APPENDIX C
Delta Water Resources - Modeling Analyses

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Abbreviations and Acronyms

ACWD	Alameda County Water District
AFRP	Anadromous Fish Restoration Plan
AIP	Alternative Intake Project
ANN	artificial neural network
BA	Biological Assessment
Banks	Harvey O. Banks Pumping Plant
Bay Area	San Francisco Bay Area
BO	Biological Opinion
CACMP	Common Assumptions Common Model Package
CALFED	CALFED Bay-Delta Program
CCC PP No. 1	Contra Costa Canal Pumping Plant Number 1
CCWD	Contra Costa Water District
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DCC	Delta Cross Channel
Delta	Sacramento-San Joaquin Delta
DI	Demand Index
DICU	Delta Island Consumptive Use
DMC-CA	Delta-Mendota Canal - California Aqueduct
DSM2	Delta Simulation Model, Version 2
DWR	California Department of Water Resources
D-xxxx	State Water Resources Control Board Water Right Decision number
E/I	Export to Inflow ratio for Delta flows
EBMUD	East Bay Municipal Utility District
EC	electrical conductivity
ECCID	East Contra Costa Irrigation District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
EWA	Environmental Water Account
FRWA	Freeport Regional Water Authority
GLC	Grant Line Canal
JPOD	Joint Point of Diversion
LV	Los Vaqueros
M&I	municipal and industrial
mg/L	milligrams per liter
mm	millimeter
msl	mean sea level
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOD	north-of-Delta
NRDC	National Resources Defense Council
OCAP	Operations Criteria and Plan

OMR	Old and Middle Rivers
PTM	particle tracking module
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
SBA	South Bay Aqueduct
SCVWD	Santa Clara Valley Water District
SDIP	South Delta Improvements Program
SOD	south-of-Delta
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VAMP	Vernalis Adaptive Management Plan
WRESL	Water Resources Simulation Language
WRIMS	Water Resources Integrated Modeling System
WSI	Water Supply Index
yr	year
Zone 7	Alameda County Flood Control and Water Conservation District, Zone 7
°C	degrees Celsius
°F	degrees Fahrenheit

C-1 INTRODUCTION

This appendix presents the application and results of facility operations and hydrodynamic and water quality modeling in support of the Draft Los Vaqueros Reservoir Expansion Project Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR). The purpose of the analysis was to identify potential environmental impacts of the Los Vaqueros Reservoir Expansion Project (project) relative to baseline conditions. The analysis was undertaken using the California Department of Water Resources (DWR) and United States Department of the Interior, Bureau of Reclamation (Reclamation) joint planning model, CalSim II, and DWR's Sacramento-San Joaquin Delta (Delta) Simulation Model, Version 2 (DSM2).

Organization of Appendix

This appendix is organized into eight chapters:

Chapter C-1, Introduction,
includes background information and the organization of the appendix.

Chapter C-2, Model Description,
summarizes the models used and the modeling approach.

Chapter C-3, Modeling Assumptions,
documents the specifics of modeling implementation.

Chapter C-4, Model Results – Water Supply and Management,
summarizes system operations modeling results for the project alternatives.

Chapter C-5, Model Results – Delta Water Quality and Delta Water Level,
summarizes Delta water quality and water level modeling results for the project alternatives.

Chapter C-6, Statistical Water Quality Impact Analysis,
presents statistical tests used to evaluate potential water quality impacts.

Chapter C-7, Fishery Analyses,
provides detailed results and analysis of the methods used for evaluating both direct and indirect effects on the Delta fishery.

Chapter C-8, References,
lists the sources used in compiling this appendix.

C-2 MODEL DESCRIPTION

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Introduction

The purpose of the system operations modeling and Delta hydrodynamic, water quality and particle tracking modeling is to quantify environmental water management, water supply reliability, and water quality benefits and assess the potential environmental impacts of each project alternative. This chapter summarizes the models and modeling process applied to the project; additional details on modeling assumptions are also provided.

Evaluation of the project alternatives requires simulation of three key, interrelated systems: (1) the statewide operations of the CVP and California State Water Project (SWP), (2) Delta hydrodynamics and water quality, and (3) CCWD's local operations. Separate models are available, or have been developed as part of this project, for simulating each of these systems, and the information produced from each model can be integrated to assess the potential of each alternative to achieve project objectives, and the potential effects on CVP/SWP operations and the Delta and upstream environments. Tools used for the project include: (1) the Los Vaqueros operations model, (2) CalSim II, including the artificial neural network (ANN) module for the Delta, and (3) DSM2, including the "hydro", "qual", and particle tracking modules. The statewide and CCWD operations models were combined to run together in an integrated fashion, as described below. This integration was designed to improve sharing of information between the models and provide a more accurate representation of the interrelationship between statewide and CCWD operations.

Operations Models

The operations models used for the project are described below. Complete model output is available for review through CCWD by contacting Marguerite Naillon, Special Projects Manager, at mnaillon@ccwater.com or (925) 688-8018.

WRIMS

The Water Resources Integrated Modeling System (WRIMS) is a generalized water resources software program developed by DWR's Bay-Delta Office. WRIMS is entirely data driven and can be applied to most reservoir-river basin systems. WRIMS represents a given physical system (reservoirs, streams, canals, pumping plants, etc.) through a network of nodes and arcs. The model user describes system connectivity and various operational constraints using a modeling language known as Water Resources Simulation Language (WRESL). WRIMS simulates facility operations using optimization techniques to route water through the network based on mass balance accounting. A mixed integer programming solver determines an optimal set of decisions at each monthly time step for a set of user-defined priorities (weights) and system constraints. The model is described by DWR (2000a) and Draper et al. (2004).

CalSim II

As California's largest water projects, CVP and SWP operations influence and, at times, control flow in the Sacramento and San Joaquin river basins and the Delta. For this Draft EIS/EIR, water conditions and facility operations in the Delta and upstream areas are being simulated using the CalSim II model.

CalSim II is an application of the WRIMS software that was jointly developed by Reclamation and DWR for performing planning studies related to CVP and SWP operations. The primary purpose of CalSim II is to evaluate the water supply reliability of the CVP and SWP at current or future levels of development (e.g., 2005, 2030), with and without various assumed future facilities, and with different modes of facility operations. Geographically, the model covers the drainage basin of the Delta, and CVP/SWP exports to the San Francisco Bay Area (Bay Area), Central Coast, and Southern California. The model assumes that facilities, land use, water supply contracts, and regulatory requirements are constant over the period of simulation, representing a fixed level of development. The historical flow record of October 1921 to September 2003, adjusted for the influence of land use change and upstream flow regulation, is used to represent the possible range of water supply conditions. Major Central Valley rivers, reservoirs, and CVP/SWP facilities are represented by a network of arcs and nodes. CalSim II uses monthly mass balance accounting, and therefore cannot simulate the tidal hydrodynamics of the Delta, and has limited ability to represent Delta water quality.

There are many sources of information documenting the CalSim II model, including two peer reviews. Relevant reports include the following (Reclamation, 2008):

- External peer review commissioned by the CALFED Bay-Delta Program (CALFED) (Close et al., 2003)
- Analysis of an historical operations simulation (DWR, 2003)
- Analysis of the effect varying selected parameters has upon model results (sensitivity analysis study) (DWR, 2005)
- Analysis of the significance of the simulation time step to the estimated SWP delivery amounts (DWR, 2005).
- Peer review of San Joaquin River Valley application (Ford et al., 2006)

CalSim II can be used in either a comparative or an absolute mode. The comparative mode consists of comparing two model runs: one that contains a reservoir expansion project alternative and one that does not. Differences in certain factors, such as deliveries or reservoir storage levels, are analyzed to determine the effects of the project alternatives on system-wide operations. All of the assumptions are the same for the No Action/No Project and action alternative model runs, except the action itself, and the focus of the analysis is the differences in the results. In the absolute mode, results of a single model run, such as the amount of delivery or reservoir levels, are considered directly. Model assumptions and results are generally believed to be more reliable in a comparative study than an absolute study.

Results from a single simulation may not necessarily correspond to actual system operations for a specific month or year, but are representative of general water supply conditions. Model results are best interpreted using various statistical measures such as long-term or year-type averages.

Common Assumptions Common Model Package

In previous analyses, the CalSim II version that supported the 2004 Operations Criteria and Plan (2004 OCAP) and OCAP Biological Assessment (OCAP BA) had been used to analyze statewide

operations (Reclamation, 2004a).[1] However, a revised and updated CalSim II model version has been developed for the DWR/Reclamation Surface Storage Investigations and has been adopted for the project Draft EIS/EIR analysis. This updated version of CalSim II is described in the following sections.

DWR, Reclamation and a team of consultants have developed a set of "common assumptions", together with a common set of tools and model studies, collectively known as the Common Assumptions Common Model Package (CACMP). The CACMP is intended to provide a common baseline for analyzing the surface storage projects currently under evaluation in California and to provide an evaluation framework that facilitates consistent analyses among the surface storage project teams. The CACMP shares many of the same operational rules and facilities as the 2004 OCAP BA modeling studies; however, the CACMP did make a number of changes corresponding to updated information, including, but not limited to: (1) SWP Banks Pumping Plant capacity is limited to 6,680 cfs in both the existing and future scenarios; (2) CCWD's Alternative Intake Project, the SBA Enlargement Project, and the Freeport Regional Water Project are incorporated into the future scenarios; (3) minimum flow requirements in the Lower Yuba River for both existing and future scenarios correspond to D-1644; and (4) the Delta-Mendota Canal-California Aqueduct (DMC-CA) Intertie with a limited CVP/SWP integration is included in the future scenario (CACMP, 2007a). For a full description of the assumptions incorporated into the CACMP modeling, consult the Common Assumptions team.

As part of the CACMP effort, the Los Vaqueros operations model (described later in this chapter) was integrated into the CACMP CalSim II model to allow dynamic calculation of operational parameters. The CACMP CalSim II model version used as the basis of the project modeling studies completed for the Draft EIS/EIR is Version 8D[2]. The CACMP includes a set of CalSim II studies. One of the studies simulates the existing condition as of 2005 and is the basis for the project Existing Condition. The CACMP Future No Action study is the basis of the Future No Action/No Project Alternative[3].

CalSim II Revisions and Updates

Revisions to CACMP CalSim II Version 8D were required for modeling for this Draft EIS/EIR to: (1) update the existing condition to account for new facilities, (2) include a limited Environmental Water Account (EWA) program, (3) include a representation of assumed future Delta operations in light of the December 2007 court interim remedial order in *NRDC vs. Kempthorne* and OCAP reconsultation, (4) adjust CVP/SWP annual allocation procedures, and (5) improve the efficiency of model simulation. These revisions are discussed in the following sections.

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1 These OCAP BA studies were released by Reclamation on February 2, 2004, with revisions released June 30, 2004. The studies and their outlined assumptions are available from Reclamation's Central Valley Operations Office Web site (Reclamation, 2004b).

2 CACMP CalSim II Version 8D contains studies for two levels of development. Studies for existing and future no action conditions were dated April 22, 2007.

3 The Sacramento Valley hydrology used in the Future No Action CalSim II model reflects 2020 land-use assumptions associated with Bulletin 160-98 (DWR, 1998). The San Joaquin Valley hydrology reflects draft 2030 land-use assumptions developed by Reclamation to support Reclamation studies.

Existing Conditions

The CACMP assumes an existing condition as of June 2004. The CACMP version of CalSim II has been updated to include: (1) the SBA Enlargement Project[4]; and (2) CCWD's Alternative Intake Project[5].

Limited EWA

The objective of simulating the EWA Program for project modeling is to represent the limited program as it has been implemented in 2008 and is expected to be implemented in coming years by SWP and CVP operations. This is referred to as Limited EWA (Reclamation, 2008). The EWA Program is not represented in the CACMP. Modeling for this Draft EIS/EIR assumes that EWA purchases are limited to 60,000 acre-feet, as provided for by the Lower Yuba River Accord (YCWA, 2007). Modeling also assumes that EWA actions are limited to the Vernalis Adaptive Management Plan (VAMP) export reduction at the Banks Pumping Plant.

Operational Modifications for new Operations Criteria and Plan (OCAP) Biological Opinions

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have been required by federal court orders in *Natural Resources Defense Council v Kempthorne* (2007) and *Pacific Coast Federation of Fishermen's Associations v Gutierrez* (2008) to issue new biological opinions based on the 2008 OCAP for operating the SWP and CVP. USFWS issued its biological opinion on December 15, 2008. NMFS is currently preparing its biological opinion with a target for completion by mid summer 2009.

In the case of *Natural Resources Defense Council v Kempthorne*, the May 25, 2007 court order found the 2004 OCAP BO to be unlawful and inadequate and the accompanying Delta Smelt Risk Assessment Matrix, adopted to implement the 2004 OCAP BO, in violation of the Administrative Procedure Act. After a seven-day evidentiary hearing, held on August 21 through 24 and August 29 through 31, 2007, a list of interim remedies was developed. These remedies were included in an interim remedial order, dated December 14, 2007, which was intended to prevent the extinction of the delta smelt and the destruction or adverse modification of their habitat via a number of restrictions to CVP and SWP operations. This order continued in effect until completion of the reconsultation on the OCAP and issuance of the USFWS OCAP BO for delta smelt on December 15, 2008.

The analyses pertaining to operations of the SWP and CVP in this document are based on the Interim Order issued by Judge Wanger and the 2004 OCAP. The interim measures rely upon real-time conditions and cannot be simulated with one simple set of rules. Future measures are also likely to be based on real-time conditions. Modeling for this Draft EIS/EIR considered moderate and severe restrictions on Delta export operations to protect fisheries that capture the range of current and anticipated future operating rules, based on the terms of the interim remedial order.

4 The SBA conveys water from Bethany Reservoir to ACWD, SCVWD, and Zone 7. The SBA was originally designed for a capacity of 300 cubic feet per second (cfs). The purpose of the SBA Enlargement Project is to increase the capacity of the SBA to 430 cfs to meet Zone 7 Water Agency's future needs and provide operational flexibility to reduce SWP peak power consumption. This enlargement to 430 cfs total capacity is included in the existing conditions assumptions for these model studies.

5 CCWD's Alternative Intake Project (AIP) consists of a new 250 cfs screened intake in Victoria Canal, and associated pump station and pipeline to connect to CCWD's Old River facilities.

The assumptions used in modeling these operations for the Draft EIS/EIR are described in Appendix C-3, under "Fishery Restrictions Applied in CalSim II Model".

Because NMFS has not yet issued its biological opinion, it is not yet possible to assess the changes to SWP and CVP operations that may occur due to the combined effects of the USFWS and NMFS biological opinions for the 2008 OCAP. Reclamation and DWR intend to complete an analysis of the effects that the new biological opinions will have on the operations of SWP and CVP. It is possible that the new opinions may result in moderate to severe fishery restrictions being imposed on Delta exports, depending on annual hydrologic conditions, above and beyond those caused by the Interim Order. The analysis of the effects of the new biological opinions on the operations of the SWP and CVP will be described in the Final Federal Feasibility Report and Final EIS/EIR for this project.

Water Supply Index-Delivery Index

CalSim II CVP/SWP delivery logic uses runoff forecast information and uncertainty and a standardized rule (Water Supply Index (WSI) versus Demand Index (DI) Curve) to estimate the total water available for delivery and carryover storage. The WSI is a conservative estimate of the water available to be shared between different uses, including deliveries, Delta requirements, and carryover storage. The WSI is the sum of the beginning-of-month storage in project reservoirs and forecast inflow. The WSI changes from month to month as storage levels change, forecasts become more certain and the accumulated inflows to the reservoirs increase. Once the WSI value is determined, CalSim II calculates a DI value from the WSI-DI curve. The DI is the sum of water available for deliveries and carryover storage. Generation of the WSI-DI curves has been automated in CalSim II to minimize CVP/SWP delivery shortages resulting from over-optimistic allocations.

The fishery restrictions assumed in CalSim II studies for project alternatives, discussed above, significantly alter CVP/SWP system operations. The WSI-DI curves were "retrained" to account for newly simulated constraints on reverse flows in the Old and Middle rivers prior to developing Los Vaqueros CalSim II simulations. After completion of the WSI-DI retraining, south-of-Delta (SOD) SWP and CVP Delta Index versus Export Index tables were adjusted manually to better address conveyance constraints through the Delta and at the export pumps.

Model Simulation Efficiency

The CACMP CalSim II model simulation is separated into five steps to correctly account for use of Central Valley Project Improvement Act (CVPIA) (b)(2) water, and available capacity for wheeling water at Banks and Jones pumping plants. These steps are known as D-1485, D-1641, B2, Conveyance, and Transfer. A 12-month period is simulated under each step before proceeding to the next step. The results from the final step are accepted as the end-of-year system state, and serve as the initial conditions for each of the steps in the following year's analysis. The purpose of the first three steps is to define CVPIA (b)(2) actions, which are subsequently fully implemented in the Conveyance step[6]. The Conveyance step also includes "Stage 1" transfers. "Stage 2" transfers are included in the subsequent Transfer step.

Modeling for the project alternatives uses a "single-step" simulation developed from the April 22, 2007 five-step Joint Point of Diversion (JPOD) model using the Conveyance step. CVP

6 Simulated (b)(2) actions include additional releases from Whiskeytown, Shasta, and Folsom reservoirs to support AFRP target flows, and pumping curtailment at the Jones Pumping Plant.

operations to meet the CVPIA (b)(2) requirements are based on simulated b2 actions developed for the CACMP. The purpose of the D1641, D1485 and b2 steps in CalSim II is to determine which b2 actions are implemented in each water year. These steps are omitted in project simulations because the b2 actions defined for the CACMP are used.

Water transfers, with the exception of EWA north-of-Delta (NOD) purchases, are not simulated. The "Stage 1" transfers cycle was not included. Joint Point of Diversion is not simulated in single-step CalSim II studies performed for this project. Under Stage 1, as defined in D1641, CVP diversions at the Banks Pumping Plant are limited to that needed to deliver water to the Cross-Valley Canal. Under Stage 2, CVP is allowed to wheel additional water through Banks Pumping Plant subject to meeting certain requirements. Neither Stage 1 nor Stage 2 of JPOD is included in the modeling performed for this project.

Delta ANN Module

Salinity in the Delta cannot be modeled accurately by the simple mass balance routing and coarse time step used in CalSim II. Instead, CalSim II uses two algorithms to translate water quality standards into flow equivalents that are subsequently used to help define facility operations. The Kimmerer-Monismith equation relates Delta salinity (defined by the X2 location) to Delta outflow (Kimmerer and Monismith, 1992). Using Delta outflow captures the effects of seawater intrusion and provides a good estimate of the salinity variation in the western Delta. However, salinity in the interior Delta is also influenced by the relative magnitude of flows through the Delta channels and export pumping. Agricultural drainage and M&I wastewater discharges also can affect local salinity conditions. To capture these effects in the interior Delta, DWR developed an ANN algorithm[7] capable of mimicking DSM2.

Prior to the CACMP, the ANN algorithm used to mimic DSM2 was trained on four input parameters (Delta inflow from the Sacramento Valley, Delta inflow from the San Joaquin River, total Delta exports, and Delta Cross Channel gate operations) to estimate electrical conductivity (EC) at key locations in the Delta. Appendix D of the Benchmark Studies Assumptions (DWR and Reclamation, 2002) provides details of implementation of the ANN within CalSim II. ANN performance is discussed by DWR (1999, 2002). The ANN was further refined as part of the CACMP. The refined ANN is trained on six input parameters that additionally include Net Delta Consumptive Use and Tidal Energy (the difference between daily maximum and daily minimum hourly astronomical tide). Training the ANN on six parameters produces water quality results that mimic DSM2 more closely than the four-input ANN. The CACMP ANN refinements also allow simulation of flow-salinity relationships at six locations. The six locations are as follows: (1) Emmaton, (2) Jersey Point, (3) Contra Costa Canal Pumping Plant No. 1 (CCC PP No. 1), (4) Collinsville, (5) Chipps Island, and (6) Antioch. The Emmaton, Jersey Point, Collinsville, Chipps Island, and Antioch salinity standards are modeled directly at their respective locations in the Delta. However, the CCC PP No. 1 chloride standard is translated into an equivalent salinity standard for the Old River at Rock Slough because of DSM2 difficulties in accurately modeling water quality in Rock Slough.

7 An Artificial Neural Network (ANN) is a non-linear statistical data modeling tool that can be used to model complex relationships between inputs and outputs or to find patterns in data.

Los Vaqueros Model

Using the WRIMS software, a model representing CCWD's existing Los Vaqueros Project and expansion project facility configurations was created, and then integrated with CalSim II. The Los Vaqueros Model represents the Los Vaqueros Reservoir, CCWD's Delta intakes at Rock Slough, Old River, and Victoria Canal, CCWD's intertie with the EBMUD Mokelumne Aqueduct, and new facilities as appropriate for the project alternatives (described in Chapter 3).

The Los Vaqueros Model was initially developed as a "stand-alone" model that requires input from other models to define boundary conditions. Inputs required for simulation include:

- Delta conditions (balanced vs. excess water conditions)
- Delta surplus available for diversion
- X2 location[8]
- Chloride concentration at Rock Slough, Old River, and AIP intakes

Delta Hydrodynamic and Water Quality Modeling – DSM2

DSM2 is a branched, one-dimensional model for simulating hydrodynamics, water quality, and particle tracking in a network of riverine or estuarine channels (DWR, 2000b). The model is used by DWR and others to perform operational and planning studies of the Delta. Details of the model, including source codes, model calibration, and model performance, are available from the DWR Bay-Delta Office, Modeling Support Branch web site (DWR, 2000b). Documentation of model development is discussed in annual reports to the SWRCB. A DSM2 schematic is shown in **Figure C2-1**.

The Hydro module of DSM2, applied to the Delta, simulates tidal hydrodynamics (channel stage, flow, and water velocity) using a 15-minute time step. For the project, DSM2 Hydro is used to evaluate changes in stage and flow in the south and central Delta.

The Qual module of DSM2 can simulate the movement of both conservative and non-conservative constituents. For the project, DSM2-Qual is used to assess changes in EC as a surrogate for salinity at key locations within the Delta. Additionally, a fingerprinting analysis is used to identify sources of EC and provide the basis for the EC-to-chloride conversion at CCWD's intakes.

The particle tracking module (PTM) simulates the movement of neutrally buoyant particles by advection and dispersion, using a random walk methodology. DSM2-PTM is a quasi three-dimensional extension of DSM2. Using the mean velocity from DSM2-Hydro, DSM2-PTM

8 X2 is the distance in kilometers from the Golden Gate Bridge to the point where daily average salinity is 2 parts per thousand (ppt) at one meter above the bottom of the Sacramento River channel. The location of X2 is used as a surrogate measure of ecosystem health in the Delta. Under the State Water Resources Control Board (SWRCB)Water Right Decision 1641 (D-1641), CVP/SWP operators are responsible for maintaining the X2 location, as specified in the 1995 Water Quality Control Plan.

applies a logarithmic vertical velocity profile and a parabolic lateral velocity profile to allow longitudinal dispersion. For the project, DSM2-PTM is used to model the transport and fate of passive or non-mobile organisms within the Delta to help quantify circulation changes and resulting entrainment risks.

Tidal forcing is imposed at the downstream boundary at Martinez as a time series of stage (for the hydrodynamic module) and salinity (for the water quality module). DWR has traditionally used a "19-year mean tide" (or "repeating tide") in 73-year (1922 through 1994) DSM2 planning studies, in which the tide is represented by a single repeating 25-hour cycle. An "adjusted astronomical tide" was later developed by DWR for a 16-year period (1976 to 1991) that accounts for the spring-neap variation of the lunar tide cycle (DWR, 2001a). As part of the Common Assumptions effort, an updated version of DSM2 has been developed that has extended the simulation period to 82 years (1922 through 2003) and uses an adjusted astronomical tide for the entire period of record. CACMP DSM2 Version 9 is used to provide water quality data at CCWD's three Delta diversion locations (Rock Slough, Old River, Victoria Canal)[9] to simulate Los Vaqueros operations within CalSim II, and to evaluate Delta water quality impacts as a result of the project.

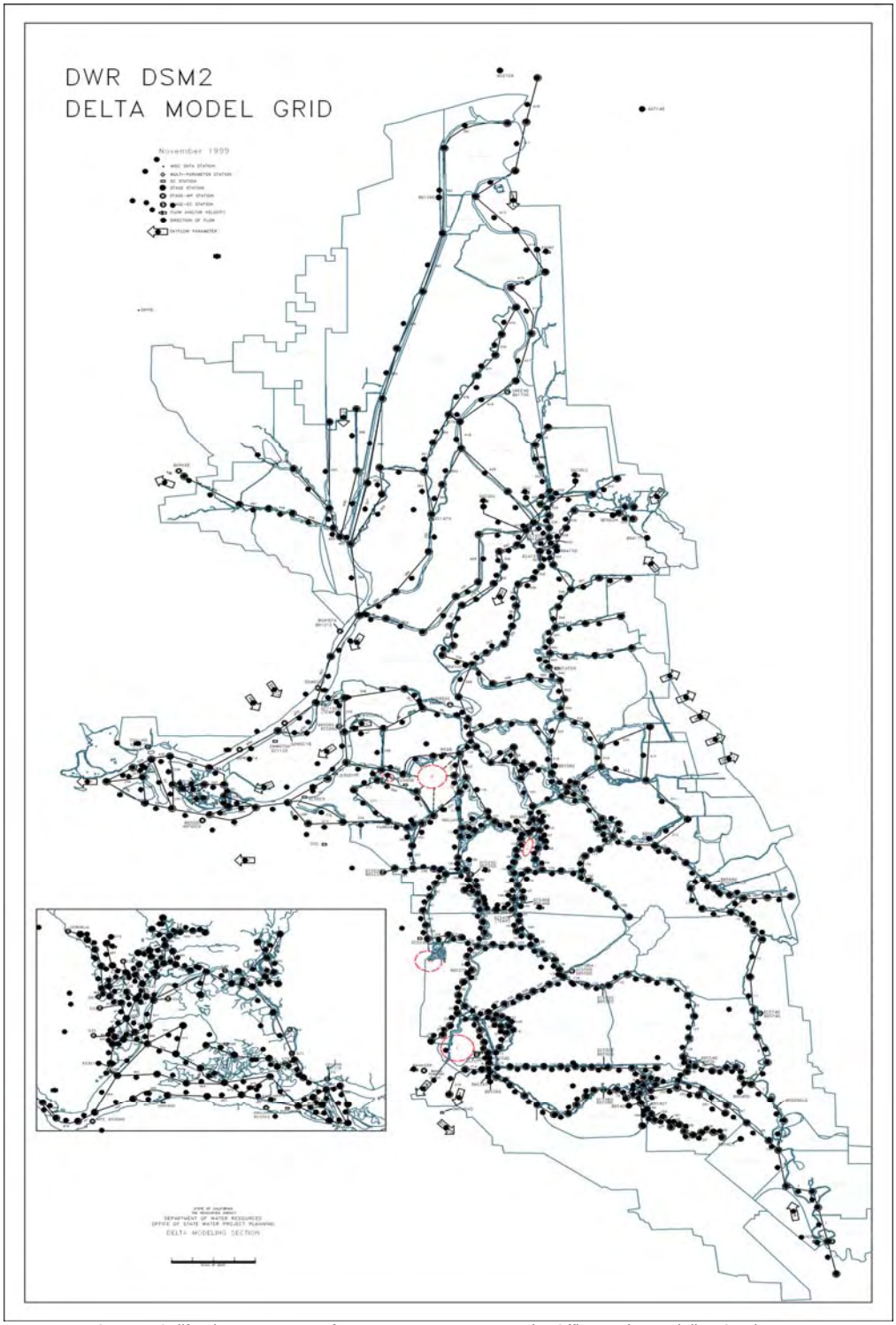
In this Draft EIR/EIS, two different levels of development are considered, 2005 for existing conditions and 2030 for future conditions. The differences between these levels of development in the DSM2 model are the amount of agricultural diversions and agricultural return flows, and the operations of South Delta barriers. The agricultural diversions and return flows (to approximately 250 diversion nodes and 200 drainage nodes) were calculated by the Delta Island Consumptive Use model with consideration of precipitation, seepage, evapotranspiration, irrigation, soil moisture, leach water, runoff, crop type, and acreage. The DSM2 model for existing conditions includes the South Delta Temporary Barriers Project (DWR, 2008b), which consists of four rock barriers that are installed seasonally across south Delta channels (at the head of Old River, Middle River, Old River near Tracy, and Grant Line Canal) as fish and agricultural barriers.

DSM2 modeling of future conditions includes the four proposed South Delta Improvement Program (SDIP) permanent operable barriers (at the head of the Old River, Grant Line Canal, Old River at Tracy Road Bridge, and Middle River at Old River) replacing the existing temporary barriers in order to minimize the number of in- and out-migrating salmon moving toward export pumps; to maintain adequate water levels for south Delta farmers to prevent cavitation from occurring in their irrigation pumps; and to improve water quality in south Delta channels by providing better circulation (DWR, 2008c). SDIP proposed three sets of operations for the gates: Plans A, B, and C. Plan C permanent barrier operations were assumed in DSM2 for future conditions.

Key DSM2 inputs include tidal stage, boundary inflow and salinity concentration, and operation of flow control structures. **Table C2-1** summarizes basic input requirements and assumptions for the CACMP DSM2 version. Results from CalSim II are used to define Delta boundary inflows, including the Sacramento River flow at Hood, San Joaquin River flow at Vernalis, inflow from

9 The Los Vaqueros module within CalSim II relies on input chloride concentrations to determine CCWD operations. The DSM2 channel locations used for this purpose are as follows:
(1) Rock Slough - ROLD024 (Old River at Bacon Island near Contra Costa Canal) was used for future LOD and CHCCC006 (Contra Costa Pumping Plant No.1) was used for the existing LOD. This distinction is made to include the effects of the CCWD Canal Replacement Project in the future LOD conditions.
(2) Old River - ROLD034, Old River near Byron.
(3) Victoria Canal (AIP) - CHVCT000, Victoria Canal at AIP.

the Yolo Bypass, and inflow from the east-side streams. In addition, net Delta outflow from CalSim II is used to calculate the DSM2 salinity boundary at Martinez.



Source: California Department of Water Resources, Bay-Delta Office, Delta Modeling Section, http://modeling.water.ca.gov/delta/models/dsm2/documentation.shtml.

Figure C2-1: Illustration of DSM2 Schematic

TABLE C2-1:
CACMP DSM2 INPUT REQUIREMENTS AND ASSUMPTIONS

Parameters	Assumptions
Period of Simulation	October 1976 – September 1991
Boundary Flows	CalSim II output: Sacramento River flow at Hood San Joaquin River flow at Vernalis Inflow from the Yolo Bypass Inflow from the east-side streams Net Delta Outflow CCWD diversions
Boundary Stage	15-minute adjusted astronomical tide
Agricultural Diversion & Return Flows	Delta Island Consumptive Use model, 2005/2030 level of development
Salinity	
Martinez EC	Computed from modified G-model, adjusted astronomical tide and Net Delta Outflow from CalSim II
Sacramento River	Constant value = 175 μS/cm
Yolo Bypass	Constant value = 175 μS/cm
Mokelumne River	Constant value = 150 μS/cm
Cosumnes River	Constant value = 150 μS/cm
Calaveras River	Constant value = 150 μS/cm
San Joaquin River	CalSim II EC estimate using link-node salt balance model
Agricultural Drainage	Varying monthly values that are constant year to year
Facility Operations	
Delta Cross Channel	CalSim II output
South Delta Barriers	Temporary barriers/SDIP operation of permanent barriers

Modeling Process

Modeling for the project alternatives included: (1) establishing baseline Delta water quality conditions; (2) developing operating rules for the project alternatives to optimize project benefits while minimizing potential environmental impacts, and (3) conducting impact analyses of the project alternatives. These modeling steps are summarized below.

Baseline Conditions

A set of baseline Delta water quality conditions was established using an iterative modeling procedure, as illustrated in **Figure C2-2**. These baseline conditions are inputs to CalSim II, and determine Los Vaqueros Reservoir blending operations. Two pairs of baseline conditions were developed, corresponding to scenarios with moderate and severe fishery restrictions on export pumping (described in Chapter 4.3) for both existing and future levels of development. These four distinct baseline conditions were developed using the following steps:

1. Retrain CalSim II WSI-DI (Water Supply Index versus Delivery Index) curves, and update Delta Index-Export Index tables for south-of-Delta CVP and SWP exports to account for imposed constraints on Delta exports (moderate or severe fishery restriction scenarios). Initial Delta water quality conditions were taken from DSM2

studies developed as part of the CACMP[10]. Initial Delta conditions were taken from CACMP CalSim II[11].

2. Simulate monthly operations for an 82-year period using the modified CACMP CalSim II version with integrated Los Vaqueros Model.
3. Simulate Delta tidal flows and EC using CACMP DSM2 for the 82-year period DSM2 run based on monthly CCWD/Los Vaqueros diversions and boundary flows from CalSim II (output from Step 2) as input.
4. Repeat steps 2 and 3 until changes in Los Vaqueros Project diversions and deliveries between iterations are small.

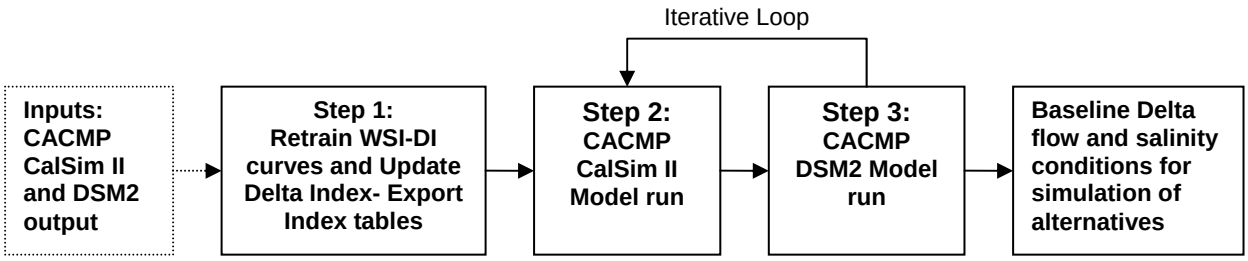


Figure C2-2: Development of Baseline Conditions

Minimizing Potential Delta Water Quality Impacts

Once baseline inputs were defined, operating rules were developed to avoid significant water quality impacts to other beneficial uses of Delta water. These operating rules were developed using the following steps as illustrated in **Figure C2-3**.

1. The system-wide baseline conditions defined through the iterative process shown in Figure C2-2 were used to simulate Los Vaqueros system operations for the Future No Action/No Project Alternative and a single project alternative.
2. The DSM2 model was used to estimate Delta water quality at important Delta locations for the Future No Action/No Project Alternative and project alternatives using Delta boundary flow inputs provided by CalSim II (Figure C2-2).
3. Water quality impacts were calculated by comparing Future No Action/No Project Alternative and the project alternative salinity (EC) output from Step 2.

[10] CACMP DSM2 V9 was used for both the existing and future levels of development. Chloride concentrations at CCWD diversion locations and in the South Delta were converted from DSM2 EC data based on the flow fraction of Martinez water present at each location, which were computed from a DSM2 fingerprinting study. The chloride conversion relationship assumes that if the fraction by volume of water from the Martinez boundary was less than 0.4% then, for that time step, Cl (mg/L) = 0.15*EC (µS/cm) – 12; otherwise Cl (mg/L) = 0.285*EC (µS/cm) – 50.

[11] CalSim II requires an initial estimate of CCWD diversions, which are subsequently refined during model simulation. The initial set of CCWD diversions were defined using the stand-alone Los Vaqueros Model. Inputs to the stand-alone Los Vaqueros Model include Delta conditions taken from April 22, 2007 five-step JPOD CalSim II model, CONV step output, and Delta water quality taken from CACMP DSM2 V9.

4. Operating rules were developed in the Los Vaqueros Model for the project alternative to minimize water quality impacts caused by the project alternative.

5. Steps 1 through 4 were repeated until all impacts calculated in Step 3 were found to be less than significant. Once this was completed, the final set of operating rules was incorporated in the CACMP CalSim II Los Vaqueros integrated model.

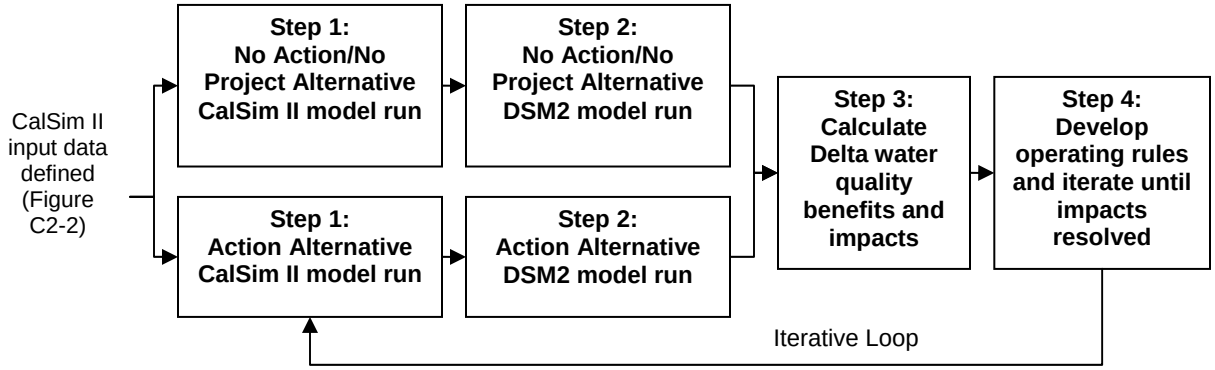


Figure C2-3: Development of Water Quality Rules

C-3 MODELING ASSUMPTIONS

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Tables

Figures

Introduction

This chapter discusses the modeling assumptions used to characterize the Existing Conditions, the Future No Action/No Project Alternative, and the project alternatives described previously in Chapter 3. The different assumptions for the 2005 (existing) and 2030 (future) levels of development are summarized in **Table C3-1**. Table 3-3 in Chapter 3 summarizes the major facility components of the project alternatives.

TABLE C3-1:
OPERATIONS MODEL ASSUMPTIONS FOR EXISTING AND FUTURE LEVELS OF DEVELOPMENT

Description	Units	Existing Level of Development	Future Level of Development
PROJECTS OR FACILITIES			
Rock Slough Intake and Contra Costa Canal Pumping Plant No.1	(cfs)	350	350
Rock Slough Canal Replacement Project		NA[1]	Included
CCWD/EBMUD Intertie			
Annual delivery[2]	(TAF)	NA	3.2
Intertie capacity	(cfs)	NA	155
South Bay Aqueduct Improvement and Enlargement[3]			
Brushy Creek Pipeline capacity	(cfs)	430	430
Freeport Regional Water Project[4,5]		NA	Included
DMC-CA Intertie		NA	Included
South Delta Improvements Program, Phase 1 (barriers)		NA	Included
South Delta Improvements Program, Phase 2		NA	Not Included
WATER DEMANDS			
CCWD demand[6,7]	(TAF/yr)		
Wet year		111	149
Above normal year		118	157
Below normal year		124	162
Dry year		135	175
Critical year		144	184
EBMUD - CCWD Settlement Agreement			
Delivery amount[8]	(TAF/yr)	NA	3.2
Delivery location		NA	Preferential delivery to storage, also direct delivery
Period of diversion		NA	December

[1] NA = not applicable.
[2] Under the CCWD settlement agreement, FRWA and EBMUD will wheel CVP contract water for CCWD.
[3] Due to the current construction schedule of the SBA Improvement and Enlargement Project, the expanded SBA capacity of 430 cfs is included in the existing condition scenarios.
[4] Included in 2004 OCAP as part of the formal consultation.
[5] The Freeport Regional Water Project is a joint venture of the Sacramento County Water Agency and East Bay Municipal Utility District to supply water from the Sacramento River to customers in Sacramento County and the East Bay. Final EIR has been certified, Final EIS has been released, and on January 4, 2005, Reclamation issued the Record of Decision.
[6] Derived from CCWD's Future Water Supply Study (CCWD, August 1996), with adjustments made for the future condition to estimate the demand distribution in 2030. Future condition demands represent Service Area C. Demands and demand pattern taken from April 2004 Planning Report.
[7] Water-years defined by Sacramento Valley Index.
[8] Included in CCWD's 195 TAF/year CVP contract

TABLE C3-1:
OPERATIONS MODEL ASSUMPTIONS FOR EXISTING AND FUTURE LEVELS OF DEVELOPMENT

Description	Units	Existing Level of Development	Future Level of Development
WATER QUALITY INPUT DATA – chloride concentration			
Rock Slough at CCWD Pumping Plant No. 1	(mg/L)	DSM2 output (CHCCC006)	DSM2 output (ROLD024)
Old River at Old River Pumping Plant	(mg/L)	DSM2 output (ROLD034)	DSM2 output (ROLD034)
New Delta Intake	(mg/L)	DSM2 output (ROLD034)	DSM2 output (ROLD034)
Victoria Canal at AIP	(mg/L)	DSM2 output (229_3048)	DSM2 output (229_3048)
Kellogg Creek	(mg/L)	Varies, 11 - 300	Varies, 11 - 300
Precipitation inflow to Los Vaqueros	(mg/L)	7	7
Mokelumne Aqueduct	(mg/L)	NA	7.5

Fishery Restrictions Applied in CalSim II Model

Biological opinions (BOs) from the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) impose restrictions on CVP and SWP operations for the protection of federally listed threatened and endangered species and their critical habitat. On May 16, 2008, Reclamation requested the initiation of formal consultation under Section 7 of ESA for the continued long-term operation of the CVP and SWP.

In *NRDC v. Kempthorne*, Federal District Judge Oliver Wanger ordered USFWS to issue a new BO for the protection of Delta smelt. Until the new BO was issued, project operations adhered to the interim remedies order issued by Judge Wanger on December 14, 2007. The order provides for a range of restrictions based on real-time conditions that cannot be simulated with one simple set of rules. Therefore, a range of operating restrictions of the interim remedies order are used to encompass the range of existing and future operational restrictions in the project modeling studies. Future restrictions will be examined to determine if the analyses results change. If those analyses indicate a new or substantially more severe impact would occur, then supplemental environmental review under CEQA and NEPA would be required prior to taking further actions.

Modeling for the project alternatives includes constraints on export diversions at the SWP Banks and CVP Jones (formerly Tracy) pumping facilities to meet reverse flow requirements in the Old and Middle rivers that are similar to those specified in the interim remedies order, which are designed to be protective of delta smelt. In addition, to be protective of longfin smelt, the starting date of the period during which the constraints can be triggered has been set to December 1, which is earlier than the date specified in the interim order (December 25).

Table C3-2 outlines the *NRDC vs. Kempthorne* interim remedies order and the actions required to protect delta smelt and their habitat.

TABLE C3-2:
NRDC VS. KEMPTHORNE INTERIM REMEDIES ORDER ACTIONS

Timing of Action	Delta Smelt Life Stage Protected by Action	OMR Flow Requirements	Trigger for Start of Action	End of Action	Reference in Interim Order
10 days in late-Dec to early Jan	Adult	-2,000	Turbidity, unless Sacramento inflow > 80,000 cfs (3-day average)	10 days after initiation of action or January 15 (whichever is first); can be ended early if: (a) Sacramento inflow > 80,000 cfs (3-day average), or (b) onset of spawning (identified by any of the indicators listed below)	p. 5-6
Jan to start of spawning	Adult	-5,000	Immediately following pulse flow (first action) or January 15 (whichever is earlier), but not start until Sacramento inflow < 80,000 cfs	**Onset of spawning as indicated by:** (1) the presence of spent female delta smelt in the Spring Kodiak Trawl survey or at either export plant's salvage facility; (2) when larval delta smelt are detected in the 20-mm survey or at either export pumping plant's salvage facility; or (3) when water temperature in the Delta reaches 12°C (53.6°F) determined by the average of the daily water temperatures at the Mossdale (MSD), Antioch (ANH or ANC) and Rio Vista (RIV or RVB) monitoring stations.	p. 6-7
Start of spawning to June 20	Adult / larval / juvenile	-750 to -5,000	Onset of spawning (identified by any of the indicators listed above)	Whichever occurs first: June 20 or when risk of entrainment is abated (to be determined by USFWS, Reclamation, and DWR, no metrics given)	p. 7-8

As shown in Table C3-2, the timing of the OMR flow requirements, as well as the level of required OMR flow, vary depending on Delta conditions. This creates uncertainty regarding implementation of the required actions detailed in the interim remedies order. To capture the range of potential requirements, and to capture the range of operational constraints that will be included in new BOs, two scenarios were simulated. The "moderate fishery restriction" scenario represents a less restrictive set of actions, while the "severe fishery restriction" scenario captures more restrictive actions that may be required under the interim remedies order (**Table C3-3**).

TABLE C3-3:
MODEL ASSUMPTIONS FOR COMBINED OMR FLOW CONSTRAINTS

Month	Trigger	Condition	Minimum OMR Flow	
			Moderate fishery restriction	***Severe fishery restriction***
October - November	N A	N A	No Action	
December	Turbidity	Sacramento Inflow - Sacramento Inflow (previous month) <= 6,000 cfs OR Sacramento plus Yolo Inflow > 80,000 cfs	No Action	
		6,000 cfs < Sacramento Inflow - Sacramento Inflow (previous month) <= 10,000 cfs	Dec. 1-15: No Action Dec. 16-25: -2,000 cfs Dec. 26-31: -5,000 cfs	
		Sacramento Inflow - Sacramento Inflow (previous month) > 10,000 cfs	Dec. 1-10: -2,000 cfs Dec. 11-31: -5,000 cfs	
January	Turbidity	Action taken in December	-5000 cfs	
		Sacramento plus Yolo Inflow <= 50,000 cfs AND Sacramento Inflow - Sacramento Inflow (previous month) <= 6,000 cfs	Jan. 1-14: No Action Jan. 15-31: -5,000 cfs	
		Sacramento plus Yolo Inflow <= 50,000 cfs AND 6,000 cfs < Sacramento Inflow - Sacramento Inflow (previous month) <= 10,000 cfs	Jan. 1-9: No Action Jan. 10-14: -2,000 cfs Jan. 15-31: -5,000 cfs	
		Sacramento plus Yolo Inflow <= 50,000 cfs AND Sacramento Inflow - Sacramento Inflow (previous month) > 10,000 cfs	Jan. 1-10: -2,000 cfs Jan. 11-31: -5,000 cfs	
		50,000 cfs < Sacramento plus Yolo Inflow <= 80,000 cfs	Jan. 1-10: -2,000 cfs Jan. 11-31: -5,000 cfs	
		Sacramento plus Yolo Inflow > 80,000 cfs	No Action	
February	Spawning (12 deg. C)	Sacramento plus Yolo Inflow > 30,000 cfs	Feb. 1-15: -5,000 cfs Feb. 16-28: -4,500 cfs	Feb. 1-15: -5,000 cfs Feb. 16-28: -2,500 cfs
		Sacramento plus Yolo Inflow <= 30,000 cfs	Feb. 1-15: -5,000 cfs Feb. 16-28: -3,500 cfs	Feb. 1-15: -5,000 cfs Feb. 16-28: -1,500 cfs
March	Proximity of smelt to export pumps	Sacramento plus Yolo Inflow > 30,000 cfs	-4,500 cfs	-2,500 cfs
		Sacramento plus Yolo Inflow <= 30,000 cfs	-3,500 cfs	-1,500 cfs
April	Proximity of smelt to export pumps	Sacramento plus Yolo Inflow > 30,000 cfs	-4,500 cfs	-2,500 cfs
		Sacramento plus Yolo Inflow <= 30,000 cfs	-3,500 cfs	-1,500 cfs
May	Proximity of smelt to export pumps	Sacramento plus Yolo Inflow > 30,000 cfs	-4,500 cfs	-2,500 cfs
		Sacramento plus Yolo Inflow <= 30,000 cfs	-3,500 cfs	-1,500 cfs
June	Proximity of smelt to export pumps	Sacramento plus Yolo Inflow > 30,000 cfs	-4,500 cfs	-2,500 cfs
		Sacramento plus Yolo Inflow <= 30,000 cfs	-3,500 cfs	-1,500 cfs
July - September	N A	N A	No Action	

Common Assumptions has not yet developed a standard constraint equation for OMR flows under either the Wanger Ruling or the 2008 OCAP. Currently, more than one equation is being evaluated by the Common Assumptions effort. For this Draft EIS/EIR, the average of three previously developed relationships for OMR net flow was used. To meet the OMR flow restrictions, export diversions at the Banks and Jones pumping facilities are varied based on a linear relationship between OMR flows and export pumping and San Joaquin River inflow to the Delta of the form $Q_{OMR} = A*Q_{San\ Joaquin\ River} + B*Q_{Exports} + C$. The coefficients of these relationships are presented in **Table C3-4**.

In Alternatives 1 and 2, the term used for export diversions ($Q_{Exports}$) includes the portion of the pumping at Los Vaqueros intakes for South Bay water agencies that is shifted from the Banks and Jones facilities. The relationship used to represent OMR net flow in these alternatives is $Q_{OMR} = A*Q_{San\ Joaquin\ River} + B*Q_{(Banks+Jones+Improved\ Fish\ Screening)} + C$, where "Improved Fish Screening" is the pumping shifted from the Banks and Jones facilities to Los Vaqueros Reservoir intakes.

In without project conditions, and in Alternatives 3 and 4, the exports term is represented by pumping at the Banks and Jones facilities such that $Q_{OMR} = A*Q_{San\ Joaquin\ River} + B*Q_{(Banks+Jones)} + C$.

TABLE C3-4:
OMR NET FLOW RELATIONSHIPS

OMR Relationship	A	B	C
DWR	0.58	-0.913	0
USGS 1	0.4486	-0.7695	-590
USGS 2	0.7094	-0.7094	-4619

Factors such as tides and wind that may have a smaller, short-term effect on OMR flows are not included in the calculation. It is assumed that the fishery restrictions are shared equally between Banks and Jones.

The interim remedies order calls for adaptive management of operations based on real-time monitoring of conditions in the Delta, including the turbidity and temperature of Delta waters, the location of delta smelt populations, and the seasonal onset of delta smelt spawning. These parameters are not directly available from the CalSim II and DSM2 model tools used in this analysis. Therefore, Delta flow conditions that are available as CalSim II model outputs were used as surrogates for estimation of these parameters, as described below.

Bracketing

Flow-based or calendar-based triggers for protective actions can be implemented in CalSim II, while triggers based on water turbidity, water temperature, or fish survey results, cannot be directly implemented, because these parameters are not used in the CalSim II model. Modeling adaptive management actions is, by the nature of the actions, approximate. To capture the range of potential actions and resulting Delta water project operations under the interim remedies order, and also attempt to anticipate the USFWS and NMFS OCAP BO documents, two operations scenarios based on the interim remedies order were simulated. The "moderate fishery restriction" scenario represents the least restrictive set of actions that are reasonably expected to occur, while

the "severe fishery restriction" scenario captures more restrictive requirements that are reasonably expected to occur. The modeling analysis for the project was performed using both the moderate and severe fishery restrictions assumptions to bracket the range of benefits and resulting environmental effects of the project alternatives.

Turbidity

An increase in turbidity in Delta waters is used in the interim remedial order to indicate the movement of delta smelt into their Delta spawning grounds. Limited turbidity data are available from Delta channels; therefore, available data from Freeport on the Sacramento River were used to identify a relationship between changes in Sacramento River flow and increases in turbidity in Sacramento River water at Freeport. A similar set of turbidity data were available for the San Joaquin River at Vernalis, but no clear relationship between flow and turbidity was apparent, possibly because of differences in runoff patterns in response to precipitation events on the two rivers. The pattern identified for the Sacramento River at Freeport, illustrated in **Figure C3-1**, was assumed to be valid for Delta channels also, and was incorporated as shown in Table C3-3.

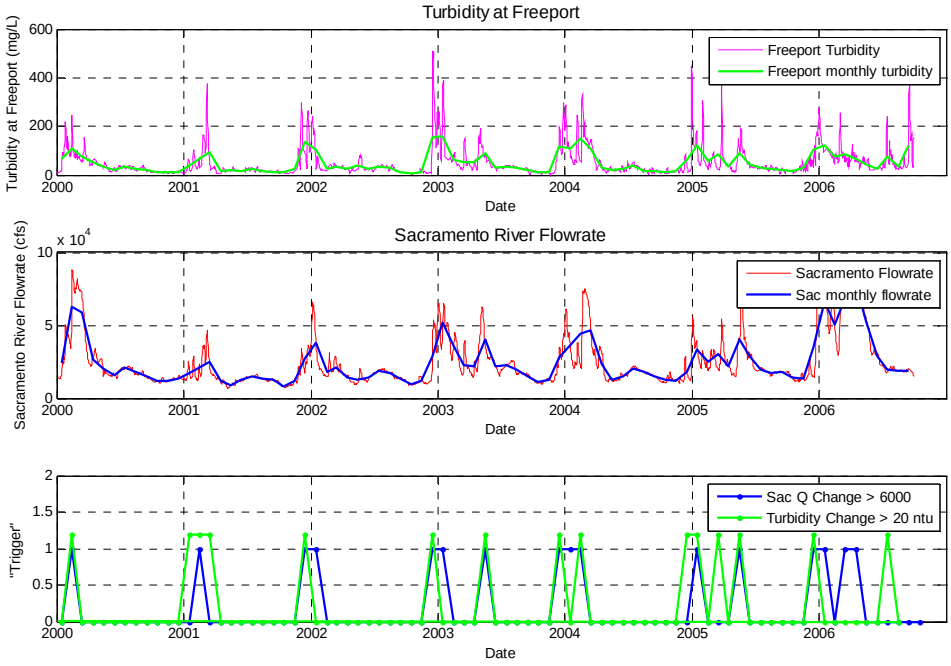

Figure C3-1: Application of Available Turbidity Data

The data for daily turbidity at Freeport and for Sacramento River daily flowrate were averaged to obtain monthly turbidity and monthly flowrate values. These are shown in Figure C3-1a and Figure C3-1b. It was observed that increases in monthly average flowrate at Freeport of greater than 6,000 cfs are correlated with increases in turbidity of greater than 20 ntu at Freeport. In Figure C3-1c, this relationship is presented graphically to demonstrate the co-occurrence of the increases in flow and turbidity. To make the relationship easier to see, the changes in flow and turbidity are represented either as a positive "trigger" value when the change is larger than 6,000 cfs or 20 ntu, respectively, or are assigned a value of zero when the change in monthly average

flow or turbidity is not larger than these values. As shown, a spike in the flowrate of 6,000 cfs in Sacramento River over one or two months serves as a good proxy for turbidity increases in the Sacramento River.

Note that the interim remedial order on delta smelt calls for the initial pulse flow action to begin on or after December 25 in response to increased Delta turbidity, but the project modeling assumes the action could begin as early as December 1, as a conservative estimate that can also account for a potential future action to protect longfin smelt.

Temperature

The interim remedial order requires that adaptive management of the OMR flows be initiated in response to the onset of delta smelt spawning. According to the order, the onset of spawning is to be determined by one of three methods: collection of spent (post-spawning) adult smelt, collection of larval smelt, or an increase above 12 deg. C in Delta waters. Because neither temperature data nor fish monitoring results are incorporated in the CalSim II model, temperature data from an external source was used in the project studies to identify the assumed onset of spawning. Temperature data for Delta waters from the Interagency Ecological Program database (http://www.iep.ca.gov/dss/) were applied for this purpose. A relationship between these temperature data and available flow values was not apparent. Therefore, February 15, which is the average date of the temperature increase above 12 deg. C in Delta waters (as measured by the average of three monitoring stations located at Antioch, Rio Vista and Mossdale) was used in all years in the model studies performed for the EIS/EIR to indicate the onset of delta smelt spawning.

Adaptive Management

Once delta smelt spawning has begun, the interim remedial order requires that OMR flows be regulated to minimize smelt mortality at the Banks and Jones facilities. Likelihood of mortality is to be determined by evaluating the location of smelt populations from fisheries surveys, in conjunction with salvage monitoring at the export facilities. Because this type of information is not available in CalSim II, a relationship to flow was again used as a rough estimator of smelt population location. Analysis of available sampling information indicates that under relatively higher Delta outflow conditions, the delta smelt population tends to be near the confluence and in Suisun Bay (Bennett, 2005). Conversely, under relatively lower outflow conditions, the delta smelt population tends to be farther into the south Delta. These general relationships are reflected in the parameters chosen for required OMR flow values under the adaptive management period that begins with the onset of spawning, as shown in Table C3-3.

Water Demand Assumptions

CCWD Demand

CCWD demands are summarized by water-year type in Table C3-1. CCWD has a delivered water quality goal of delivering water with less than or equal to 65 mg/L chloride concentration. The model delivers the best possible water quality to CCWD customers while optimizing reservoir storage.

Delta Supply Restoration Demand

The South Bay water agencies' demand for Delta Supply Restoration water from an expanded Los Vaqueros Reservoir system was estimated using CalSim II data for each of the three SBA water agencies (ACWD, SCVWD, and Zone 7) and the SCVWD CVP M&I water users, collectively referred to as the South Bay water agencies. Delta supply restoration deliveries to the South Bay water agencies in Alternative 1 were assumed to replace deliveries lost due to the implementation of the *NRDC vs. Kempthorne* decision. The Delta Supply Restoration demands were estimated by taking the difference in deliveries for each participating agency as output from CalSim II simulations for both pre- and post-delta smelt protection actions. Dry and critical year demands were then increased by an additional 50 percent and 200 percent, respectively, to approximate the estimated level of water supply required by these agencies in all years (contract allocation values are lower in dry and critically dry years, requiring more reliability water to meet a minimum delivery requirement). These values may be refined in future studies if improved estimates of the reliability demands of these agencies are developed. **Table C3-5** summarizes by water-year type the assumed Bay Area reliability demand from an expanded Los Vaqueros Reservoir.

TABLE C3-5:
DELTA SUPPLY RESTORATION DEMANDS BY WATER-YEAR TYPE

	Total Demand (TAF/year)[2]			
	Existing		Future	
Water-Year Type[1]	Severe fishery restriction	Moderate fishery restriction	Severe fishery restriction	Moderate fishery restriction
Wet	54.4	36.5	67.5	45.9
Above Normal	76.6	50.6	94.2	63.0
Below Normal	72.6	53.2	92.0	62.1
Dry	92.3	69.5	100.0	66.5
Critical	114.1	82.3	100.7	71.4

Notes:
[1] Water-years defined by Sacramento Valley Index (Oct – Nov).
[2] TAF/year = thousand acre-feet per year

Environmental Water Demand

Environmental water demands met by Alternatives 2 and 3 are represented in the model by Incremental Level 4 and replacement demands, as established by water service contracts in the San Joaquin Valley and Tulare Basin. The annual refuge demands have been scaled up to account for an assumed average 11.3 percent conveyance loss. **Table C3-6** summarizes monthly refuge demands to be met through deliveries from the project facilities for Alternatives 2 and 3.

In Alternative 2, environmental water is delivered through the South Bay Connection to Bethany Reservoir, and from there to San Luis Reservoir. In Alternative 3, there is no direct connection from the project facilities to Bethany Reservoir to deliver refuge supplies. Instead, CCWD foregoes its CVP contract diversions during Delta balanced conditions and meets demands through releases from an expanded Los Vaqueros Reservoir. The forgone Delta diversions are wheeled through available capacity at the CVP Jones Pumping Plant and delivered to the refuges as additional environmental water supply.

TABLE C3-6:
REFUGE DEMANDS BY MONTH (TAF)

Month	San Joaquin Valley	Tulare Basin	Total
January	7.2	1.3	8.4
February	6.2	1.1	7.3
March	3.5	0.6	4.1
April	3.5	0.6	4.1
May	9.5	1.7	11.2
June	6.3	1.1	7.4
July	4.5	0.8	5.3
August	7.8	1.4	9.1
September	28.1	5.0	33.1
October	27.7	4.9	32.6
November	13.2	2.3	15.5
December	8.6	1.5	10.1
Total Annual (TAF/yr)	**126.0**	**22.3**	**148.2**

Water Supply Assumptions

CCWD Supply

On May 10, 2005, CCWD signed a long-term contract with Reclamation for delivery of up to 195,000 acre-feet of water per year for M&I uses in the CCWD service area. The contract expires in 2045. Through a settlement agreement with EBMUD, CCWD may receive a portion of its CVP supplies from the existing intertie with the Mokelumne Aqueduct. This settlement agreement supply is outlined in Table C3-1. The CVP annual allocation to north-of-Delta (NOD) M&I water service contractors is assigned for the contract year beginning in March and ending in February and is taken from CalSim II. For modeling purposes and the allocation of shortages, it is considered that CCWD facilities are NOD.

D-1629, issued on June 2, 1994, gives CCWD the rights to divert and store water for beneficial uses. Under SWRCB Water Right Permits No. 20749 and 20750, CCWD may fill Los Vaqueros Reservoir from the intake at Old River and divert and store water from Kellogg Creek.

These rights are in addition to the contractual rights to divert and store CVP contract water. Up to 95,850 acre-feet per year may be diverted for storage between November 1 and June 30 at a maximum rate of 200 cfs. Diversion is limited to periods when the Delta is in excess water conditions under the Coordinated Operations Agreement when those diversions will not adversely impact the operations of the SWP and CVP. CCWD may also divert water under its CVP water supply contract to storage in Los Vaqueros Reservoir throughout the year. CCWD diversions and filling of the reservoir are also subject to the provisions of the 1993 delta smelt and chinook salmon BOs.

The water right permit for filling Los Vaqueros Reservoir includes the diversion and storage of water from Kellogg Creek (up to 9,640 acre-feet per year). The simulated inflow from Kellogg Creek was defined as part of the modeling effort conducted for the 2004 Project Planning Report (CCWD, DWR, Reclamation, 2004). For the period of October 1921 to September 2003, Kellogg Creek inflow varies between 0 and 9,000 acre-feet per year, with an average of approximately 1,400 acre-feet per year; 96 percent of the inflow occurs from December to April.

CCWD can divert up to 26,780 acre-feet per year of water from Mallard Slough under its own water rights (SWRCB Water Right License No. 317 and Permit No. 19856). Diversions under this water right are not explicitly modeled in this study. The City of Antioch and several industrial customers of CCWD have water right permits to divert water from the Delta. These diversions are included in the CalSim II model through CCWD's diversions, and to some extent through the Delta Island Consumptive Use (DICU) estimates.

Historically, CCWD has relied on water transfers to supplement its CVP contract allocation. For example, in 2003, CCWD purchased 5,000 acre-feet from Yuba County Water Agency and CCWD regularly uses water under its contract with East Contra Costa Irrigation District. The availability of water from single-year transfer agreements is represented indirectly. In the operations modeling, water transfers are represented to a limited extent. It is assumed that transfer water is available once CCWD has depleted its annual CVP allocation. Typically, CCWD will purchase an amount of water equal to the difference between its annual demand and its CVP allocation, consistent with CCWD's Future Water Supply Implementation EIR.

Operational Constraints

San Luis Reservoir

Storage in San Luis Reservoir plays a role in the delivery of refuge and SCVWD CVP water from the Los Vaqueros facilities in Alternative 2 because these supplies are temporarily stored in San Luis Reservoir for use in later months to match the monthly demand patterns. It has been assumed that other similar environmental water programs would also rely on San Luis Reservoir operations.

Preference is given to storing CVP and SWP water in San Luis Reservoir, so current and future available storage in San Luis Reservoir is evaluated in the model used in this EIS/EIR to ensure that Los Vaqueros supplies (refuge and SCVWD CVP) stored in San Luis Reservoir are not "spilled" in later months because of San Luis Reservoir reaching the top of the conservation pool. For modeling purposes, a perfect forecast of the storage at the end of the filling cycle was used to avoid spilling. During CalSim II simulation, a cumulative account of stored Los Vaqueros water

in San Luis Reservoir is maintained. In any given month, the allowable releases from the project facilities cannot exceed the following:

- The annual demand (the sum of refuge and SCVWD CVP reliability demands and SCVWD April CVP allocation for M&I use), accounting for all deliveries made in previous months of that year.
- The available storage capacity in San Luis Reservoir (including the cumulative Los Vaqueros account) less the sum of refuge and SCVWD CVP demands for that month.
- The projected available storage capacity in San Luis Reservoir (including the cumulative Los Vaqueros account) at the end of the filling cycle minus total annual demands (refuge plus SCVWD CVP reliability plus SCVWD CVP M&I April allocation).

When there are no Los Vaqueros supplies in San Luis Reservoir, Los Vaqueros Reservoir can be used to meet SCVWD CVP and refuge demands. When Los Vaqueros Reservoir is at or below 80 TAF, no deliveries are made to either of these entities.

Los Vaqueros Reservoir

As described in Chapter 2.1.2, existing biological opinions for the Los Vaqueros Project impose certain restrictions on operations of the Los Vaqueros system and CCWD's Delta diversions, including an annual 75-day no-fill period and a concurrent 30-day no-diversion period. The default dates for the no-fill and no-diversion periods are March 15 through May 31 and April 1 through April 30, respectively. Per the biological opinions, these restrictions are waived if storage in Los Vaqueros Reservoir is at or below emergency levels of 70 TAF in wet, above-normal, or below normal water years, and 44 TAF in dry or critically dry water years. In the CalSim II modeling for this Draft EIS/EIR, the default no-fill and no-diversion periods are applied in CCWD operations for the Existing and Future Without Project conditions and for Alternative 4. For Alternatives 1, 2 and 3, a 30-day no diversion period was assumed to be in effect.

In all scenarios, water is preferentially diverted at the Old River, AIP and (in the case of Alternative 1 and 2) new Delta intakes, over the Rock Slough intake, unless this preference results in a reduction in total diversions. This maximizes use of currently screened intakes.

The operations model fills Los Vaqueros Reservoir with water from the Delta of up to 65 mg/L chloride concentration. Due to evaporation, it is possible for Los Vaqueros Reservoir to exceed 65 mg/L chloride concentration; under such a circumstance, filling with water above 65 mg/L chloride concentration is allowed as long as it lowers the salinity in the reservoir.

The increased number of available intakes in the Delta with the construction of the AIP Intake and the potential new Delta Intake provides increased flexibility to respond to the results of fish monitoring by allow greater flexibility in the point(s) of diversion. The benefits of this added flexibility have been determined through a post processing to the CalSim II results to allow a shift in diversions from intakes where fish densities are higher (according to historical survey and salvage data) to intakes where fish densities are lower (See Appendix C-7).

Alternatives 1 & 2

To improve fish screening in Delta diversions, Alternative 1 shifts the pumping of SWP and CVP supplies for South Bay water agencies to the more effectively screened Los Vaqueros Reservoir system intakes from the existing SWP or CVP export facilities. Alternative 1 also provides Delta supply restoration for these same agencies through direct diversions or by making releases from Los Vaqueros Reservoir. Alternative 2 performs the same improved fish screening operations as Alternative 1. It also provides environmental water supplies for refuges, wildlife areas, and wetlands in the San Joaquin Valley.

In the modeling for Alternatives 1 and 2, first priority was given to improved fish screening operations, as governed by the following assumed operational rules:

- A 30-day no-diversion period is observed in the spring (April) of each year at CCWD intakes (other than to meet CCWD service area demands when storage in Los Vaqueros Reservoir is at or below emergency levels). Deliveries to the SBA and SCVWD are made through releases from Los Vaqueros Reservoir during these no-diversion periods.

- During periods of suitable water quality (< 65 mg/L chloride at CCWD intakes), filling of Los Vaqueros Reservoir is given priority over deliveries to South Bay water agencies under improved fish screening operations.

- Delivery of CVP/SWP contract water to South Bay water agencies through the expanded Los Vaqueros system is limited to the exports at Banks Pumping Plant and Jones Pumping Plant that would have occurred to deliver water to the SBA and SCVWD in the absence of the project. These deliveries are augmented with Delta Supply Restoration in Alternative 1 only, as described above in the discussion of water demand assumptions.

- Water deliveries to South Bay water agencies that are shifted from Banks and Jones pumping plants to the Los Vaqueros system are assumed to be diverted from the Delta year-round, with the exception of the 30-day no-diversion period, as described above. Additional deliveries for Delta Supply Restoration that are made in Alternative 1 only are assumed to be diverted directly from the Delta when surplus water is available, and are assumed to be released from Los Vaqueros Reservoir when the Delta is in balanced conditions.

- Delivery of CVP/SWP contract water to South Bay water agencies through the expanded Los Vaqueros system is given conveyance capacity priority (to Bethany Reservoir) over deliveries for Delta Supply Restoration in Alternative 1.

- Releases are made from Los Vaqueros Reservoir to the South Bay water agencies during the 30-day no diversion period, when direct delivery via direct diversion at Rock Slough, Old River, AIP and the new Delta Intakes is precluded by the no-

diversion period, and when storage is Los Vaqueros Reservoir is above 80 TAF. If storage in Los Vaqueros Reservoir is below 80 TAF during this period, the South Bay water agency contract deliveries are made through Banks and Jones Pumping Plants. The use of 80 TAF as a threshold to stop reservoir releases to the South Bay water agencies was intended to preserve CCWD's existing benefit in the reservoir.

- Reduction in exports are made at Banks Pumping Plant equal to the volume of water wheeled through Los Vaqueros diversion facilities or released from Los Vaqueros Reservoir to meet SWP/CVP contract allocations.

- SWP is compensated for wheeling of CVP water through LV facilities, and corresponding reduction in exports at Banks Pumping Plant, through reassignment of storage in San Luis Reservoir from CVP water to SWP water.

- Wheeled water is subject to the E/I standard. D-1641 specifies export limits in the form of an E/I ratio, and defines export as the combined inflow rate to Clifton Court Forebay and the export rate of the Jones Pumping Plant. CCWD is considered an in-Delta diverter, not an exporter; therefore the project diversions used by CCWD are not constrained by the E/I ratio. For modeling purposes, water deliveries to South Bay water agencies that are shifted from Banks or Jones export facilities to the Los Vaqueros system in Alternatives 1 and 2 are assumed to be limited by E/I requirements.

Delta Supply Restoration demands (Alternative 1) or environmental water supply deliveries (Alternative 2) would be met through additional diversions at project facilities during Delta excess conditions, either for direct delivery or for storage in Los Vaqueros Reservoir for later release. Assumed operating rules for these diversions and deliveries are as follows:

- Deliveries from Los Vaqueros facilities for Delta supply restoration (Alternative 1) or environmental water supply (Alternative 2) are secondary to deliveries to South Bay water agencies under improved fish screening operations.

- During periods of suitable water quality (< 65 mg/L chloride), filling of Los Vaqueros Reservoir is given priority over delivery of Delta Supply Restoration or environmental water supply.

- Diversions for direct delivery are limited by existing X2 requirements.

- Releases from Los Vaqueros Reservoir for refuge supply are restricted when Los Vaqueros Reservoir storage is at or below 80 TAF.

Alternative 3

As modeled under Alternative 3, CCWD would forego Delta diversions to provide water supplies for environmental use by relying on supplies from an expanded Los Vaqueros Reservoir when the following conditions are met:

- Balanced water conditions exist in the Delta from December through June
- Storage in Los Vaqueros Reservoir is above 80,000 acre-feet
- Delta diversions foregone by CCWD can be retained in Shasta Reservoir without being released to meet instream flow requirements

Water retained in Shasta Reservoir in this manner would increase water storage in the summer, which would help maintain the cold water pool needed for temperature control in the Sacramento River in summer and fall. Water stored in Shasta Reservoir in this manner would be conveyed through the Delta for south-of-Delta environmental purposes, such as delivery for Level 4 refuge water supply, when there is available capacity at the CVP/SWP export pumps, as limited by permit conditions at Jones Pumping Plant.

Alternative 4

Under Alternative 4, CCWD would operate an expanded Los Vaqueros Reservoir for blending purposes and water supply reliability. Operational criteria would be as described for the No Action/No Project Alternative.

C-4 MODEL RESULTS – WATER SUPPLY AND MANAGEMENT

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Tables

Figures

Introduction

This appendix presents a summary of CalSim II model results for the project alternatives. For 2005 level of development, the project alternatives are compared to the Existing Condition. For 2030 level of development, the project alternatives are compared to the Future Without Project condition.

2005 Level of Development, Severe Fishery Restrictions

Model results for each project alternative are presented in **Table C4-1(A-D)** as average values for the full hydrologic study period (1921 to 2003) and a six-year dry period (1987 to 1992). These results include upstream and Delta flows and diversions (e.g. flow in Sacramento River and major tributaries, San Joaquin River flow, exports at Banks and Jones Pumping Plants, Net Delta Outflow, X2 position and QWEST), CVP and SWP south of Delta deliveries, CVP and SWP reservoir carry-over storages (at Folsom, Oroville, San Luis, Shasta and Trinity Reservoirs), and parameters specific to project alternative operations (CCWD and Los Vaqueros Reservoir (LV) diversions; additional south of Delta Environmental Water Supply deliveries; and Delta Supply Restoration deliveries to South Bay water agencies).

Table C4-2 and **Table C4-3** present the change in Delta channel flows and indices, upstream reservoir storages and local operation parameters for each project alternative as compared to the Existing Condition. Results are summarized in these tables as averages by water year type and by month, respectively.

Table C4-4 (A-D) presents the changes from the Existing Condition in monthly Banks and Jones export diversions for each project alternative, and **Table C4-5 (A-D)** presents the changes from the Existing Condition in monthly CCWD and Los Vaqueros Reservoir (LV) diversions for each project alternative. These tables also indicate whether the Delta is in excess or balanced conditions.

Monthly and year type average changes in various Delta parameters (Sacramento River flow at Hood, San Joaquin River flow at Vernalis, Delta Outflow, combined Banks and Jones diversions, and combined CCWD and LV diversions) are presented in **Figure C4-1** through **Figure C4-5** and **Figure C4-11** through **Figure C4-15**, respectively. **Figure C4-6** shows the monthly average Los Vaqueros storage and **Figure C4-7** through **Figure C4-10** show time-series of storage for each alternative and the Existing Conditions.

Figure C4-16 through **Figure C4-21** are exceedence plots of the end of September storage in upstream reservoirs (Trinity, Shasta, Oroville, and Folsom) and San Luis Reservoir (CVP and SWP).

TABLE C4-1:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2005 LOD, SEVERE FISHERY RESTRICTIONS

(A) ALTERNATIVE 1 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 1		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	133	362	278	235	145	184%	109%
Banks Pumping Plant	2626	1508	2421	1374	-205	-133	-8%	-9%
Jones Pumping Plant	2151	1722	2153	1722	2	0	0%	0%
Total	4904	3363	4936	3375	32	12	1%	0%
Delta (cfs)								
Sacramento River at Hood	22,408	12,922	22,406	12,920	-2	-2	0%	0%
San Joaquin River at Vernalis	4,284	1,595	4,284	1,595	0	0	0%	0%
Delta Outflow	22,461	8,648	22,417	8,630	-44	-18	0%	0%
QWEST	3,258	223	3,215	212	-42	-11	-1%	-5%
X2 Position (km)	74.82	81.53	74.86	81.55	0.04	0.01	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,550	6,310	8,549	6,311	-1	1	0%	0%
American River below Nimbus Dam	3,491	1,651	3,490	1,651	0	0	0%	0%
Feather River below Thermalito	4,402	2,324	4,402	2,320	0	-4	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,419	841	1,422	836	3	-5	0%	-1%
Shasta	2,798	1,798	2,789	1,780	-8	-18	0%	-1%
Oroville	2,183	1,248	2,184	1,255	1	7	0%	1%
Folsom	544	344	541	338	-2	-6	0%	-2%
CVP San Luis (August)	158	94	159	94	1	0	1%	0%
SWP San Luis (August)	244	119	243	119	0	0	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	823	393	823	393	1	-1	0%	0%
CVP SOD M&I	114	99	114	100	0	1	0%	1%
SWP Table A + Article 56	2,486	1,467	2,486	1,480	0	13	0%	1%
SWP Article 21	85	0	85	0	0	0	0%	NA
Delta Supply Restoration + Dry Year	0	0	27	30	27	30	NA	NA

(B) ALTERNATIVE 2 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 2		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	133	381	291	253	158	199%	119%
Banks Pumping Plant	2626	1508	2425	1373	-201	-135	-8%	-9%
Jones Pumping Plant	2151	1722	2151	1720	0	-2	0%	0%
Total	4904	3363	4957	3384	52	21	1%	1%
Delta (cfs)								
Sacramento River at Hood	22,408	12,922	22,410	12,920	2	-2	0%	0%
San Joaquin River at Vernalis	4,284	1,595	4,284	1,595	0	0	0%	0%
Delta Outflow	22,461	8,648	22,390	8,618	-71	-30	0%	0%
QWEST	3,258	223	3,189	199	-69	-24	-2%	-11%
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,550	6,310	8,549	6,313	-1	3	0%	0%
American River below Nimbus Dam	3,491	1,651	3,491	1,651	0	0	0%	0%
Feather River below Thermalito	4,402	2,324	4,402	2,317	0	-8	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,419	841	1,420	834	2	-7	0%	-1%
Shasta	2,798	1,798	2,788	1,771	-10	-27	0%	-1%
Oroville	2,183	1,248	2,181	1,257	-2	9	0%	1%
Folsom	544	344	541	338	-2	-6	0%	-2%
CVP San Luis (August)	158	94	158	94	1	0	1%	0%
SWP San Luis (August)	244	119	243	119	0	0	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	823	393	822	391	-1	-3	0%	-1%
CVP SOD M&I	114	99	114	100	0	1	0%	1%
SWP Table A + Article 56	2,486	1,467	2,484	1,478	-1	11	0%	1%
SWP Article 21	85	0	85	0	-1	0	-1%	NA
Additional SOD Env Water Supply	0	0	51	43	51	43	NA	NA

TABLE C4-1:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2005 LOD, SEVERE FISHERY RESTRICTIONS

(C) ALTERNATIVE 3 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 3		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	133	130	106	3	-27	2%	-21%
Banks Pumping Plant	2626	1508	2643	1515	17	8	1%	1%
Jones Pumping Plant	2151	1722	2155	1740	4	18	0%	1%
Total	4904	3363	4928	3361	24	-2	0%	0%
Delta (cfs)								
Sacramento River at Hood	22,408	12,922	22,406	12,921	-2	0	0%	0%
San Joaquin River at Vernalis	4,284	1,595	4,284	1,595	0	0	0%	0%
Delta Outflow	22,461	8,648	22,424	8,651	-38	3	0%	0%
QWEST	3,258	223	3,225	231	-33	8	-1%	4%
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,550	6,310	8,547	6,299	-2	-11	0%	0%
American River below Nimbus Dam	3,491	1,651	3,491	1,656	0	5	0%	0%
Feather River below Thermalito	4,402	2,324	4,402	2,326	0	1	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,419	841	1,424	852	6	11	0%	1%
Shasta	2,798	1,798	2,796	1,803	-1	5	0%	0%
Oroville	2,183	1,248	2,178	1,246	-5	-3	0%	0%
Folsom	544	344	542	332	-2	-12	0%	-3%
CVP San Luis (August)	158	94	157	94	0	0	0%	0%
SWP San Luis (August)	244	119	244	114	0	-5	0%	-5%
Deliveries (TAF/yr)								
CVP SOD Ag	823	393	823	394	1	1	0%	0%
CVP SOD M&I	114	99	114	99	0	0	0%	0%
SWP Table A + Article 56	2,486	1,467	2,492	1,473	6	7	0%	0%
SWP Article 21	85	0	93	0	8	0	9%	NA
Additional SOD Env Water Supply	0	0	7	24	7	24	NA	NA

(D) ALTERNATIVE 4 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 4		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	133	128	124	1	-9	1%	-7%
Banks Pumping Plant	2626	1508	2628	1510	2	2	0%	0%
Jones Pumping Plant	2151	1722	2153	1729	2	7	0%	0%
Total	4904	3363	4909	3363	5	0	0%	0%
Delta (cfs)								
Sacramento River at Hood	22,408	12,922	22,410	12,915	2	-7	0%	0%
San Joaquin River at Vernalis	4,284	1,595	4,284	1,595	0	0	0%	0%
Delta Outflow	22,461	8,648	22,452	8,642	-9	-7	0%	0%
QWEST	3,258	223	3,251	224	-7	1	0%	0%
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,550	6,310	8,548	6,307	-1	-3	0%	0%
American River below Nimbus Dam	3,491	1,651	3,491	1,651	0	0	0%	0%
Feather River below Thermalito	4,402	2,324	4,402	2,322	0	-2	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,419	841	1,421	850	2	9	0%	1%
Shasta	2,798	1,798	2,800	1,804	2	6	0%	0%
Oroville	2,183	1,248	2,180	1,251	-3	2	0%	0%
Folsom	544	344	543	345	0	1	0%	0%
CVP San Luis (August)	158	94	157	94	-1	0	0%	0%
SWP San Luis (August)	244	119	243	119	0	0	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	823	393	825	399	2	6	0%	2%
CVP SOD M&I	114	99	114	100	0	1	0%	1%
SWP Table A + Article 56	2,486	1,467	2,488	1,469	2	2	0%	0%
SWP Article 21	85	0	86	0	0	0	0%	NA

TABLE C4-2:
ANNUAL VALUES BY WATER YEAR TYPE, 2005 LOD, SEVERE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
CCWD and LV Diversions (TAF/yr)							
Average Total Diversions Existing Condition	**127**	**133**	**122**	**137**	**136**	**129**	**116**
Changes under Alternative 1	235	145	279	243	242	224	137
Changes under Alternative 2	253	158	300	265	262	239	152
Changes under Alternative 3	3	-27	12	18	9	2	-36
Changes under Alternative 4	1	-9	8	8	1	-8	-9
Improved Fish Screening Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	189	135	228	188	190	167	139
Changes under Alternative 2	184	135	222	184	180	163	138
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta (cfs)							
Sacramento River at Hood Existing Condition	**22,408**	**12,922**	**33,127**	**25,434**	**18,639**	**15,481**	**10,943**
Changes under Alternative 1	-2	-2	-17	16	8	7	-14
Changes under Alternative 2	2	-2	-18	22	13	17	-8
Changes under Alternative 3	-2	0	-12	1	7	14	-19
Changes under Alternative 4	2	-7	3	0	2	-2	8
San Joaquin River at Vernalis Existing Condition	**4,284**	**1,595**	**7,529**	**4,016**	**3,336**	**2,244**	**1,686**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta Outflow Existing Condition	**22,461**	**8,648**	**40,636**	**24,479**	**15,117**	**10,915**	**6,955**
Changes under Alternative 1	-44	-18	-65	-30	-44	-42	-16
Changes under Alternative 2	-71	-30	-110	-70	-58	-58	-21
Changes under Alternative 3	-38	3	-57	-27	-41	-26	-19
Changes under Alternative 4	-9	-7	-18	-19	6	-10	5
Banks Pumping Plant Existing Condition	**3,617**	**2,082**	**4,677**	**3,807**	**3,545**	**3,101**	**1,991**
Changes under Alternative 1	-282	-184	-339	-285	-283	-255	-193
Changes under Alternative 2	-278	-186	-330	-281	-279	-249	-202
Changes under Alternative 3	24	11	24	3	34	21	39
Changes under Alternative 4	4	3	1	-1	-1	10	11
Jones Pumping Plant Existing Condition	**2,964**	**2,378**	**3,443**	**3,084**	**2,943**	**2,719**	**2,198**
Changes under Alternative 1	2	0	4	2	2	-4	7
Changes under Alternative 2	-1	-2	4	-1	-10	-4	6
Changes under Alternative 3	5	25	-1	-3	2	18	10
Changes under Alternative 4	3	10	0	5	-4	9	4
Banks + Jones Exports Existing Condition	**6,581**	**4,461**	**8,119**	**6,891**	**6,489**	**5,820**	**4,189**
Changes under Alternative 1	-280	-184	-335	-283	-281	-259	-187
Changes under Alternative 2	-278	-189	-326	-282	-289	-253	-196
Changes under Alternative 3	29	35	24	0	36	39	49
Changes under Alternative 4	6	13	1	4	-5	19	15
Banks + Jones + CCWD + LV Diversions Existing Condition	**6,757**	**4,644**	**8,288**	**7,080**	**6,676**	**5,997**	**4,348**
Changes under Alternative 1	43	16	49	51	52	49	2
Changes under Alternative 2	70	28	87	83	71	75	14
Changes under Alternative 3	33	-3	40	24	48	41	-1
Changes under Alternative 4	7	0	12	15	-4	7	2
QWEST Existing Condition	**3,258**	**223**	**7,543**	**3,285**	**1,654**	**293**	**265**
Changes under Alternative 1	-42	-11	-52	-47	-49	-45	-4
Changes under Alternative 2	-69	-24	-90	-78	-66	-69	-15
Changes under Alternative 3	-33	8	-42	-22	-47	-35	-3
Changes under Alternative 4	-7	1	-12	-15	4	-7	-1
X2 Position (km) Existing Condition	**74.82**	**81.53**	**68.47**	**73.01**	**76.20**	**78.96**	**82.53**
Changes under Alternative 1	0.04	0.01	0.05	0.02	0.04	0.05	0.02
Changes under Alternative 2	0.06	0.02	0.07	0.05	0.04	0.06	0.03
Changes under Alternative 3	0.02	0.00	0.04	0.01	0.02	0.02	0.01
Changes under Alternative 4	0.00	0.01	0.01	0.01	0.00	0.01	-0.01
Upstream River Flows (cfs)							
Sacramento River at Keswick Existing Condition	**8,550**	**6,310**	**11,630**	**8,688**	**7,033**	**6,798**	**6,134**
Changes under Alternative 1	-1	1	-13	13	16	7	-18
Changes under Alternative 2	-1	3	-17	12	13	12	-15
Changes under Alternative 3	-2	-11	-15	11	15	13	-31
Changes under Alternative 4	-1	-3	-3	10	-3	-3	-4
American River below Nimbus Existing Condition	**3,491**	**1,651**	**5,476**	**3,901**	**2,958**	**2,144**	**1,419**
Changes under Alternative 1	0	0	-1	1	-7	5	-1
Changes under Alternative 2	0	0	-1	1	-8	6	0
Changes under Alternative 3	0	5	0	-1	2	1	-2
Changes under Alternative 4	0	0	0	0	-2	1	0

TABLE C4-2:
ANNUAL VALUES BY WATER YEAR TYPE, 2005 LOD, SEVERE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
Feather River below Thermalito							
Existing Condition	**4,402**	**2,324**	**6,783**	**4,419**	**3,529**	**3,059**	**2,261**
Changes under Alternative 1	0	-4	-3	9	1	-6	5
Changes under Alternative 2	0	-8	-6	1	6	-2	7
Changes under Alternative 3	0	1	3	-12	-9	0	16
Changes under Alternative 4	0	-2	-2	-14	4	0	12
Reservoir Carryover Storage (TAF)							
Trinity Existing Condition	**1,419**	**841**	**1,863**	**1,645**	**1,298**	**1,172**	**743**
Changes under Alternative 1	3	-5	0	6	8	3	5
Changes under Alternative 2	2	-7	0	2	3	1	4
Changes under Alternative 3	6	11	1	12	9	2	11
Changes under Alternative 4	2	9	0	1	3	1	7
Shasta Existing Condition	**2,798**	**1,798**	**3,344**	**3,245**	**2,920**	**2,522**	**1,438**
Changes under Alternative 1	-8	-18	0	-5	-26	-12	-4
Changes under Alternative 2	-10	-27	-1	-5	-26	-14	-10
Changes under Alternative 3	-1	5	-1	-4	-10	-9	21
Changes under Alternative 4	2	6	0	0	5	2	6
Oroville Existing Condition	**2,183**	**1,248**	**3,055**	**2,453**	**2,068**	**1,530**	**1,137**
Changes under Alternative 1	1	7	2	-2	1	3	0
Changes under Alternative 2	-2	9	1	-3	-13	0	-1
Changes under Alternative 3	-5	-3	-1	-3	-2	-8	-17
Changes under Alternative 4	-3	2	-1	-1	-4	-1	-8
Folsom Existing Condition	**544**	**344**	**646**	**609**	**584**	**465**	**326**
Changes under Alternative 1	-2	-6	0	-1	-2	-7	-1
Changes under Alternative 2	-2	-6	0	-1	-2	-8	-1
Changes under Alternative 3	-2	-12	0	0	-2	-5	-1
Changes under Alternative 4	0	1	0	0	0	-1	1
CVP San Luis (August) Existing Condition	**158**	**94**	**223**	**146**	**123**	**114**	**134**
Changes under Alternative 1	1	0	1	-2	7	-1	2
Changes under Alternative 2	1	0	1	-2	5	-1	2
Changes under Alternative 3	0	0	1	-2	3	-2	-1
Changes under Alternative 4	-1	0	0	0	-5	0	0
SWP San Luis (August) Existing Condition	**244**	**119**	**473**	**167**	**137**	**132**	**115**
Changes under Alternative 1	0	0	1	-3	-1	0	0
Changes under Alternative 2	0	0	1	-3	-1	0	0
Changes under Alternative 3	0	-5	3	-5	0	-2	0
Changes under Alternative 4	0	0	-1	-1	0	0	0
CVP and SWP Deliveries (TAF/year)							
CVP SOD Ag Existing Condition	**823**	**393**	**1,256**	**892**	**740**	**551**	**319**
Changes under Alternative 1	1	-1	5	3	-3	1	-5
Changes under Alternative 2	-1	-3	4	1	-10	0	-6
Changes under Alternative 3	1	1	1	1	-4	3	1
Changes under Alternative 4	2	6	0	-2	2	8	2
CVP SOD M&I Existing Condition	**114**	**99**	**128**	**112**	**112**	**108**	**96**
Changes under Alternative 1	0	1	0	0	0	1	0
Changes under Alternative 2	0	1	0	-1	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	1	0	0	0	0	0
SWP Table A + Article 56 Existing Condition	**2,486**	**1,467**	**3,025**	**2,627**	**2,576**	**2,267**	**1,399**
Changes under Alternative 1	0	13	0	-1	-1	-3	8
Changes under Alternative 2	-1	11	0	-2	-2	-5	2
Changes under Alternative 3	6	7	-2	-3	8	9	26
Changes under Alternative 4	2	2	0	-2	-1	7	9
SWP Article 21 Existing Condition	**85**	**0**	**191**	**76**	**50**	**21**	**3**
Changes under Alternative 1	0	0	0	0	1	0	0
Changes under Alternative 2	-1	0	0	0	-3	0	0
Changes under Alternative 3	8	0	18	2	12	0	0
Changes under Alternative 4	0	0	1	0	0	0	0
Improved Fish Screening for CVP South Bay	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	76	73	79	75	77	73	73
Changes under Alternative 2	74	74	76	73	74	71	74
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	129	71	167	129	129	108	76
Changes under Alternative 2	125	70	164	126	122	105	76
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
CVP Delta Supply Restoration							
Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	6	5	5	5	6	8	8
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-2:
ANNUAL VALUES BY WATER YEAR TYPE, 2005 LOD, SEVERE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
SWP Delta Supply Restoration Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	21	25	12	13	15	27	44
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from Dedicated Storage Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	51	43	42	43	50	64	64
Changes under Alternative 3	7	24	1	4	5	19	8
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-3:
AVERAGE MONTHLY VALUES, 2005 LOD, SEVERE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CCWD and LV Diversions (TAF)												
Average Total Diversions Existing Condition	**7**	**6**	**6**	**6**	**7**	**7**	**2**	**11**	**22**	**22**	**18**	**12**
Changes under Alternative 1	13	17	20	21	17	27	-2	33	20	22	23	25
Changes under Alternative 2	15	20	24	25	19	28	-1	33	21	23	23	25
Changes under Alternative 3	-1	-1	0	0	1	1	-2	7	-6	4	0	0
Changes under Alternative 4	0	0	0	0	0	0	-1	0	0	0	1	0
Improved Fish Screening Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	12	15	18	19	14	23	0	10	14	18	22	24
Changes under Alternative 2	12	15	17	19	14	22	0	10	13	17	22	23
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta (cfs)												
Sacramento River at Hood Existing Condition	**11,910**	**15,539**	**25,741**	**34,475**	**40,240**	**34,931**	**24,085**	**19,836**	**15,575**	**18,272**	**14,880**	**13,410**
Changes under Alternative 1	-10	-33	-18	-13	-25	10	-40	33	76	69	-56	-17
Changes under Alternative 2	-12	-35	-22	-18	-8	-7	-37	25	86	125	-35	-34
Changes under Alternative 3	-20	-1	-23	-16	13	-9	-28	-9	-59	27	-2	103
Changes under Alternative 4	-1	5	10	3	-6	4	-16	0	-5	8	18	3
San Joaquin River at Vernalis Existing Condition	**2,547**	**2,731**	**3,484**	**4,857**	**6,598**	**6,478**	**6,022**	**6,065**	**4,681**	**3,244**	**2,129**	**2,570**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta Outflow Existing Condition	**5,161**	**9,743**	**24,095**	**43,797**	**55,745**	**46,645**	**29,756**	**22,275**	**14,065**	**8,116**	**4,652**	**5,488**
Changes under Alternative 1	-39	-56	-62	-10	-75	-51	137	-319	-23	30	-29	-31
Changes under Alternative 2	-73	-104	-150	-47	-124	-93	135	-338	-37	42	-26	-38
Changes under Alternative 3	-29	-7	-126	-114	-15	-47	-11	-130	38	-20	-3	12
Changes under Alternative 4	-3	14	-26	-81	-14	2	8	8	-8	1	4	-12
Banks Pumping Plant Existing Condition	**4,312**	**4,755**	**4,875**	**4,088**	**3,401**	**2,193**	**1,280**	**1,471**	**1,401**	**5,168**	**5,522**	**4,944**
Changes under Alternative 1	-196	-262	-302	-317	-256	-366	-237	-166	-232	-294	-364	-389
Changes under Alternative 2	-192	-265	-298	-345	-250	-354	-233	-161	-217	-261	-355	-401
Changes under Alternative 3	-4	24	72	77	5	34	24	8	-1	-3	-7	63
Changes under Alternative 4	-2	-6	12	32	-5	0	2	-1	0	4	3	3
Jones Pumping Plant Existing Condition	**3,963**	**3,965**	**3,683**	**3,555**	**2,649**	**1,789**	**1,372**	**1,390**	**1,208**	**3,866**	**4,092**	**4,033**
Changes under Alternative 1	8	3	7	2	-9	-2	90	-13	-3	-25	-29	-9
Changes under Alternative 2	7	3	11	-25	-2	-2	88	-14	-5	-29	-31	-9
Changes under Alternative 3	25	-3	16	32	-8	-10	-11	-5	0	-8	0	34
Changes under Alternative 4	2	1	0	31	10	3	-11	0	0	-5	-1	3
Banks + Jones Exports Existing Condition	**8,275**	**8,719**	**8,558**	**7,643**	**6,050**	**3,982**	**2,652**	**2,861**	**2,609**	**9,034**	**9,614**	**8,977**
Changes under Alternative 1	-188	-259	-295	-314	-264	-368	-147	-178	-235	-319	-393	-398
Changes under Alternative 2	-186	-262	-287	-370	-252	-355	-145	-174	-222	-289	-386	-409
Changes under Alternative 3	21	21	87	108	-3	24	13	3	-1	-11	-7	97
Changes under Alternative 4	0	-5	12	63	6	3	-9	-1	0	-1	2	6
Banks + Jones + CCWD + LV Diversions Existing Condition	**8,390**	**8,827**	**8,659**	**7,741**	**6,180**	**4,090**	**2,689**	**3,044**	**2,982**	**9,384**	**9,914**	**9,181**
Changes under Alternative 1	29	23	38	22	35	64	-175	353	99	39	-27	14
Changes under Alternative 2	55	67	105	38	93	94	-170	364	123	83	-9	4
Changes under Alternative 3	8	7	81	109	12	39	-17	121	-97	46	1	90
Changes under Alternative 4	1	-9	12	68	8	2	-24	-8	4	7	14	14

TABLE C4-3:
AVERAGE MONTHLY VALUES, 2005 LOD, SEVERE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
QWEST Existing Condition	**-929**	**-929**	**1,395**	**6,159**	**9,780**	**9,815**	**8,085**	**6,456**	**5,097**	**-1,353**	**-2,944**	**-1,535**
Changes under Alternative 1	-30	-28	-41	-24	-38	-63	169	-348	-78	-19	10	-19
Changes under Alternative 2	-56	-72	-109	-41	-94	-95	165	-360	-99	-47	-1	-14
Changes under Alternative 3	-13	-6	-86	-111	-10	-40	13	-122	81	-38	-1	-60
Changes under Alternative 4	-1	9	-10	-67	-9	-1	22	8	-5	-4	-8	-14
X2 Position (km) Existing Condition	**85.09**	**85.39**	**82.44**	**76.93**	**69.63**	**64.10**	**63.27**	**66.17**	**69.29**	**73.92**	**78.19**	**83.37**
Changes under Alternative 1	0.05	0.05	0.06	0.04	0.03	0.03	0.03	-0.03	0.12	0.06	-0.02	0.04
Changes under Alternative 2	0.07	0.09	0.10	0.10	0.05	0.04	0.04	-0.03	0.14	0.07	-0.02	0.03
Changes under Alternative 3	-0.03	0.03	0.01	0.06	0.07	0.03	0.02	0.01	0.06	-0.01	0.02	0.01
Changes under Alternative 4	0.01	0.01	-0.01	-0.01	0.02	0.01	0.00	0.00	-0.01	0.01	0.00	-0.01
E/I Ratio Existing Condition	**0.57**	**0.52**	**0.42**	**0.27**	**0.14**	**0.09**	**0.08**	**0.10**	**0.10**	**0.41**	**0.54**	**0.57**
Changes under Alternative 1	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 2	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream River Flows (cfs)												
Sacramento River at Keswick Existing Condition	**6,233**	**5,899**	**7,359**	**8,707**	**10,924**	**8,733**	**6,979**	**7,822**	**10,193**	**12,961**	**10,288**	**6,498**
Changes under Alternative 1	-10	-19	-16	3	-9	6	-16	19	38	41	-20	-23
Changes under Alternative 2	-28	-17	-17	-1	-2	-1	-16	11	31	64	-12	-23
Changes under Alternative 3	-6	-8	-56	18	-10	1	-11	-8	-44	11	28	58
Changes under Alternative 4	0	1	-17	0	0	5	-4	3	-6	0	4	-3
American River below Nimbus Existing Condition	**1,764**	**2,790**	**3,486**	**4,559**	**5,298**	**3,836**	**3,461**	**3,889**	**3,625**	**3,859**	**2,698**	**2,622**
Changes under Alternative 1	-1	-8	-5	4	-21	1	-7	4	16	27	-24	12
Changes under Alternative 2	7	-14	-6	1	-18	-3	-8	4	25	42	-19	-12
Changes under Alternative 3	-3	-2	1	-8	0	-6	-4	-3	-9	33	-8	10
Changes under Alternative 4	-3	1	0	-3	2	1	0	0	0	1	3	-1
Feather River below Thermalito Existing Condition	**3,270**	**2,576**	**4,298**	**5,593**	**6,567**	**6,749**	**3,157**	**3,747**	**3,151**	**6,538**	**4,996**	**2,187**
Changes under Alternative 1	-1	-6	-4	3	-7	7	-13	7	23	7	-11	-8
Changes under Alternative 2	1	-7	-26	-11	-8	3	-11	8	30	26	-3	-3
Changes under Alternative 3	-7	6	26	-21	10	-1	-15	3	-3	-19	-18	39
Changes under Alternative 4	3	3	3	-15	-8	-2	-15	0	2	5	13	7
CVP and SWP Deliveries (TAF)												
CVP SOD Ag Existing Condition	**27**	**19**	**27**	**48**	**56**	**39**	**54**	**86**	**137**	**168**	**121**	**40**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	1	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	-1	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	1	0	0	0
CVP SOD M&I Existing Condition	**9**	**11**	**11**	**8**	**3**	**12**	**9**	**9**	**9**	**10**	**11**	**12**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP Table A + Article 56 Existing Condition	**197**	**168**	**151**	**126**	**121**	**118**	**179**	**235**	**265**	**348**	**336**	**242**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	-1	0	0	0
Changes under Alternative 3	0	0	0	1	0	-2	1	1	2	1	1	1
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	1	0	0

TABLE C4-3:
AVERAGE MONTHLY VALUES, 2005 LOD, SEVERE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
SWP Article 21 Existing Condition	**6**	**7**	**7**	**11**	**22**	**18**	**5**	**3**	**1**	**1**	**1**	**3**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	1	2	5	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Improved Fish Screening for CVP South Bay Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	7	10	9	5	2	8	5	3	4	6	7	9
Changes under Alternative 2	7	10	9	5	2	8	5	3	4	5	7	9
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	5	5	9	14	12	15	10	8	10	12	15	14
Changes under Alternative 2	5	5	9	14	12	14	10	7	9	11	14	14
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
CVP South Bay Delta Supply Restoration Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	1	1	1	1	0	1	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP South Bay Delta Supply Restoration Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	4	3	3	0	1	1	0	1	2	0	2	3
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from Dedicated Storage Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	13	10	6	4	5	2	1	2	2	1	2	3
Changes under Alternative 3	1	0	0	0	0	0	0	0	0	0	2	4
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C4-4:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-163	-114	-431	-165	0	-354	-393	-426	-431
1923	-120	-241	-309	-479	-300	-470	-157	-138	-327	-377	-510	-412
1924	-164	-230	-299	-253	-214	-300	-133	-172	-194	-111	-147	-154
1925	19	-336	-128	-95	-112	-300	0	0	0	54	-410	-423
1926	-217	-250	-298	-240	-210	-300	-143	-218	0	-240	-617	-342
1927	-125	-174	0	0	0	-189	-153	0	-190	-475	-347	-446
1928	-189	-268	-340	-468	-427	-469	-62	-219	-300	-329	-240	-393
1929	-152	-236	-280	-246	-213	-385	-119	-173	-194	-371	-454	-240
1930	48	-16	-134	0	0	-406	-243	-251	0	5	-343	-421
1931	-142	-205	-275	-218	-175	-300	-32	-155	-169	-202	-91	-214
1932	-120	-97	-128	0	-47	-338	0	0	0	0	-1034	-257
1933	-130	-165	-145	631	264	-350	-193	-178	-204	-70	-258	-212
1934	20	15	96	-667	0	-381	0	-202	0	0	-200	-319
1935	-155	34	-167	-121	-126	-351	0	0	-358	3	2	-366
1936	-257	-255	-310	-281	-249	0	-156	-322	-1	-272	-594	-279
1937	-299	-239	-44	-260	-504	-508	-322	-42	-261	-413	-230	-435
1938	-183	-244	-315	-939	-489	-468	-301	-223	-470	-482	-408	-470
1939	-529	-472	-471	-470	-89	-377	-9	-289	-300	-147	-555	-431
1940	-173	-190	-323	-191	-160	-439	-165	0	0	-622	-262	-424
1941	-165	-219	-305	-307	-289	-313	-271	-248	-430	-455	-481	-470
1942	-214	-306	-376	-465	-445	-470	-169	-232	-440	-477	-481	-469
1943	-222	-302	-465	-470	-314	-364	-316	-557	-451	-494	-494	-470
1944	-233	180	-878	-470	-439	-470	-143	-5	-188	-376	-512	-430
1945	-321	-211	-276	-240	-428	43	-147	-217	-300	-507	-105	-452
1946	-184	-254	-326	-455	-890	-470	-157	-219	-313	-388	-438	-395
1947	-148	-250	-284	-254	-223	-454	-143	0	0	-391	-422	-553
1948	-148	-233	-358	-364	-300	-411	-157	0	0	-314	-391	-370
1949	-160	-228	-266	-271	-199	-435	-268	-290	0	0	-406	-445
1950	-131	-225	-309	-252	0	-431	-157	0	-182	-361	-377	-334
1951	-150	-219	-285	-486	-464	-305	-85	-220	-398	-460	-457	-463
1952	-356	-265	-336	-453	-150	-469	-261	-222	-391	-429	-461	-470
1953	-466	-477	-356	-443	-167	-179	0	-215	-385	-272	-450	-437
1954	-180	-247	-320	-454	-422	-470	-165	-105	-300	-418	-261	-421
1955	-285	-234	-303	-214	-312	-470	-143	-252	-68	-534	-537	-549
1956	-134	-195	-267	-245	0	-468	-169	-225	-446	-489	-492	-467
1957	-225	-302	-332	-470	-470	-470	-320	-49	-212	-371	-392	-432
1958	-158	-228	-292	-323	-328	-330	-349	-241	-470	-482	-470	-470
1959	-287	-472	-470	-348	-470	-470	-26	-111	-300	-179	-391	-439
1960	-153	-216	-355	-299	-249	-401	-143	-272	0	0	-330	-425
1961	-149	-221	-529	-238	-208	-325	-124	-282	0	-15	-411	-540
1962	-184	-248	-275	-149	-187	-439	-157	-294	0	1	1	-455
1963	-195	0	-321	-292	-264	-463	-169	-143	-355	-391	-263	-416
1964	-162	-235	-361	-370	-334	-414	-143	-280	-136	-378	-482	-434
1965	-183	-229	-21	0	-254	-460	0	-216	-372	-641	-748	-429
1966	-154	-239	-311	-440	-409	-470	0	-280	-300	-540	-393	-636
1967	-123	-229	-294	-264	-253	-470	-316	0	-284	-431	-470	-470
1968	-468	-480	-471	-432	-162	-179	-273	-218	-300	-445	-450	-429
1969	-133	-244	-312	-429	-89	-444	-310	-221	-470	-470	-470	-470
1970	-470	-471	-252	-471	-467	-318	-11	-216	-443	-463	-469	-458
1971	-238	-303	-374	-465	-470	-470	-169	-221	-24	-329	-345	-361
1972	-121	-188	-254	-470	-136	-178	-236	-219	-300	-504	-429	-432
1973	-138	-240	-152	-425	-408	-462	-165	-218	-391	-415	-450	-397
1974	-190	-249	-321	-492	-418	-337	-154	-222	-470	-485	-469	-470
1975	-253	-331	-400	-470	-470	-460	-169	-222	-385	-406	-440	-445
1976	-173	-249	-470	-470	-177	-168	-133	-284	-300	-533	-539	-401
1977	-159	-226	-249	311	-276	-300	0	-5	-117	-768	-78	-153
1978	-85	-87	-122	-82	-38	-308	-209	-170	-212	176	-346	0
1979	-232	-327	-247	-470	0	-327	-157	-219	-324	-429	-374	-408
1980	344	-225	-470	-774	-271	-423	-165	-222	-488	-459	-470	-470
1981	-270	-331	-400	-470	-470	-470	-58	0	-207	-475	-470	-444
1982	-135	-218	-25	-259	-463	-437	-316	-233	-470	-470	-470	-470
1983	-284	-357	-448	-470	-408	-434	-315	-238	-468	-469	-470	-469
1984	-469	-455	-451	-470	-355	-296	0	-219	-389	-464	-499	-447
1985	-176	-254	-326	-470	-343	-178	-118	-184	-300	-440	-472	-456
1986	-179	-669	-307	-408	-373	421	-316	-78	-426	-413	-209	-470
1987	-202	-563	-210	-590	-433	-470	-268	-254	0	-344	-330	-377
1988	-146	-193	-265	-227	-193	-300	-133	-186	0	244	-380	-274
1989	-175	41	-100	-117	-86	-334	-91	-293	0	3	-427	-470
1990	-283	-196	-516	-217	-181	-300	0	-151	-126	336	494	11
1991	185	-771	58	147	-78	-313	0	-143	-37	-179	-493	-210
1992	-43	-282	-138	66	-47	-248	0	-197	-79	-425	-428	-299
1993	-132	-123	-153	-130	-139	-432	0	0	0	0	-627	-435
1994	-172	-246	-313	-431	-390	-300	-94	-243	-134	-353	-428	-446
1995	21	-115	-279	-216	3	-467	-2	-187	-1	0	0	0
1996	-451	-472	-252	-466	-464	-750	-169	-228	-422	-487	-487	-469
1997	-247	-326	-395	-465	-470	-419	-159	-218	-417	-483	-469	-465
1998	-117	-281	-350	-470	-450	-349	-231	-237	-470	-470	-470	-470
1999	-467	-467	-452	-466	-351	-322	-147	-223	-416	-445	-478	-468
2000	-201	-278	-349	-470	-422	-470	-165	-220	-347	-575	-214	-412
2001	-183	-236	-301	-299	-267	-460	-143	0	0	-377	-534	-394
2002	-45	-389	-293	-240	0	-425	-143	-246	-156	0	-369	-373
2003	-158	-210	-277	0	-290	-437	-165	-228	-133	-136	-407	-408
Average	**-188**	**-259**	**-295**	**-314**	**-264**	**-368**	**-147**	**-178**	**-235**	**-319**	**-393**	**-398**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-4:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-163	-114	-431	-165	0	-354	-393	-426	-431
1923	-120	-241	-309	-373	-300	-470	-157	-29	-327	-377	-510	-412
1924	-164	-230	-298	-253	-214	-300	-133	-172	-194	-113	-148	-151
1925	21	-331	-124	-95	-112	-300	0	0	0	61	-407	-422
1926	-215	-249	-296	-241	-210	-300	0	-218	0	-169	-569	-333
1927	-129	-174	0	0	0	-189	-169	0	0	-429	-288	-527
1928	-151	-268	-340	-468	-427	-469	-62	-219	-300	-329	-240	-389
1929	-155	-235	-291	-246	-213	-385	-133	-173	-194	-375	-441	-246
1930	57	-19	-134	0	0	-405	-244	-250	0	-4	-351	-429
1931	-149	-210	-279	-218	-175	-300	0	-155	-169	-209	-85	-214
1932	-110	-125	-128	0	-47	-338	0	0	0	0	-1016	-257
1933	-130	-165	-143	631	251	-350	-223	-178	-203	-61	-258	-211
1934	30	-254	714	-2830	569	-381	0	-200	0	581	11	-316
1935	-212	100	-277	-120	-114	-350	0	0	-359	3	2	-426
1936	-205	-257	-312	-275	-242	0	-156	-326	-1	-238	-292	-479
1937	-150	-239	-326	-260	-456	-510	-324	-45	-119	-393	-386	-434
1938	-185	-242	-134	-664	-460	-452	-316	-221	-470	-482	-502	-470
1939	-427	-470	-470	-470	-89	-377	-10	-289	-300	-140	-548	-433
1940	-176	-188	-326	-191	-160	-439	-165	0	0	-614	-262	-424
1941	-164	-219	-305	-306	-289	-11	-272	-248	-427	-453	-481	-470
1942	-214	-306	-376	-426	-446	-470	-169	-232	-440	-472	-481	-469
1943	-222	-302	-465	-436	-314	-364	-316	-557	-451	-493	-493	-470
1944	-233	184	-882	-470	-439	-470	-143	-5	0	-376	-512	-431
1945	-325	-211	-276	-240	-428	63	-147	-14	-300	-509	-105	-452
1946	-188	-254	-261	-455	-888	-470	-157	-219	-313	-388	-433	-395
1947	-148	-258	-284	-254	-223	-454	-143	0	0	-8	-421	-554
1948	-150	-234	-482	-364	-300	-411	-157	0	0	0	-380	-827
1949	-122	-238	-340	-119	-199	-432	-268	-289	0	0	-404	-455
1950	-194	-265	-295	-248	0	-429	-157	0	0	0	-378	-370
1951	-147	-219	-242	-415	-480	-305	-85	-220	-398	-459	-457	-463
1952	-356	-265	-336	-453	-17	-469	-261	-222	-391	-429	-461	-470
1953	-466	-477	-356	-443	-167	-179	0	-215	-385	-273	-458	-437
1954	-180	-247	-320	-454	-422	-470	-165	-117	-300	-417	-261	-450
1955	-280	-234	-303	-104	-313	-470	-143	-252	0	-523	-527	-521
1956	-147	-196	-267	-245	0	-105	-169	-225	-446	-493	-495	-467
1957	-225	-302	-332	-573	-470	-470	-320	-62	-211	-368	-391	-431
1958	-157	-227	-292	-384	-279	-330	-352	-249	-470	-482	-470	-470
1959	-287	-473	-470	-348	-470	-470	-26	-118	-300	-180	-391	-439
1960	-161	-221	-357	-299	-249	-401	-143	-272	0	0	-334	-407
1961	-146	-242	-654	-238	-208	-325	-143	-281	0	15	-383	-570
1962	-197	-259	-274	-148	-187	-438	0	-294	0	1	1	-459
1963	-195	0	0	-292	-264	-464	-169	-144	-356	-390	-264	-415
1964	-163	-235	-487	-369	-333	-414	-143	-280	-142	-378	-481	-366
1965	-235	-229	-21	0	-250	-459	0	-216	-373	-652	-755	-430
1966	-127	-240	-237	-440	-409	-470	0	-280	-300	-540	-393	-641
1967	-134	-229	-293	-264	-253	-470	-316	0	-121	-431	-470	-470
1968	-468	-480	-470	-432	-162	-179	-314	-218	-300	-433	-431	-429
1969	-125	-247	-312	-429	0	-302	-316	-221	-470	-470	-470	-470
1970	-470	-471	-252	-438	-467	-318	-12	-216	-443	-464	-469	-458
1971	-236	-303	-275	-465	-470	-470	-169	-221	-24	-329	-345	-361
1972	-132	-187	-254	-3168	-211	-450	-294	-219	-302	-24	-101	-497
1973	-131	-242	-1	-423	-406	-462	-165	-218	-393	-414	-449	-400
1974	-207	-250	-323	-360	-418	-335	-169	-222	-470	-475	-470	-470
1975	-253	-330	-399	-470	-470	-460	-169	-222	-385	-405	-440	-444
1976	-173	-249	-470	-470	-177	-168	-133	-284	-300	-533	-540	-399
1977	-161	-226	-296	-214	-246	-300	0	-69	-115	-463	-122	-151
1978	-86	-101	-122	-82	-38	-300	-215	-157	-211	152	-370	0
1979	-233	-327	-231	-470	0	-185	-157	-219	-324	-430	-375	-408
1980	381	-225	-470	-812	-271	-423	-165	-222	-488	-459	-470	-470
1981	-271	-331	-400	-470	-470	-470	-58	0	-162	-475	-470	-444
1982	-135	-218	0	-259	-470	-441	-316	-233	-470	-470	-470	-470
1983	-284	-357	-448	-421	-398	-409	-316	-239	-470	-470	-470	-470
1984	-470	-456	-452	-469	-354	-296	0	-217	-389	-465	-500	-448
1985	-176	-254	-326	-470	-343	-178	-143	-185	-300	-417	-449	-457
1986	-180	-671	-307	-408	-394	423	-316	0	-332	-447	-270	-470
1987	-202	-500	-240	-565	-433	-470	-268	-254	0	-344	-330	-381
1988	-150	-193	-264	-227	-193	-300	-133	-186	0	240	-381	-274
1989	-170	31	-74	-117	-86	-334	0	-293	0	3	-427	-524
1990	-256	-196	-493	-218	-182	-300	0	-150	-126	240	430	-26
1991	147	-698	58	73	-69	-309	0	-143	-43	-193	-514	-208
1992	-39	-288	-139	71	-47	-247	0	-195	-79	-595	-500	-307
1993	-163	-38	-211	-130	-139	-432	0	0	0	-6	-637	-432
1994	-186	-245	-312	-430	-390	-300	-127	-243	-134	-354	-404	-444
1995	21	-120	-279	-216	3	-436	-2	-212	-1	0	0	0
1996	-451	-472	-252	-443	-425	-750	-169	-228	-422	-487	-487	-469
1997	-248	-326	-395	-443	-470	-419	-159	-218	-417	-483	-469	-465
1998	-117	-281	-350	-470	-450	-141	-231	-237	-470	-470	-470	-470
1999	-467	-467	-452	-466	-351	-322	-157	-244	-416	-436	-469	-467
2000	-201	-278	-349	-470	-422	-435	-165	-220	-347	-577	-214	-412
2001	-184	-236	-301	-299	-267	-460	-143	0	0	-232	-536	-392
2002	13	-468	-293	-240	0	-425	-143	-245	-156	0	-379	-372
2003	-152	-210	-277	0	-168	-437	-165	-170	-134	-175	-408	-412
Average	**-186**	**-262**	**-287**	**-370**	**-252**	**-355**	**-145**	**-174**	**-222**	**-289**	**-386**	**-409**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-4:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	1	0	0	0	0	0	0	0	0	-11	0
1923	111	0	0	701	0	0	0	0	0	0	4	1
1924	58	56	-7	0	0	0	0	0	0	80	59	89
1925	127	-193	2	0	0	0	0	0	0	-79	-24	540
1926	306	-24	8	0	0	0	0	0	-1	-172	-131	290
1927	-31	-1	0	0	0	0	0	0	0	1	1	81
1928	-122	0	0	0	0	0	0	0	0	-88	0	228
1929	-14	94	-141	0	0	0	0	23	0	-14	-53	20
1930	113	139	0	0	0	0	0	23	0	-74	-111	-73
1931	-53	-52	-31	0	0	0	0	0	0	-30	68	196
1932	151	209	0	0	0	0	0	0	0	0	-688	17
1933	-6	-5	-4	740	1050	0	0	0	0	-167	357	45
1934	36	159	304	201	1076	0	0	0	1	0	-73	11
1935	45	114	286	0	0	0	0	0	0	-3	-2	356
1936	46	6	105	0	2	0	0	-216	0	-76	-60	127
1937	-104	40	285	0	-101	2877	474	281	0	-587	-372	38
1938	18	0	0	859	-10	-332	35	38	0	-12	114	0
1939	53	31	16	0	0	0	0	0	0	0	0	27
1940	16	32	-1	0	0	0	0	0	0	-20	1	1
1941	-92	29	0	0	0	0	160	0	-46	-44	-11	0
1942	0	0	0	0	0	0	0	0	0	-12	-11	0
1943	0	0	0	0	-147	11	3	-26	0	24	24	0
1944	-22	521	-390	0	0	0	0	-1	0	30	7	-76
1945	-152	0	0	0	41	401	0	0	0	-33	289	-1
1946	35	0	0	0	-407	0	0	0	0	-35	0	37
1947	84	333	0	27	0	0	0	0	0	-278	-197	227
1948	215	234	387	0	0	0	0	0	0	-1	-1	52
1949	88	44	-11	128	0	0	0	23	0	0	0	192
1950	-55	-3	65	0	0	0	0	0	0	0	0	41
1951	-3	0	0	134	-93	224	0	0	0	20	0	37
1952	-90	0	0	0	0	0	0	0	0	0	0	0
1953	-2	-2	0	0	0	0	0	0	0	0	-22	0
1954	-5	0	0	0	0	0	0	0	0	-187	0	290
1955	-27	0	0	2781	0	0	0	23	2	121	92	914
1956	350	130	-1	1	-6	1	0	0	0	17	19	-4
1957	-2	-2	-163	0	0	0	0	0	0	150	1	258
1958	1	0	0	1214	0	-2	-44	0	0	-12	0	0
1959	0	-2	4	0	0	0	0	0	0	20	0	226
1960	23	16	597	0	0	0	0	0	0	0	0	814
1961	78	-86	0	0	0	0	0	15	0	-386	-331	250
1962	-179	-113	234	105	0	0	0	0	0	1	1	-145
1963	1	0	0	0	0	0	0	0	0	108	0	117
1964	0	0	-2	0	0	0	0	63	0	0	0	-231
1965	105	0	0	0	0	0	0	0	0	29	52	0
1966	22	0	0	0	0	0	0	0	0	45	0	27
1967	9	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	-1	0	0	0	0	0	0	0	149	25
1969	15	47	4086	1505	-1474	-2517	-101	24	0	169	26	0
1970	0	29	0	26	0	0	0	0	0	41	89	-5
1971	-15	0	0	0	0	0	0	0	0	0	0	0
1972	-49	6	0	0	0	0	0	0	0	39	98	0
1973	-17	0	0	0	0	0	0	0	0	1	-43	73
1974	25	0	0	-109	0	0	0	0	0	1	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	2	2	3
1977	-3	0	1255	826	-62	0	0	132	0	-604	86	0
1978	26	13	0	0	0	-5	-92	-222	-170	225	-296	0
1979	-353	-1	262	0	0	0	0	0	0	80	77	-2
1980	459	0	0	-429	0	0	0	0	71	-34	99	0
1981	102	39	0	0	0	0	0	0	0	48	39	1
1982	31	0	0	0	0	15	0	0	0	170	0	0
1983	0	0	0	0	-73	7	9	9	10	9	0	9
1984	9	8	4	0	60	745	0	0	0	10	10	17
1985	0	0	0	0	0	0	0	23	0	-29	-29	4
1986	1	22	0	0	25	-17	453	26	0	-164	262	0
1987	-5	-501	81	-32	0	0	0	0	0	-44	-9	728
1988	11	136	179	0	1	0	0	20	0	52	-40	233
1989	-13	153	160	0	0	0	0	0	0	0	0	692
1990	-272	120	-580	0	0	0	0	0	0	516	679	529
1991	214	-478	173	23	-11	0	0	0	0	18	-301	0
1992	62	-135	-1	166	0	0	0	0	0	88	-87	19
1993	-49	102	-4	0	0	0	0	0	0	-6	-453	0
1994	-11	81	-15	0	0	0	0	0	0	-4	-30	-11
1995	157	117	0	0	2	105	-1	-27	0	0	0	0
1996	0	-2	0	0	0	113	0	0	49	-23	-23	0
1997	15	0	0	0	0	310	0	0	0	0	0	0
1998	10	287	0	0	0	0	141	0	0	0	0	0
1999	16	14	0	0	7	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	48	-15	-7
2001	116	80	29	0	0	0	0	0	0	0	62	306
2002	131	-122	0	0	0	0	0	0	0	0	85	298
2003	-19	0	0	0	-117	0	0	0	0	166	-1	28
Average	**21**	**21**	**87**	**108**	**-3**	**24**	**13**	**3**	**-1**	**-11**	**-7**	**97**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-4:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	0	-4	0
1923	-13	0	0	0	0	0	0	0	0	0	-6	0
1924	0	0	-4	0	0	0	0	0	0	3	2	95
1925	124	-178	0	0	0	0	0	0	0	58	-21	-16
1926	-50	-16	-3	0	0	0	0	0	0	4	86	8
1927	-5	0	0	0	0	0	0	0	0	0	0	-101
1928	184	0	0	0	0	0	0	0	0	-9	0	29
1929	6	-1	-7	0	0	0	0	0	0	-1	-52	16
1930	110	138	0	0	0	0	0	0	0	-8	-3	-27
1931	-16	-13	-8	0	0	0	0	0	0	-10	90	0
1932	-12	22	0	0	0	0	0	0	0	0	-8	0
1933	-4	-3	0	51	0	0	0	0	0	11	-2	1
1934	0	0	0	-1	0	0	0	0	0	0	77	-5
1935	-13	25	-64	0	0	0	0	0	0	-1	0	25
1936	-17	0	-1	0	0	0	0	0	0	-1	-1	-46
1937	43	-1	-19	0	6	1	0	0	0	2	-113	0
1938	0	0	0	116	0	0	0	0	0	-31	-3	0
1939	35	0	0	0	0	0	0	0	0	0	0	-6
1940	-6	2	-4	0	0	0	0	0	0	-4	0	0
1941	8	-11	0	0	0	0	-4	0	0	0	-144	0
1942	0	0	0	0	0	0	0	0	0	22	-4	0
1943	0	0	0	-1	0	0	0	1	0	4	4	0
1944	-2	3	3	0	0	0	0	0	0	0	0	0
1945	1	0	0	0	1	0	0	0	0	0	-62	0
1946	-94	0	0	0	171	0	0	0	0	5	0	0
1947	0	-3	0	0	0	0	0	0	0	-2	-1	-3
1948	-2	3	-30	0	0	0	0	0	0	0	0	-4
1949	0	0	3	-1	0	0	0	0	0	0	0	-7
1950	-404	1	22	0	0	0	0	0	0	4	3	69
1951	3	1	0	66	455	224	0	0	0	-112	-3	0
1952	-170	-1	0	0	2	-1	-1	0	0	0	0	0
1953	-7	-7	0	0	0	0	0	0	0	3	-10	4
1954	-2	1	0	0	0	0	0	0	0	-25	-1	7
1955	-13	0	0	2781	0	0	0	1	2	216	204	358
1956	350	59	-1	1	-6	1	0	0	0	24	25	-4
1957	-2	-1	-235	0	0	0	0	0	0	-14	1	0
1958	1	0	0	1214	0	-1	-497	0	0	-4	0	0
1959	0	-1	0	0	0	0	0	0	0	-21	0	0
1960	5	3	6	0	0	0	0	0	0	0	0	1
1961	2	0	0	0	0	0	0	0	0	-2	-2	-1
1962	-1	-1	26	-18	0	0	0	0	0	0	0	-2
1963	0	0	0	0	0	0	0	0	0	-199	0	2
1964	0	0	-18	0	0	0	0	-1	0	0	0	6
1965	-17	0	0	0	0	0	0	0	0	-1	-1	0
1966	2	0	0	0	0	0	0	0	0	-11	0	4
1967	-5	0	0	0	0	0	0	0	0	0	0	0
1968	-1	-1	-1	0	0	0	0	0	0	0	0	0
1969	-3	1	0	0	0	3	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	-9	0	-3
1971	0	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	-5	0	0
1973	0	0	0	0	0	0	0	0	0	0	0	-7
1974	-5	0	0	12	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	3
1977	-3	0	1104	841	-369	0	0	0	0	-275	88	0
1978	-13	43	0	0	0	-1	-267	-51	0	86	0	0
1979	-194	-1	20	0	0	0	0	0	0	10	-194	0
1980	-10	0	0	19	216	0	0	0	0	1	0	0
1981	-5	0	0	0	0	0	0	0	0	-1	-1	-26
1982	-1	0	0	0	0	23	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	-3	-3	-3
1985	0	0	0	0	0	0	0	0	0	1	1	-3
1986	-2	4	0	0	3	-4	0	0	0	0	-60	0
1987	-4	66	-87	46	0	0	0	0	0	-3	-5	-10
1988	6	0	-2	0	0	0	0	0	0	28	14	3
1989	21	129	187	0	0	0	0	0	1	4	3	41
1990	-35	48	-110	0	0	0	0	0	0	185	451	105
1991	203	-453	173	12	-5	0	0	0	0	-18	-133	0
1992	27	-55	1	60	0	0	0	0	0	72	-19	9
1993	-9	14	0	0	0	0	0	0	0	-4	-3	-1
1994	-6	0	0	0	0	0	0	0	0	0	0	-1
1995	0	0	0	0	0	2	0	0	0	0	0	0
1996	0	-197	0	0	0	3	0	0	-4	2	2	0
1997	-10	0	0	0	0	0	0	0	0	-9	0	0
1998	17	0	0	0	0	0	8	0	0	0	0	0
1999	1	1	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	-7	1	-3
2001	0	0	0	0	0	0	0	0	0	0	-1	0
2002	3	-12	0	0	0	0	0	0	0	0	0	0
2003	-10	0	0	0	15	0	0	0	0	-2	0	4
Average	**0**	**-5**	**12**	**63**	**6**	**3**	**-9**	**-1**	**0**	**-1**	**2**	**6**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-5:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	198	126	370	0	670	355	342	426	458
1923	175	402	372	459	301	472	0	646	296	371	404	459
1924	170	236	299	257	268	305	0	180	193	89	135	154
1925	-12	27	77	-12	55	300	-162	634	470	470	189	408
1926	171	237	300	275	223	300	-57	207	470	437	217	314
1927	137	273	470	470	470	349	0	670	470	270	324	458
1928	309	223	480	470	436	470	0	670	170	383	250	395
1929	165	231	295	249	279	468	0	304	197	28	238	240
1930	-40	16	59	470	470	370	0	485	470	449	295	386
1931	145	200	274	239	82	304	-181	19	-56	-8	199	214
1932	102	140	181	470	-144	489	0	524	470	470	470	286
1933	130	165	144	151	31	313	-181	184	204	379	226	212
1934	-77	-15	-21	26	470	468	0	202	387	423	190	319
1935	122	24	18	-13	131	470	0	465	287	470	429	394
1936	192	255	303	217	259	570	-34	654	470	470	296	457
1937	190	249	311	293	249	370	0	670	470	229	375	424
1938	182	381	470	433	463	469	0	670	348	482	481	478
1939	474	472	470	476	114	478	0	289	300	374	326	441
1940	173	247	315	216	179	470	-121	470	470	470	89	413
1941	174	239	425	313	302	570	0	670	320	467	481	478
1942	323	347	413	461	454	472	0	670	355	477	481	478
1943	332	342	468	466	323	451	0	670	347	482	481	458
1944	237	323	399	471	459	472	0	670	470	185	308	392
1945	150	311	326	250	474	570	-115	651	297	242	334	458
1946	171	274	592	461	419	473	0	670	324	371	386	383
1947	151	222	433	256	216	472	0	597	470	381	382	429
1948	165	239	302	263	201	404	-136	452	470	470	218	411
1949	144	218	286	170	107	464	0	458	470	470	375	418
1950	171	235	298	153	470	470	-136	470	470	190	206	459
1951	123	233	575	468	240	366	0	670	340	432	467	451
1952	179	418	393	456	470	369	0	670	297	478	481	478
1953	475	470	417	447	179	339	0	670	343	290	433	478
1954	179	316	358	459	430	370	0	663	272	398	272	449
1955	167	474	398	470	222	470	0	470	470	242	335	358
1956	134	193	313	249	460	547	0	670	297	395	481	477
1957	335	301	405	469	469	470	0	670	297	260	402	399
1958	295	381	350	325	338	467	0	661	371	482	480	478
1959	397	472	470	353	470	470	0	670	127	303	402	469
1960	153	216	284	290	197	470	0	471	470	372	287	467
1961	150	343	167	116	102	379	-162	433	470	378	338	409
1962	166	148	165	113	101	396	-136	274	470	470	366	463
1963	350	470	448	278	273	470	0	580	358	398	276	458
1964	318	295	386	374	349	470	0	467	470	356	394	412
1965	166	306	67	422	105	403	0	670	349	405	423	458
1966	164	325	430	443	418	470	0	460	491	386	404	473
1967	166	360	347	248	64	370	0	653	470	359	481	478
1968	475	471	470	446	170	431	0	670	317	407	438	421
1969	176	250	373	443	442	364	0	670	297	457	481	478
1970	473	471	314	463	471	359	0	670	344	479	481	458
1971	233	394	477	470	472	472	0	670	69	344	395	432
1972	178	188	300	477	169	433	0	670	257	406	439	495
1973	177	372	350	247	415	471	0	670	260	422	455	455
1974	381	328	379	469	432	471	0	670	347	481	481	478
1975	363	373	436	475	462	469	0	670	349	416	480	478
1976	472	391	471	477	207	267	0	316	336	289	221	260
1977	-15	83	160	175	106	309	-181	-67	-7	128	141	153
1978	86	128	158	85	44	470	0	455	470	470	470	391
1979	236	487	409	477	470	631	0	670	179	382	397	447
1980	335	300	270	565	214	472	0	670	342	481	481	458
1981	268	344	480	474	470	370	0	643	470	187	327	427
1982	161	332	470	7	470	467	0	670	357	482	481	476
1983	392	393	468	464	429	463	0	670	364	482	480	477
1984	474	466	465	471	368	332	0	670	345	423	456	458
1985	346	266	435	470	357	398	0	639	126	399	403	455
1986	179	254	396	431	406	471	-104	653	297	278	358	459
1987	202	287	363	471	454	473	0	258	470	134	325	383
1988	145	200	275	286	193	300	0	307	470	405	234	274
1989	113	32	24	-5	-59	376	-162	293	470	398	384	472
1990	185	145	182	147	190	440	-181	151	102	2	169	223
1991	96	129	115	86	47	403	0	143	16	180	191	210
1992	105	150	141	98	66	325	0	197	-60	8	457	286
1993	126	170	157	151	187	470	0	408	470	470	470	373
1994	185	261	327	477	456	480	0	243	133	343	277	243
1995	-18	93	309	215	470	270	-114	634	470	470	533	658
1996	500	472	312	465	466	472	0	670	352	482	481	478
1997	246	410	428	462	472	474	0	670	345	451	480	456
1998	237	390	403	482	467	520	0	670	297	350	481	478
1999	475	470	464	469	373	473	0	670	347	449	481	478
2000	207	339	355	477	441	518	0	670	306	398	269	412
2001	195	256	318	361	297	473	0	653	470	244	334	446
2002	185	249	416	256	470	470	0	496	259	379	365	364
2003	158	186	228	470	212	470	-121	637	161	93	297	461
Average	**218**	**282**	**333**	**336**	**299**	**432**	**-28**	**531**	**334**	**359**	**366**	**412**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-5:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	419	114	370	0	670	355	342	426	458
1923	175	473	473	540	301	471	0	646	296	371	404	459
1924	168	234	298	256	344	304	0	178	190	86	132	151
1925	-15	25	323	101	44	300	-76	634	470	470	189	408
1926	171	236	300	476	239	300	-57	207	470	437	218	310
1927	134	473	470	470	470	470	0	670	470	470	324	458
1928	475	383	568	470	471	470	0	670	170	383	250	395
1929	169	235	297	250	347	476	0	485	198	28	241	246
1930	-36	19	350	470	470	370	0	488	470	449	295	389
1931	146	201	274	436	60	341	-181	22	-55	138	199	214
1932	102	140	470	470	-70	490	0	524	470	470	470	286
1933	130	165	144	351	4	344	-181	306	203	379	226	211
1934	-77	-15	-21	280	470	470	0	200	387	423	187	316
1935	121	23	17	237	114	470	0	465	288	470	429	394
1936	194	257	304	380	307	570	-34	654	470	470	533	457
1937	193	252	313	476	293	370	0	670	470	403	373	422
1938	185	484	470	459	463	469	0	670	348	482	481	478
1939	474	472	470	477	228	480	0	289	300	374	326	444
1940	176	249	317	454	172	470	-121	470	470	470	382	413
1941	182	246	476	471	391	570	0	670	320	467	481	478
1942	474	471	470	461	470	472	0	670	355	477	481	478
1943	474	469	468	466	446	471	0	670	347	482	481	458
1944	242	327	400	473	473	475	0	670	470	194	308	393
1945	154	480	478	474	476	570	-115	651	297	242	334	458
1946	175	362	678	470	419	473	0	670	324	371	386	383
1947	155	225	474	258	333	473	0	601	470	381	382	429
1948	165	238	302	351	201	403	-136	452	470	470	461	411
1949	158	228	292	173	109	471	0	473	470	470	373	431
1950	179	242	302	357	470	470	-136	470	470	470	313	459
1951	153	356	684	468	355	374	0	670	340	432	467	451
1952	199	481	477	475	470	369	0	670	297	478	481	478
1953	475	470	464	469	302	470	0	670	343	290	442	478
1954	179	469	477	474	470	370	0	665	272	398	272	449
1955	183	487	483	470	220	470	0	487	470	280	335	358
1956	147	203	476	470	460	570	0	670	297	395	481	477
1957	474	301	475	472	473	470	0	670	297	259	401	398
1958	476	549	468	465	413	472	0	661	371	482	480	478
1959	475	472	473	472	473	470	0	670	127	303	402	475
1960	161	221	288	293	300	473	0	480	470	372	290	474
1961	154	419	169	118	222	381	-162	432	470	378	337	412
1962	166	148	165	112	219	470	0	274	470	470	366	472
1963	472	470	470	672	395	470	0	580	358	398	276	458
1964	411	476	513	468	463	470	0	473	470	356	394	423
1965	177	478	446	422	315	403	0	670	349	406	420	458
1966	173	478	546	469	471	470	0	460	491	386	403	486
1967	175	480	475	455	95	370	0	653	470	359	481	478
1968	475	471	470	466	289	472	0	670	324	407	438	421
1969	184	256	485	484	442	517	0	670	297	457	481	478
1970	473	471	466	463	471	393	0	670	344	479	481	458
1971	238	477	515	470	472	472	0	670	347	344	395	478
1972	246	188	480	453	459	474	0	670	154	404	436	499
1973	178	490	350	331	467	471	0	670	262	424	458	455
1974	482	358	585	469	472	471	0	670	347	481	481	478
1975	474	472	468	478	459	469	0	670	349	417	480	478
1976	472	472	471	480	311	483	0	323	344	294	226	267
1977	-13	85	161	168	99	335	-181	-2	115	126	139	151
1978	85	127	470	154	38	470	0	455	470	470	470	391
1979	237	488	410	477	470	631	0	670	179	382	397	447
1980	442	490	270	651	331	472	0	670	342	481	481	458
1981	269	344	480	474	470	370	0	643	470	187	327	428
1982	162	491	470	277	593	467	0	670	357	482	481	476
1983	472	465	468	464	466	465	0	670	364	482	480	477
1984	474	466	465	471	471	365	0	670	345	423	456	458
1985	483	421	522	470	471	470	0	640	126	399	403	456
1986	180	255	485	489	486	471	-104	653	470	278	358	459
1987	202	287	365	472	473	476	0	260	470	133	325	388
1988	148	202	277	475	192	300	0	470	470	405	234	274
1989	113	32	24	-5	-59	376	-105	293	470	398	384	472
1990	184	145	181	344	187	470	-181	150	101	193	206	221
1991	95	128	115	86	47	470	0	143	53	179	190	208
1992	105	150	141	98	174	470	0	195	-61	8	456	284
1993	124	168	151	402	181	470	0	408	470	470	470	373
1994	185	261	327	477	471	480	0	243	133	343	277	242
1995	-18	105	466	439	470	270	-114	634	470	470	533	658
1996	500	472	464	465	466	472	0	670	352	482	481	478
1997	246	468	464	462	472	474	0	670	345	451	480	456
1998	237	495	485	482	478	520	0	670	297	350	481	478
1999	475	470	464	469	473	473	0	670	347	449	481	478
2000	207	469	354	477	480	570	0	670	306	398	269	412
2001	194	255	317	479	372	473	0	652	470	358	334	440
2002	181	245	479	478	470	470	0	497	470	379	365	364
2003	152	391	372	470	470	470	-121	637	296	93	297	459
Average	**240**	**329**	**392**	**408**	**345**	**449**	**-24**	**538**	**345**	**373**	**377**	**413**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-5:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	104	0	152	-173	-51	11	8
1923	3	2	2	-13	1	2	0	213	-174	-6	11	7
1924	7	7	6	4	3	-38	0	8	-105	-120	-89	-89
1925	-119	-114	-100	-111	-65	-109	-162	-235	370	370	258	1
1926	9	7	6	5	0	-109	-57	-199	-433	337	86	15
1927	11	11	370	370	359	0	0	198	-174	-170	-3	8
1928	-2	4	-2	0	1	0	0	-149	180	12	11	8
1929	2	2	2	1	1	1	0	5	2	241	5	-20
1930	-160	-139	-128	370	370	-22	0	14	81	-170	-30	11
1931	7	5	4	-36	-121	-131	-181	-140	-226	-223	-213	-196
1932	-182	-157	-142	370	142	12	0	424	370	370	327	10
1933	6	5	4	-17	-123	-131	-181	-143	0	279	0	-45
1934	-188	-159	-147	-135	370	0	0	0	-455	323	3	17
1935	-17	-161	-148	-141	0	0	-136	-370	-71	370	329	0
1936	-8	-6	-20	-99	-11	470	-34	554	370	-91	-111	8
1937	-12	-9	-6	-3	-6	226	0	255	-173	-170	-58	8
1938	-21	-13	43	-11	-7	-1	0	144	-122	12	11	8
1939	4	2	0	-7	-7	-10	0	0	0	258	-64	-25
1940	-16	-12	-8	-5	-10	0	-121	370	-68	39	-174	-38
1941	-30	-22	-16	-4	-4	116	0	117	-150	12	11	8
1942	4	1	-12	3	0	2	0	133	-115	12	11	8
1943	4	-1	-2	-4	0	1	0	144	-123	12	11	8
1944	-26	-18	-10	-6	-6	-16	0	570	-58	-170	-39	-7
1945	-19	-17	-15	-14	-13	391	-115	150	-173	-170	-112	8
1946	-36	10	25	0	-102	96	0	168	-146	12	11	8
1947	-26	-23	-14	-11	-31	-10	0	440	-433	281	0	-50
1948	-22	-17	-16	-132	-127	-82	-136	352	370	135	-174	-37
1949	-37	-25	-17	-68	-101	-16	0	-43	370	287	-5	-44
1950	-22	-17	-13	-125	370	0	-136	187	-173	-170	-171	8
1951	-56	58	-5	-2	0	3	0	151	-130	12	11	8
1952	-38	-33	-19	-36	292	-101	0	143	-173	8	11	8
1953	5	0	-6	-1	3	0	0	150	-127	12	11	8
1954	5	1	-37	-8	0	49	0	-149	-28	207	11	8
1955	-31	-26	-40	177	-183	0	0	-46	-433	449	46	6
1956	-13	-9	-5	-15	360	-59	0	140	-173	-74	11	7
1957	4	2	-16	-5	-6	0	0	344	-173	-114	11	8
1958	-35	41	-2	-5	-16	-13	0	137	-99	12	10	8
1959	5	2	-14	-5	-15	-92	0	400	-421	171	11	-25
1960	-24	-16	-10	-16	-82	-7	0	-29	-433	272	0	-30
1961	-15	-13	-127	-128	-125	-100	-162	0	-433	278	0	-48
1962	-19	-98	-141	-137	-104	-86	-136	309	-71	370	266	-14
1963	-9	370	370	474	-1	0	0	131	-112	12	11	8
1964	-1	-1	4	-2	3	0	0	-2	67	-22	0	4
1965	4	3	2	254	-201	-67	0	-149	178	12	10	8
1966	-2	-1	3	-1	1	0	0	178	-153	12	11	-1
1967	0	0	0	-24	142	91	0	125	-175	-111	11	8
1968	5	1	0	-4	0	2	0	168	-146	12	9	8
1969	-11	-8	-8	-9	231	-106	0	145	-173	-13	11	8
1970	3	1	-4	-7	1	3	0	149	-126	12	11	8
1971	-19	-15	29	0	-93	88	0	144	-123	12	11	8
1972	5	0	-9	-9	19	4	0	168	-146	12	11	-26
1973	-9	-13	226	-184	-3	1	0	154	-131	12	11	8
1974	-29	29	-3	-1	2	1	0	143	-123	11	11	8
1975	4	2	-2	-15	14	-1	0	143	-121	12	10	8
1976	2	2	1	-8	-5	-10	0	-38	-30	-157	-249	-230
1977	-198	-165	-152	-147	-161	-144	-181	-222	-255	-265	-114	0
1978	0	0	0	-20	0	0	0	355	370	370	370	291
1979	355	8	6	3	370	374	0	167	-146	12	11	0
1980	9	9	31	-45	-4	2	0	149	-128	11	11	8
1981	8	6	4	2	0	215	0	193	-173	-170	-22	10
1982	6	7	223	-257	0	-3	0	132	-113	12	11	6
1983	2	-5	-2	-6	-4	-5	0	126	-106	12	10	7
1984	4	-4	-5	1	1	3	0	148	-125	12	11	8
1985	-7	6	-1	0	1	0	0	196	-174	12	11	-4
1986	-1	-1	-1	-1	-1	371	-104	239	-173	-170	-112	7
1987	5	2	-8	-4	-4	-11	0	-169	-433	266	0	-24
1988	-13	-10	-7	-5	-127	-144	0	0	-455	305	0	-9
1989	-23	-152	-142	-131	-161	-100	-162	-199	370	298	0	-10
1990	-7	-108	-135	-129	0	0	-181	0	-280	-214	-240	-173
1991	0	0	0	0	0	0	0	0	-28	0	0	0
1992	0	0	0	0	0	0	0	0	27	8	-34	0
1993	0	0	0	0	0	0	0	308	370	370	370	27
1994	17	18	12	6	1	9	0	0	0	0	-87	-140
1995	-156	-140	-118	-75	370	205	-114	534	370	370	433	22
1996	5	2	-6	-5	-4	2	0	137	-118	12	11	8
1997	4	-2	-6	-8	2	4	0	147	-125	12	10	8
1998	22	15	9	7	5	123	0	128	-173	-120	11	8
1999	5	0	-6	-1	3	3	0	142	-123	12	11	8
2000	5	1	3	3	5	23	0	151	-164	12	10	8
2001	14	10	8	5	6	2	0	548	-433	131	-35	20
2002	14	12	6	6	-332	0	0	26	0	279	0	0
2003	19	-78	-97	370	106	0	-121	110	-174	-171	-111	-13
Average	**-13**	**-14**	**-7**	**0**	**15**	**16**	**-29**	**118**	**-96**	**57**	**8**	**-7**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-5:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, SEVERE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	14	4	3
1923	2	2	2	-7	1	1	0	0	0	13	4	3
1924	4	4	4	3	2	3	0	4	-4	-126	-95	-95
1925	-124	-117	-104	-114	-69	0	-112	-26	0	0	0	1
1926	6	5	4	3	0	0	-19	0	0	0	0	7
1927	5	5	0	0	0	0	0	0	0	0	171	51
1928	5	45	203	202	200	101	0	0	10	4	4	3
1929	4	3	2	1	1	2	0	6	2	0	7	-16
1930	-158	-138	-127	0	0	0	0	16	0	0	0	17
1931	9	7	5	-35	-120	-130	-181	-109	0	0	0	0
1932	0	0	0	0	0	9	0	0	0	0	0	9
1933	4	3	2	-18	-26	0	0	0	0	0	0	-1
1934	0	0	0	0	0	0	0	0	0	0	0	5
1935	-5	0	0	0	0	0	0	0	-71	0	0	0
1936	0	0	68	0	0	0	0	0	0	0	63	44
1937	1	1	1	0	1	0	0	0	0	0	116	172
1938	-2	-2	0	194	234	116	0	0	51	31	4	3
1939	1	1	0	1	1	1	0	0	0	0	0	7
1940	6	5	3	2	3	0	-121	-200	0	0	0	6
1941	-7	-5	-4	-1	-1	0	0	0	23	182	143	3
1942	1	0	-1	-2	0	1	0	0	8	4	4	3
1943	2	0	-1	-2	0	0	0	0	10	4	4	3
1944	-2	-1	-1	0	0	-1	0	0	0	0	0	0
1945	0	0	0	0	0	0	-115	-19	0	0	62	57
1946	-3	10	54	0	1	1	0	0	10	4	4	3
1947	1	1	0	0	-23	0	0	0	0	0	0	7
1948	5	4	-4	-118	-97	-65	-136	-200	0	0	0	0
1949	-3	-2	-1	-61	-91	-1	0	-2	0	0	0	-3
1950	-2	-1	-4	-117	0	0	0	0	0	0	2	66
1951	-3	58	214	208	202	98	0	0	43	86	4	3
1952	13	11	7	5	0	0	0	0	-26	0	4	3
1953	2	0	-2	0	1	0	0	0	10	4	4	3
1954	2	0	4	2	0	-1	0	0	-28	37	4	3
1955	14	12	10	0	-40	0	0	10	0	5	4	3
1956	11	8	5	6	0	0	0	0	0	-18	4	3
1957	1	1	0	0	0	0	0	0	0	13	4	3
1958	-3	5	-1	-2	-2	-2	0	0	9	4	4	3
1959	2	1	-3	-1	-3	0	0	0	0	21	4	-5
1960	-5	-3	-2	-11	-79	-2	0	-5	0	0	0	-2
1961	-1	0	-120	-122	-119	-92	-162	0	0	0	0	-2
1962	-1	-84	-131	-17	0	0	0	-20	0	0	0	-1
1963	0	0	0	202	214	0	0	0	61	182	184	91
1964	10	8	43	37	1	0	0	4	0	11	0	14
1965	14	11	7	0	0	-39	0	0	9	4	4	3
1966	9	7	-16	0	0	0	0	0	12	4	4	11
1967	8	7	4	-18	0	0	0	0	0	2	4	3
1968	2	0	0	-1	0	1	0	0	10	4	3	3
1969	3	3	2	3	0	0	0	0	0	0	4	3
1970	1	0	-1	-3	0	1	0	0	10	4	4	3
1971	-4	-2	4	0	1	1	0	0	9	4	4	3
1972	2	0	-1	-1	2	2	0	0	10	4	4	0
1973	0	1	0	-2	-1	0	0	0	10	4	4	3
1974	-4	4	-1	-1	1	0	0	0	9	4	4	3
1975	1	1	-1	-1	1	0	0	0	10	4	4	3
1976	1	1	0	-1	-1	-1	0	-2	-1	-130	-226	-202
1977	-189	-160	-26	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	1
1979	193	0	0	0	0	61	0	0	28	182	184	0
1980	17	16	0	181	107	1	0	0	10	4	4	3
1981	16	11	8	3	0	0	0	0	0	0	-7	26
1982	14	15	0	-64	0	-1	0	0	9	4	4	2
1983	1	-2	-1	-2	-2	-2	0	0	9	4	4	3
1984	2	-2	-2	0	0	1	0	0	10	4	4	3
1985	-2	1	0	0	0	0	0	0	0	15	4	2
1986	2	2	1	2	2	-57	-104	-17	0	0	62	121
1987	4	1	-5	-2	-3	-7	0	-7	0	0	0	-10
1988	-6	-4	-3	-2	0	0	0	0	0	0	0	-3
1989	-20	-149	-140	-127	-149	-98	-162	0	0	0	0	-2
1990	-2	-50	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	1	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	63	188
1996	193	197	209	137	-1	1	0	0	9	4	4	3
1997	1	-1	-2	-3	1	1	0	0	10	4	4	3
1998	10	7	4	3	2	0	0	0	0	-19	4	3
1999	2	0	-2	0	1	1	0	0	9	4	4	3
2000	2	0	1	1	1	0	0	0	7	4	4	3
2001	4	3	3	1	2	1	0	0	0	0	0	11
2002	7	6	3	3	0	0	0	14	0	0	0	0
2003	10	-87	-103	0	0	0	-121	-33	0	0	67	-1
Average	**1**	**-4**	**1**	**4**	**2**	**-1**	**-15**	**-7**	**4**	**7**	**11**	**8**

NOTE: Values with a grey background indicate months of Delta excess conditions.

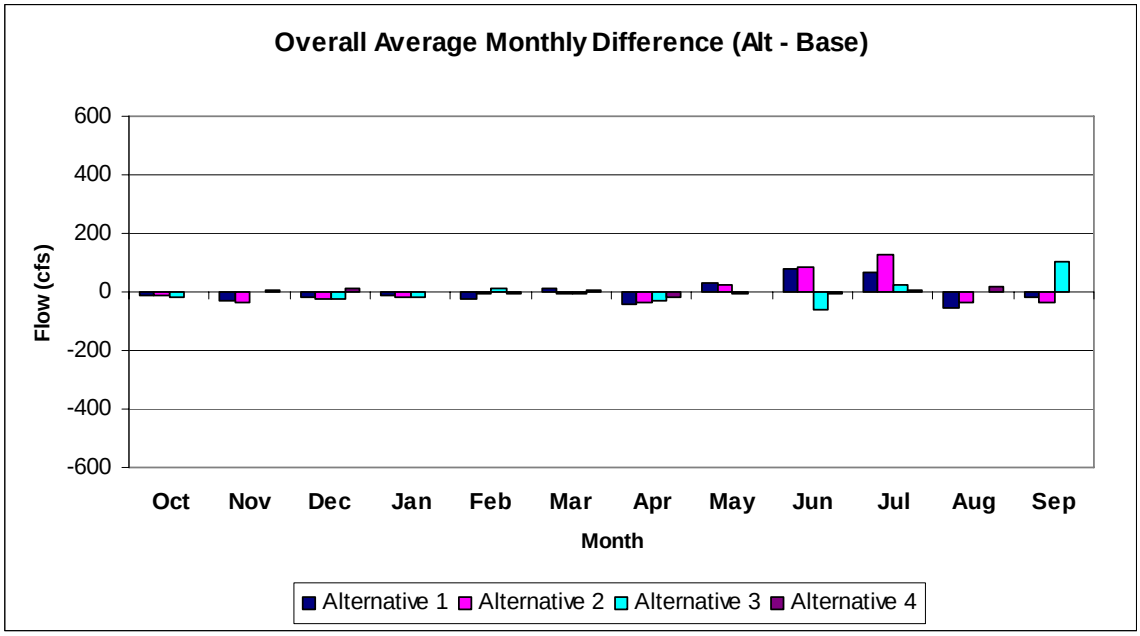


Figure C4-1: Changes in Average Monthly Sacramento River at Hood flow, 2005 LOD, Severe Fishery Restrictions

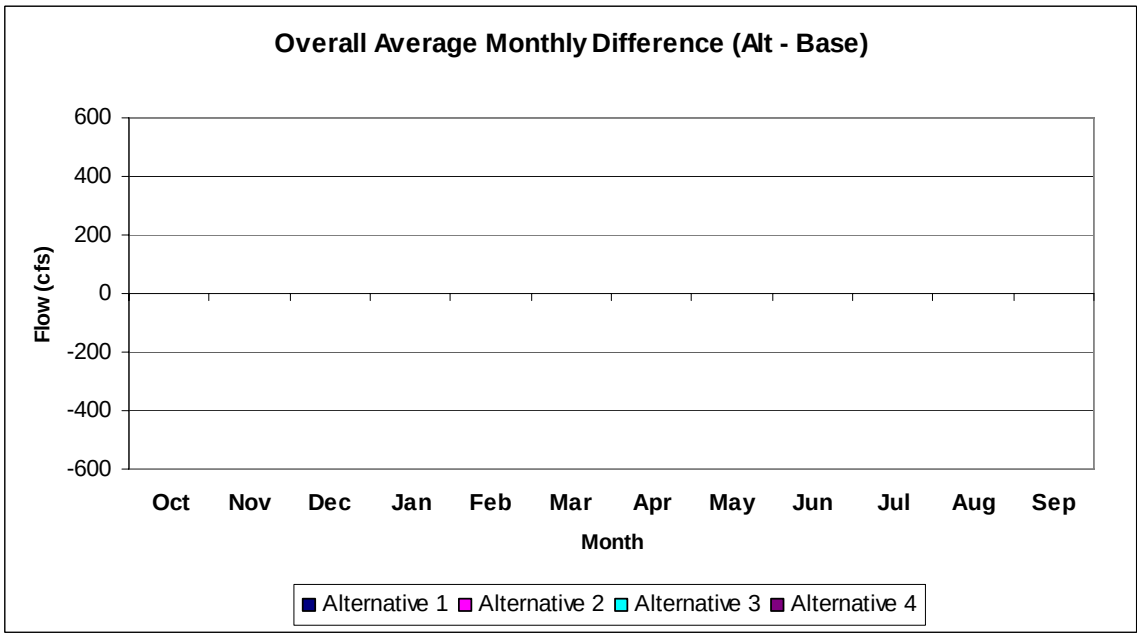


Figure C4-2: Changes in Average Monthly San Joaquin River at Vernalis Flow, 2005 LOD, Severe Fishery Restrictions

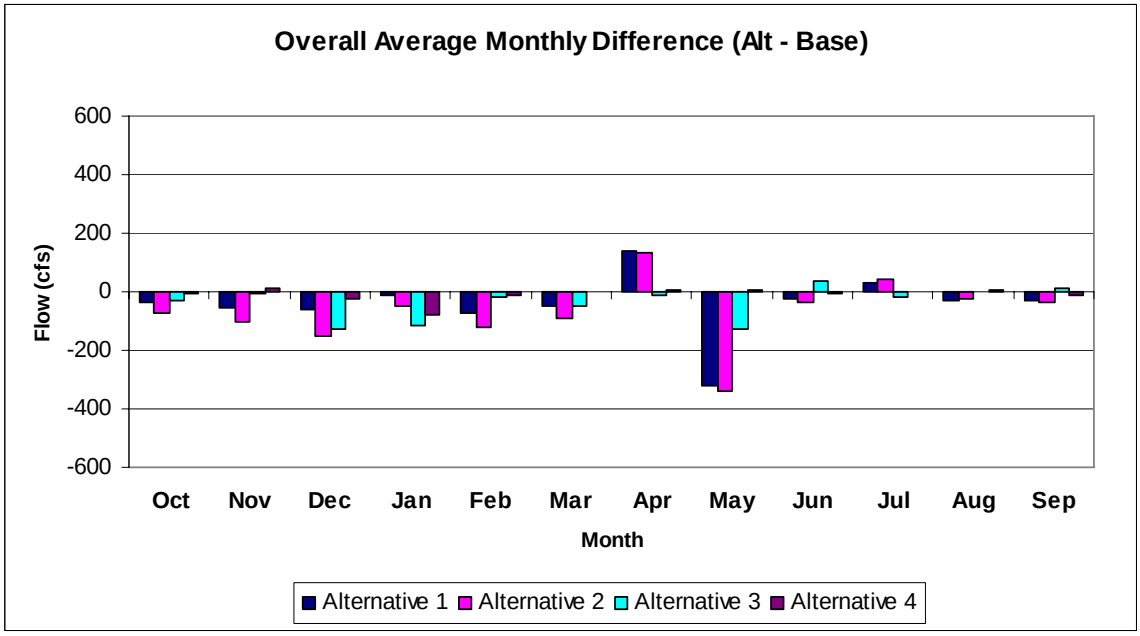


Figure C4-3: Changes in Average Monthly Delta Outflow, 2005 LOD, Severe Fishery Restrictions

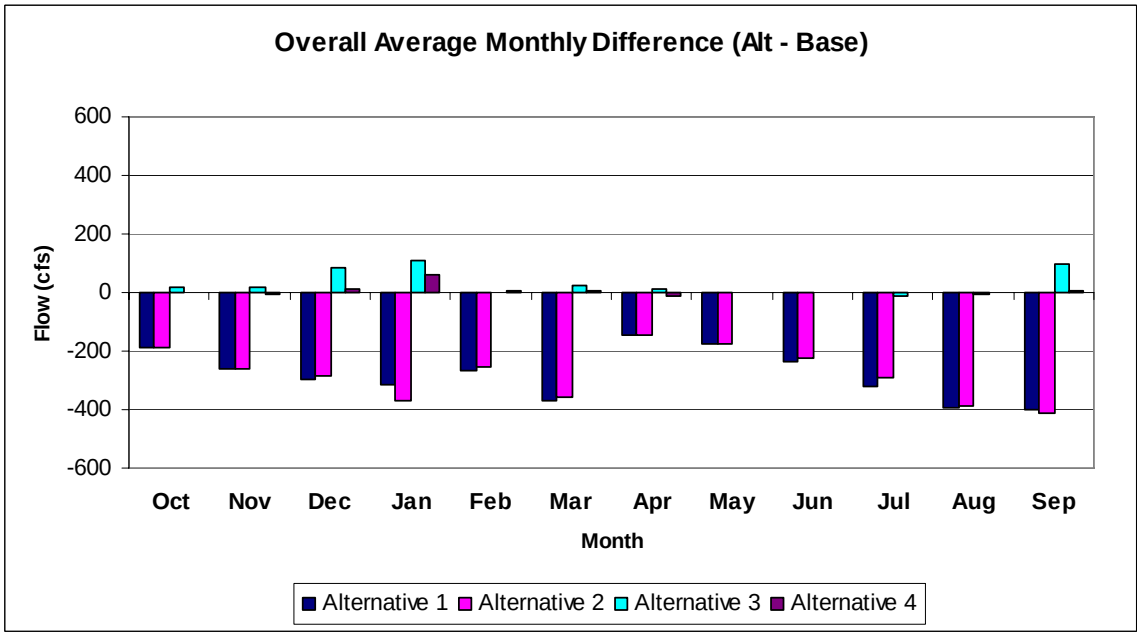


Figure C4-4: Changes in Average Monthly Banks + Jones Diversions, 2005 LOD, Severe Fishery Restrictions

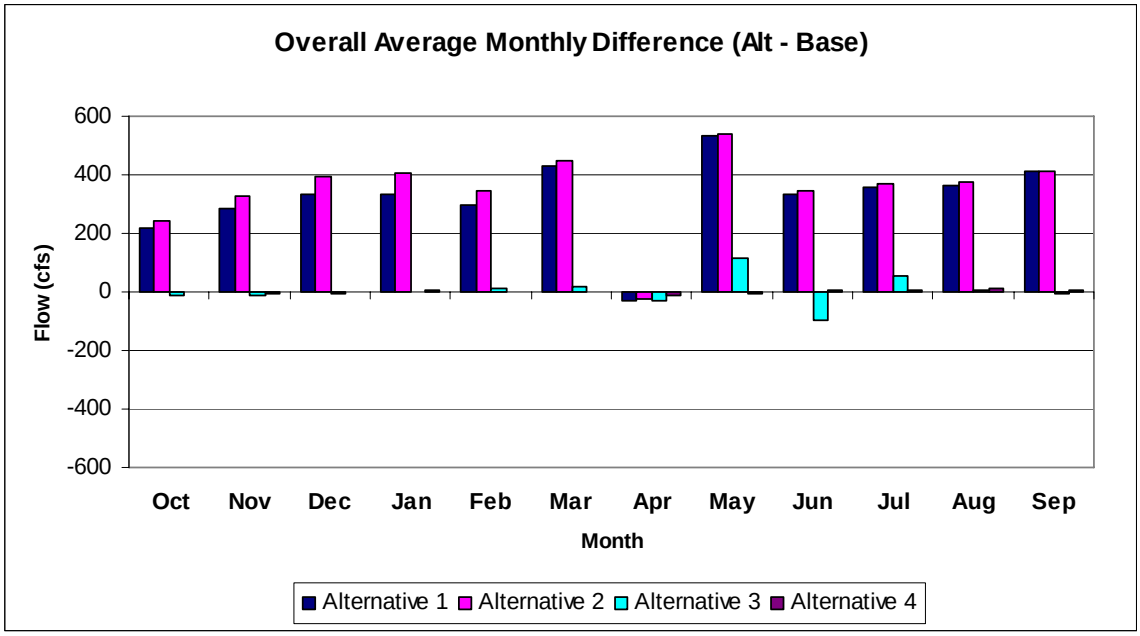


Figure C4-5: Changes in Average Monthly CCWD + LV Diversions, 2005 LOD, Severe Fishery Restrictions

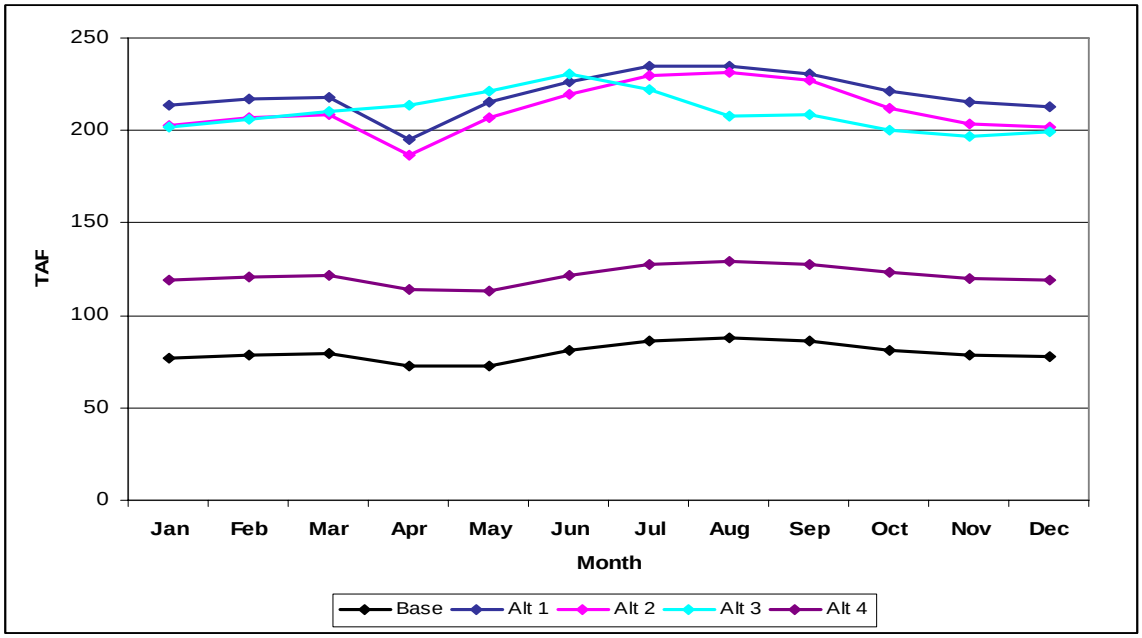


Figure C4-6: Average Los Vaqueros storage 2005 LOD, Severe Fishery Restrictions

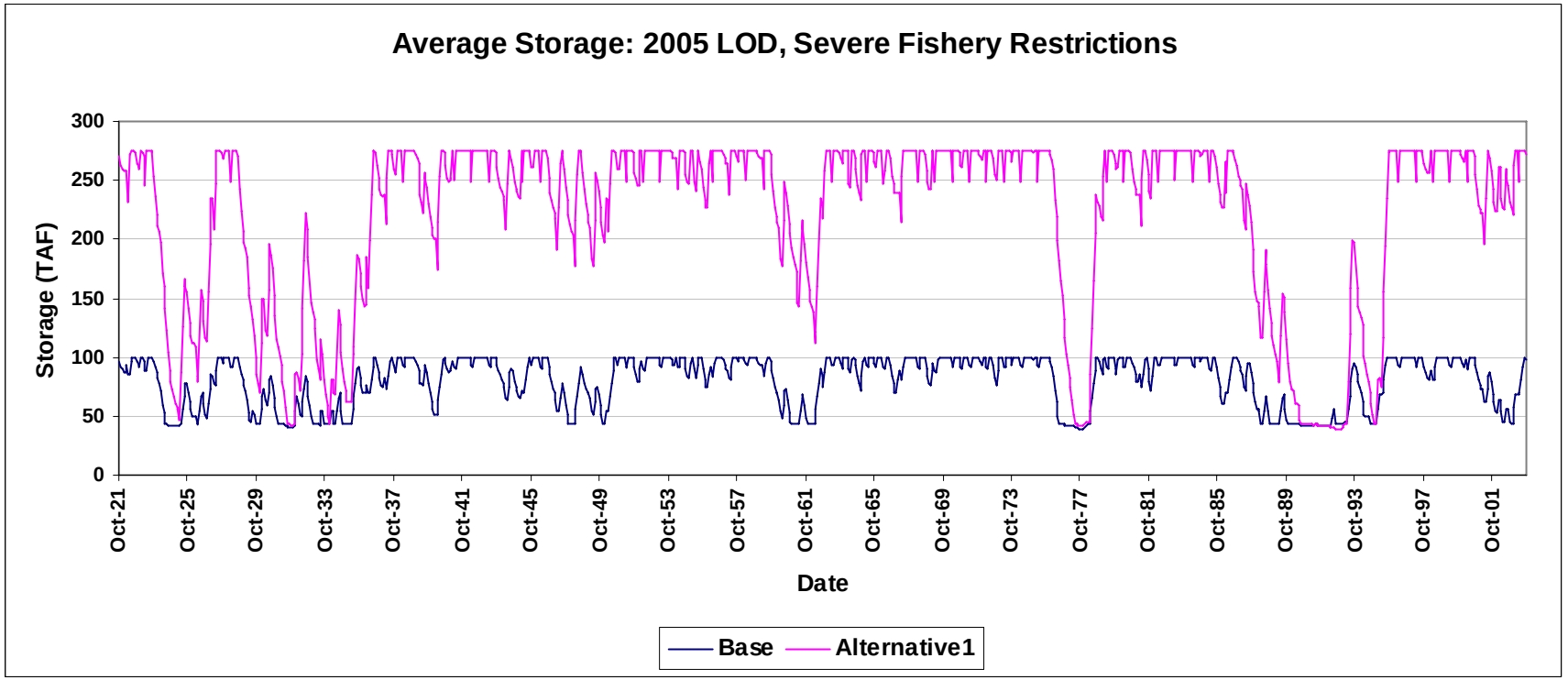


Figure C4-7: Timeseries of Alternative 1 and Base Los Vaqueros storage 2005 LOD, Severe Fishery Restrictions

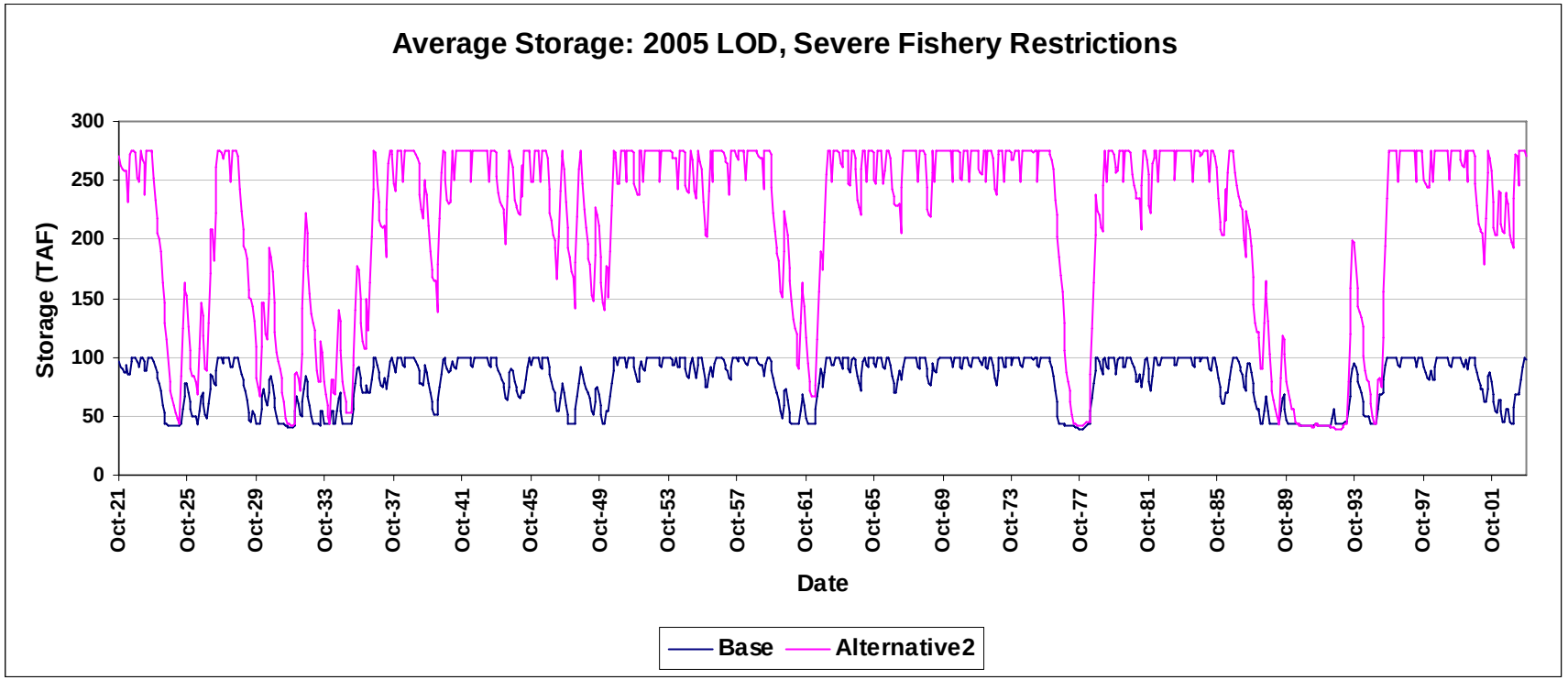


Figure C4-8: Timeseries of Alternative 2 and Base Los Vaqueros storage 2005 LOD, Severe Fishery Restrictions

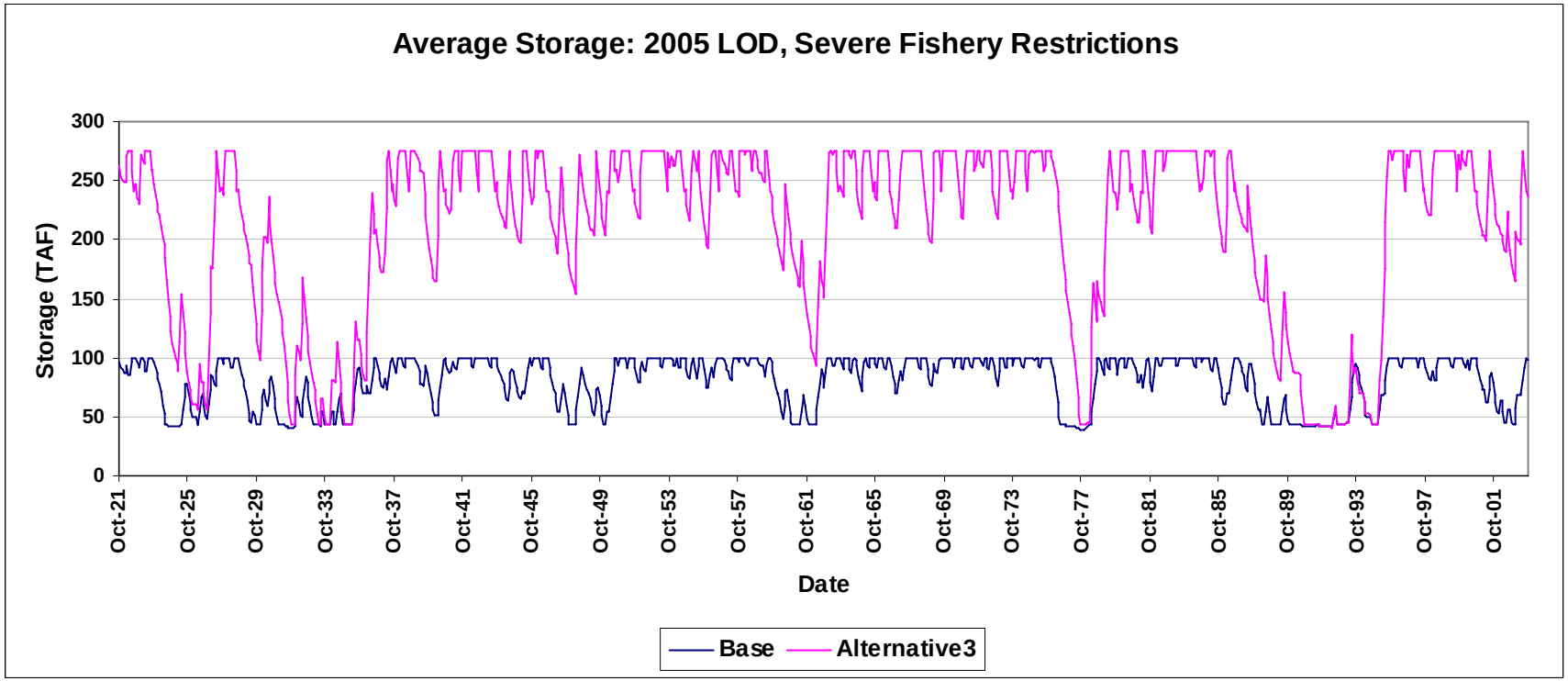


Figure C4-9: Timeseries of Alternative 3 and Base Los Vaqueros storage 2005 LOD, Severe Fishery Restrictions

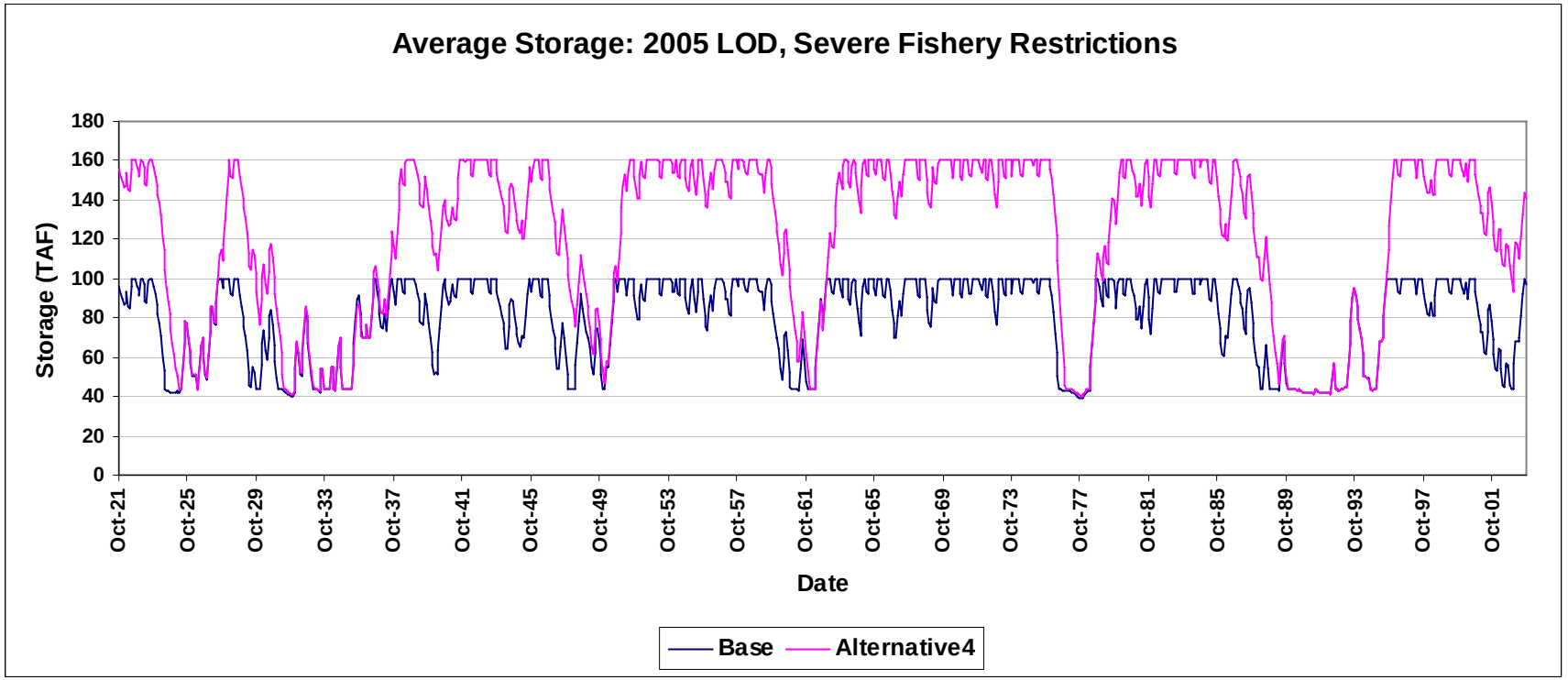


Figure C4-10: Timeseries of Alternative 4 and Base Los Vaqueros storage 2005 LOD, Severe Fishery Restrictions

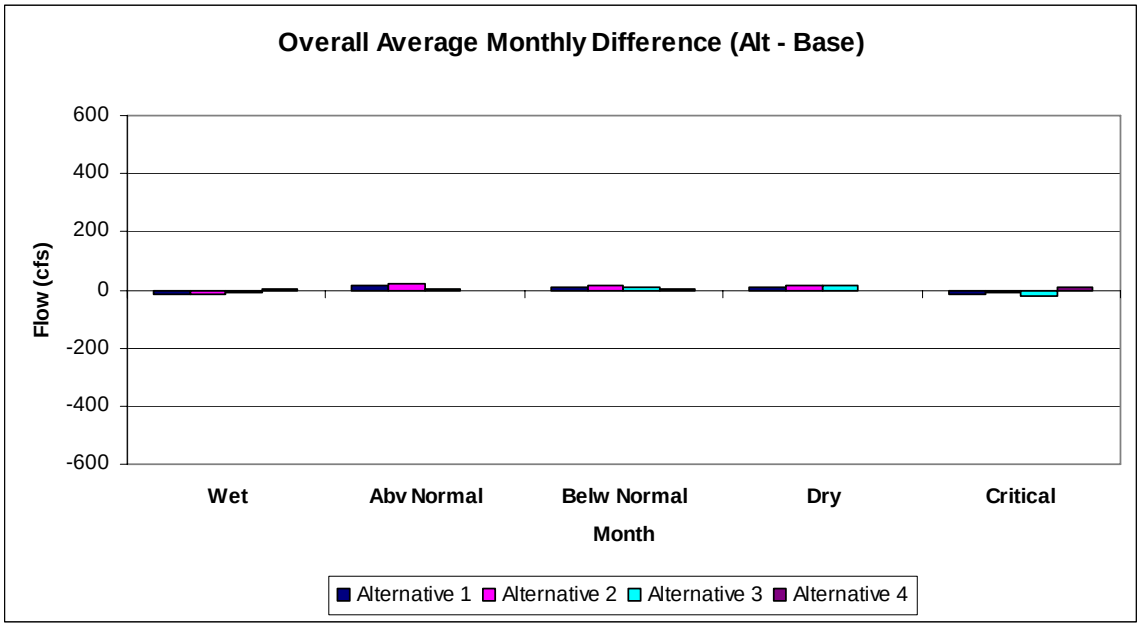


Figure C4-11: Changes in Sacramento River at Hood flow by water year type, 2005 LOD, Severe Fishery Restrictions

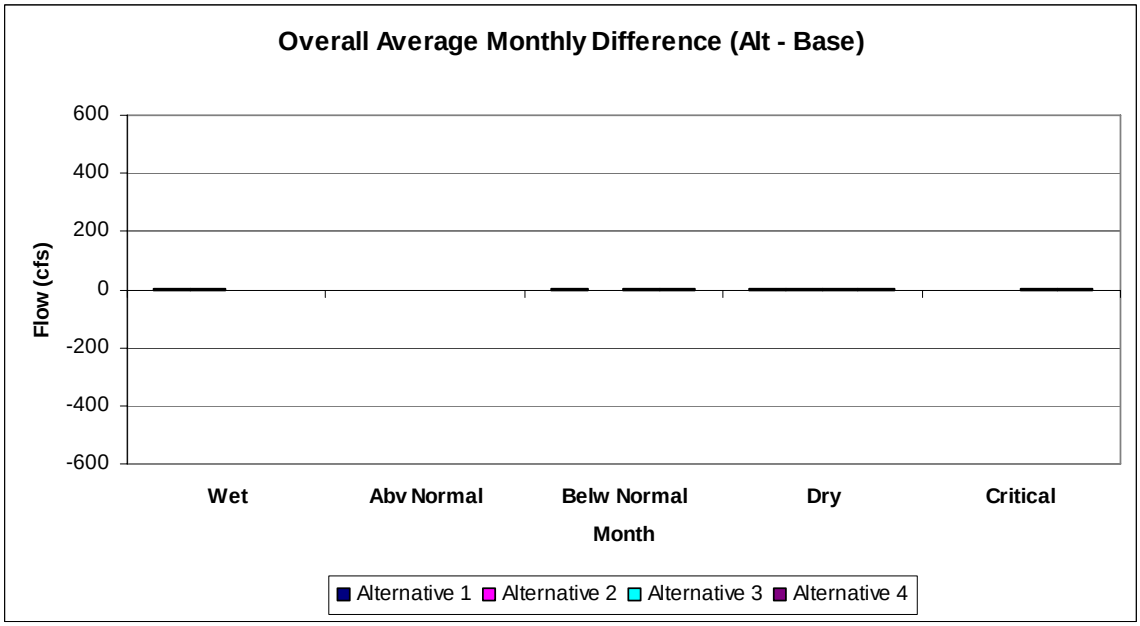


Figure C4-12: Changes in San Joaquin River at Vernalis flow by water year type, 2005 LOD, Severe Fishery Restrictions

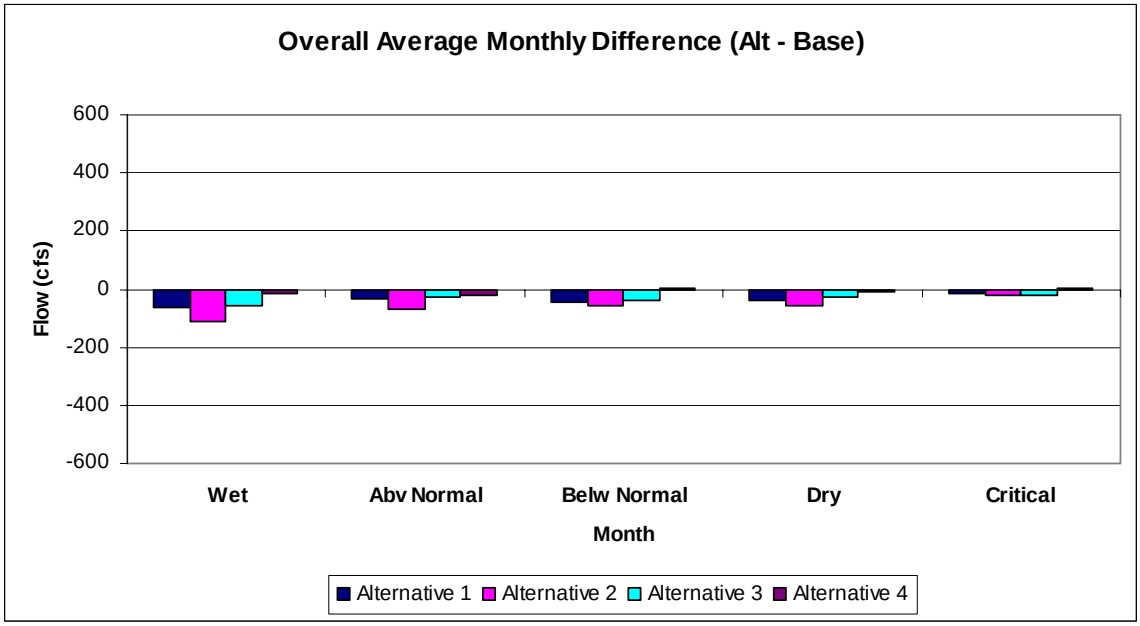


Figure C4-13: Changes in Delta Outflow by Year Type, 2005 LOD, Severe Fishery Restrictions

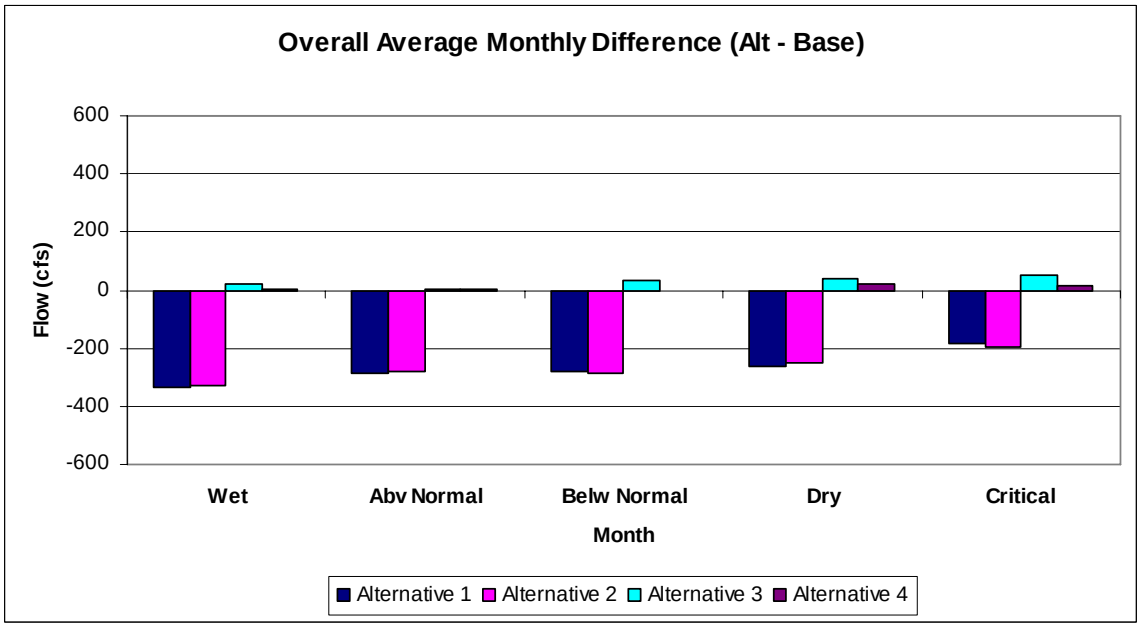


Figure C4-14: Changes in Banks + Jones Diversions by Year Type, 2005 LOD, Severe Fishery Restrictions

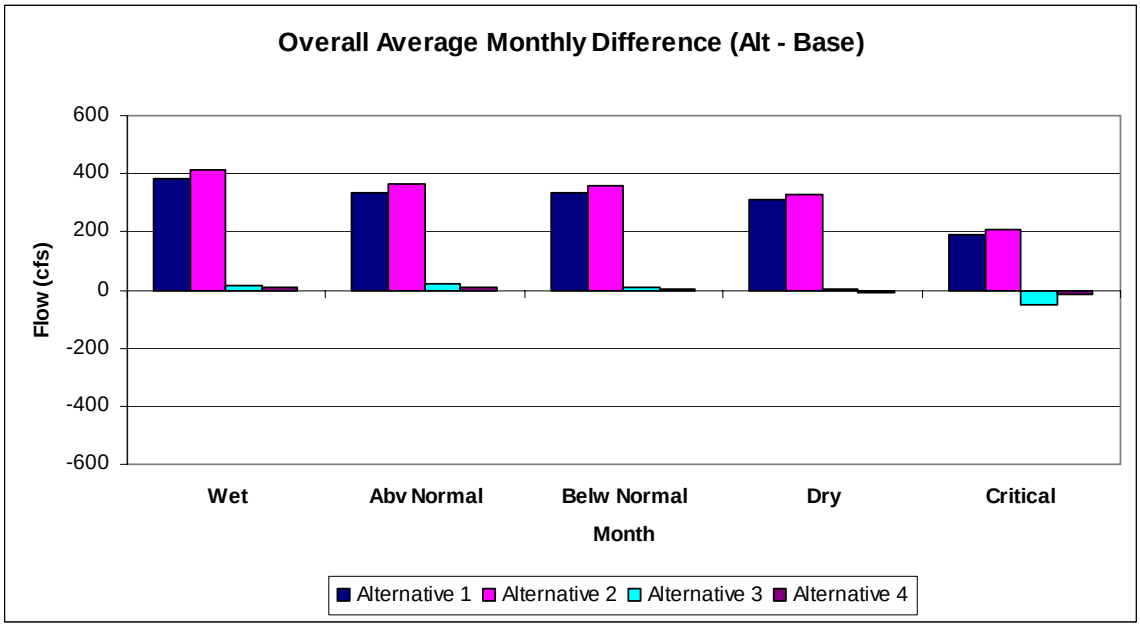


Figure C4-15: Changes in Project diversions by water year type, 2005 LOD, Severe Fishery Restrictions

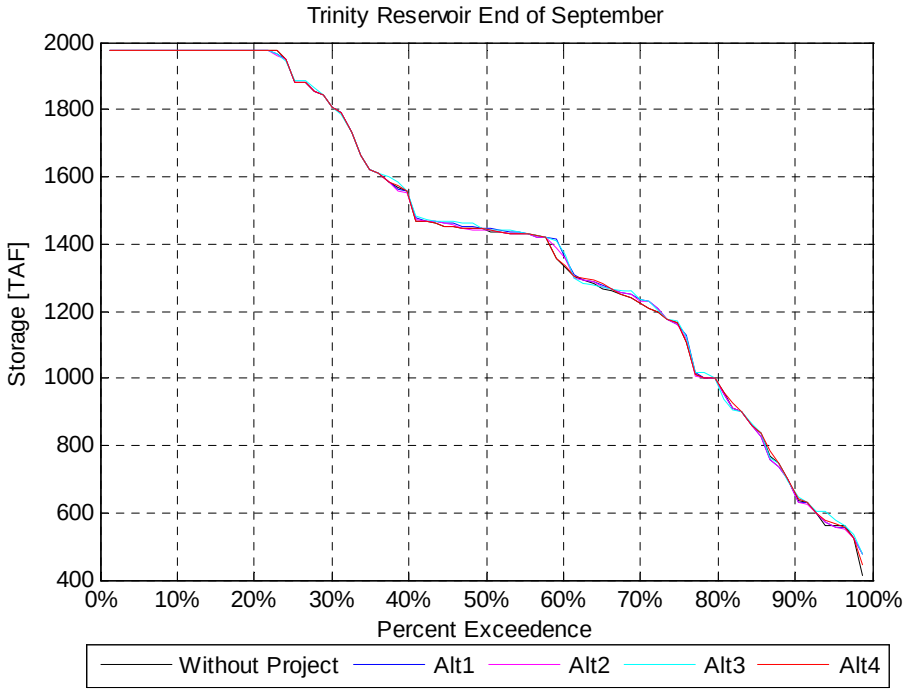


Figure C4-16: Trinity Reservoir end of September storage, 2005 LOD, Severe Fishery Restrictions

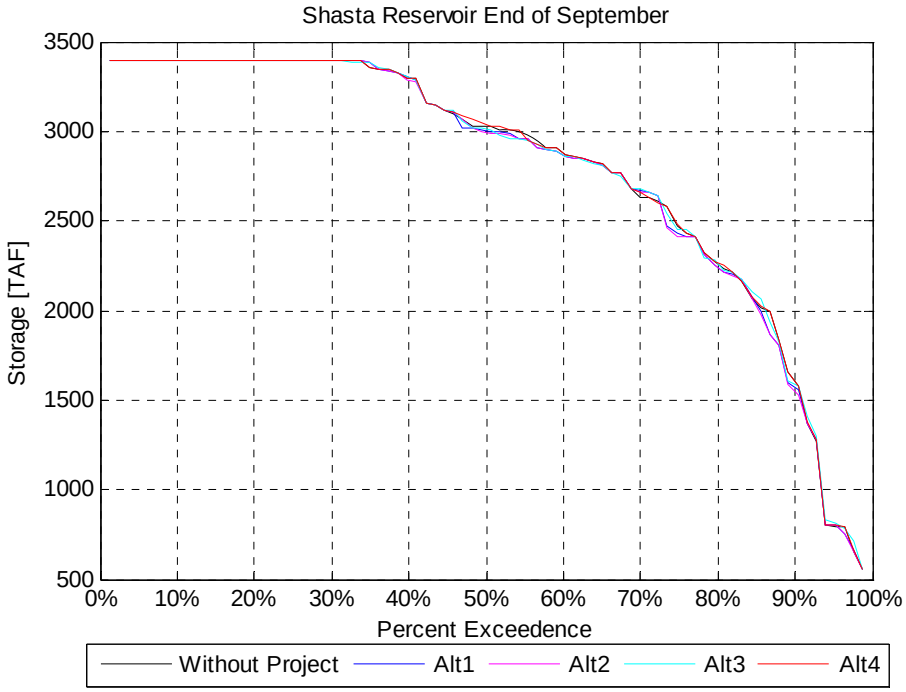


Figure C4-17: Shasta Reservoir end of September storage, 2005 LOD, Severe Fishery Restrictions

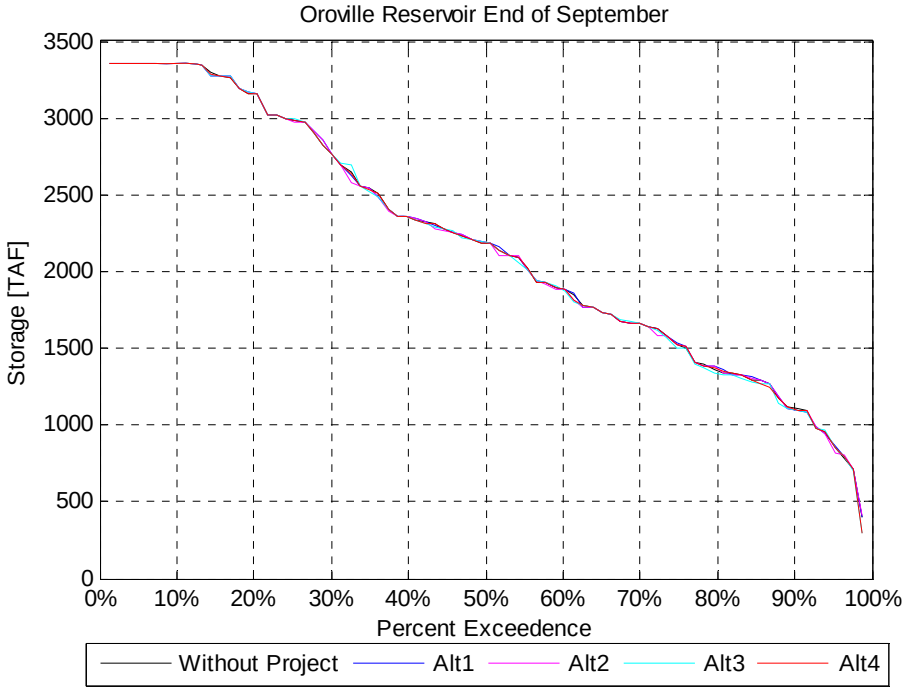


Figure C4-18: Oroville Reservoir end of September storage, 2005 LOD, Severe Fishery Restrictions

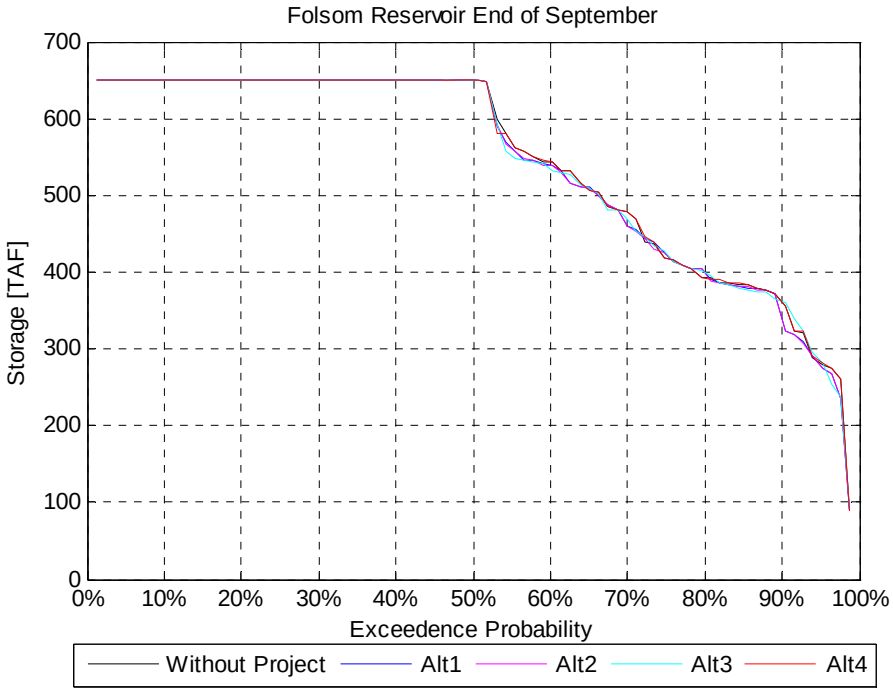


Figure C4-19: Folsom Reservoir end of September storage, 2005 LOD, Severe Fishery Restrictions

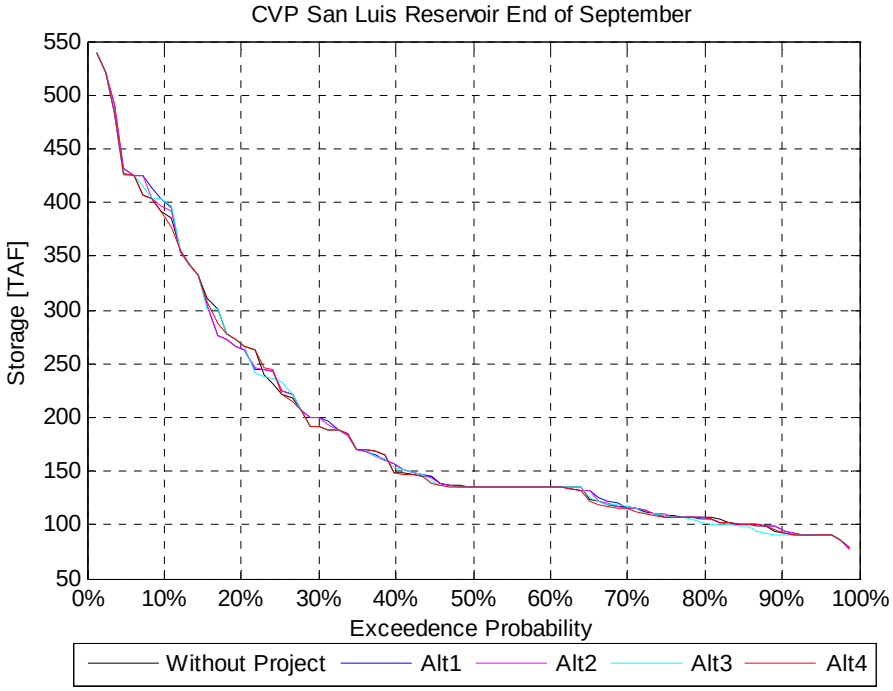


Figure C4-20: CVP San Luis Reservoir end of September storage, 2005 LOD, Severe Fishery Restrictions

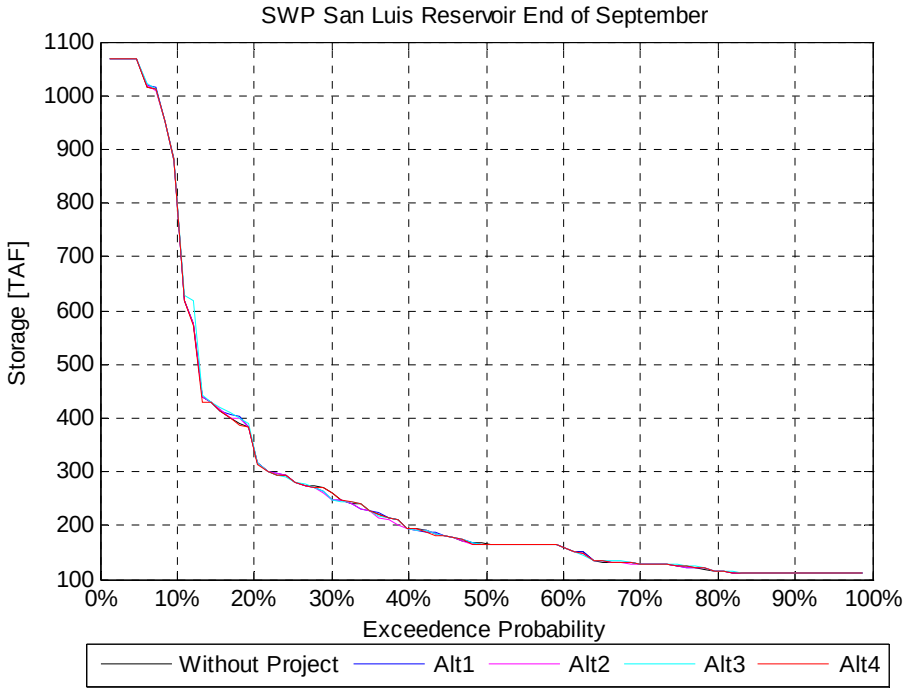


Figure C4-21: SWP San Luis Reservoir end of September storage, 2005 LOD, Severe Fishery Restrictions

2005 Level of Development, Moderate Fishery Restrictions

Model results for each project alternative are presented in **Table C4-6 (A-D)** as average values for full hydrologic study period (1921 to 2003) and a six-year dry period (1987 to 1992). These results include upstream and Delta flows and diversions (e.g. flow in Sacramento River and major tributaries, San Joaquin River flow, exports at Banks and Jones Pumping Plants, Net Delta Outflow, X2 position and QWEST), CVP and SWP south of Delta deliveries, CVP and SWP reservoir carry-over storages (at Folsom, Oroville, San Luis, Shasta and Trinity Reservoirs), and parameters specific to project alternative operations (CCWD and Los Vaqueros Reservoir (LV) diversions; additional south of Delta Environmental Water Supply deliveries; and Delta Supply Restoration deliveries to South Bay water agencies).

Table C4-7 and **Table C4-8** present the change in Delta channel flows and indices, upstream reservoir storages and local operation parameters for each project alternative as compared to the Existing Condition. Results are summarized in these tables as averages by water year type and by month, respectively.

Table C4-9 (A-D) presents the changes from the Existing Condition in monthly Banks and Jones export diversions for each project alternative, and **Table C4-10 (A-D)** presents the changes from the Existing Condition in monthly CCWD and Los Vaqueros Reservoir (LV) diversions for each project alternative. These tables also indicate whether the Delta is in excess or balanced conditions.

Monthly and year type average changes in various Delta parameters (Sacramento River flow at Hood, San Joaquin River flow at Vernalis, Delta Outflow, Combined Banks and Jones diversions, and combined CCWD and LV diversions) are presented in **Figure C4-22** through **Figure C4-26** and **Figure C4-32** through **Figure C4-36**, respectively. **Figure C4-27** shows the monthly average Los Vaqueros storage and **Figure C4-28** through **Figure C4-31** show time-series of storage for each alternative and the Existing Condition.

Figure C4-37 through **Figure C4-42** are exceedence plots of the end of September storage in upstream reservoirs (Trinity, Shasta, Oroville, and Folsom) and San Luis Reservoir (CVP and SWP).

TABLE C4-6:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2005 LOD, MODERATE FISHERY RESTRICTIONS

(A) ALTERNATIVE 1 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 1		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	135	368	295	241	159	189%	118%
Banks Pumping Plant	2781	1597	2569	1465	-212	-132	-8%	-8%
Jones Pumping Plant	2287	1750	2287	1739	0	-11	0%	-1%
Total	5195	3482	5224	3499	29	16	1%	0%
Delta (cfs)								
Sacramento River at Hood	22,427	12,975	22,423	12,956	-4	-19	0%	0%
San Joaquin River at Vernalis	4,285	1,596	4,285	1,596	0	0	0%	0%
Delta Outflow	22,064	8,535	22,021	8,494	-43	-41	0%	0%
QWEST	2,861	43	2,820	20	-41	-24	-1%	-55%
X2 Position (km)	75.03	81.60	75.06	81.65	0.03	0.05	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,559	6,348	8,558	6,343	0	-5	0%	0%
American River below Nimbus Dam	3,492	1,667	3,492	1,666	0	-1	0%	0%
Feather River below Thermalito	4,403	2,315	4,401	2,305	-2	-10	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,399	780	1,397	767	-2	-13	0%	-2%
Shasta	2,749	1,615	2,744	1,606	-5	-10	0%	-1%
Oroville	2,184	1,246	2,191	1,271	7	24	0%	2%
Folsom	539	336	538	334	-1	-3	0%	-1%
CVP San Luis (August)	174	97	176	97	2	0	1%	0%
SWP San Luis (August)	255	124	253	124	-1	0	-1%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	951	424	952	423	0	-1	0%	0%
CVP SOD M&I	118	100	118	100	0	0	0%	0%
SWP Table A + Article 56	2,630	1,566	2,637	1,568	7	2	0%	0%
SWP Article 21	97	0	97	0	0	0	0%	NA
Delta Supply Restoration + Dry Year	0	0	20	33	20	33	NA	NA

(B) ALTERNATIVE 2 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 2		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	135	387	311	260	176	204%	130%
Banks Pumping Plant	2781	1597	2577	1457	-204	-140	-7%	-9%
Jones Pumping Plant	2287	1750	2287	1750	0	0	0%	0%
Total	5195	3482	5251	3518	56	36	1%	1%
Delta (cfs)								
Sacramento River at Hood	22,427	12,975	22,425	13,010	-2	35	0%	0%
San Joaquin River at Vernalis	4,285	1,596	4,285	1,596	0	0	0%	0%
Delta Outflow	22,064	8,535	21,986	8,510	-78	-25	0%	0%
QWEST	2,861	43	2,783	-9	-79	-53	-3%	-122%
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,559	6,348	8,557	6,376	-2	28	0%	0%
American River below Nimbus Dam	3,492	1,667	3,492	1,680	0	13	0%	1%
Feather River below Thermalito	4,403	2,315	4,402	2,313	-2	-2	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,399	780	1,395	760	-5	-20	0%	-3%
Shasta	2,749	1,615	2,738	1,554	-11	-62	0%	-4%
Oroville	2,184	1,246	2,188	1,253	4	7	0%	1%
Folsom	539	336	536	322	-3	-14	-1%	-4%
CVP San Luis (August)	174	97	174	97	-1	0	0%	0%
SWP San Luis (August)	255	124	255	122	0	-2	0%	-2%
Deliveries (TAF/yr)								
CVP SOD Ag	951	424	952	422	0	-2	0%	-1%
CVP SOD M&I	118	100	118	100	0	0	0%	0%
SWP Table A + Article 56	2,630	1,566	2,636	1,579	6	13	0%	1%
SWP Article 21	97	0	97	0	0	0	0%	NA
Additional SOD Env Water Supply	0	0	46	51	46	51	NA	NA

TABLE C4-6:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2005 LOD, MODERATE FISHERY RESTRICTIONS

(C) ALTERNATIVE 3 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 3		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	135	131	122	3	-13	3%	-10%
Banks Pumping Plant	2781	1597	2804	1628	23	31	1%	2%
Jones Pumping Plant	2287	1750	2292	1748	5	-2	0%	0%
Total	5195	3483	5227	3498	31	15	1%	0%
Delta (cfs)								
Sacramento River at Hood	22,427	12,975	22,423	12,997	-4	22	0%	0%
San Joaquin River at Vernalis	4,285	1,596	4,285	1,595	0	0	0%	0%
Delta Outflow	22,064	8,535	22,016	8,536	-47	2	0%	0%
QWEST	2,861	43	2,815	25	-46	-18	-2%	-41%
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,559	6,348	8,557	6,362	-2	14	0%	0%
American River below Nimbus Dam	3,492	1,667	3,492	1,667	0	0	0%	0%
Feather River below Thermalito	4,403	2,315	4,402	2,317	-1	2	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,399	780	1,403	763	4	-17	0%	-2%
Shasta	2,749	1,615	2,744	1,593	-5	-23	0%	-1%
Oroville	2,184	1,246	2,191	1,271	7	25	0%	2%
Folsom	539	336	538	333	0	-3	0%	-1%
CVP San Luis (August)	174	97	177	96	2	-1	1%	-1%
SWP San Luis (August)	255	124	252	123	-3	-2	-1%	-1%
Deliveries (TAF/yr)								
CVP SOD Ag	951	424	950	419	-2	-5	0%	-1%
CVP SOD M&I	118	100	118	100	0	0	0%	0%
SWP Table A + Article 56	2,630	1,566	2,638	1,581	8	15	0%	1%
SWP Article 21	97	0	106	0	9	0	10%	NA
Additional SOD Env Water Supply	0	0	12	31	12	31	NA	NA

(D) ALTERNATIVE 4 COMPARED TO EXISTING CONDITION (NO ACTION)

	Existing Condition		Alternative 4		Difference (Alt – Ex. Cond.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	127	135	128	126	1	-9	1%	-7%
Banks Pumping Plant	2781	1597	2785	1597	4	-1	0%	0%
Jones Pumping Plant	2287	1750	2287	1749	0	-1	0%	0%
Total	5195	3483	5200	3471	5	-11	0%	0%
Delta (cfs)								
Sacramento River at Hood	22,427	12,975	22,421	12,956	-5	-19	0%	0%
San Joaquin River at Vernalis	4,285	1,596	4,285	1,596	0	0	0%	0%
Delta Outflow	22,064	8,535	22,054	8,531	-10	-4	0%	0%
QWEST	2,861	43	2,852	55	-9	12	0%	27%
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,559	6,348	8,558	6,332	-1	-16	0%	0%
American River below Nimbus Dam	3,492	1,667	3,492	1,666	0	-1	0%	0%
Feather River below Thermalito	4,403	2,315	4,403	2,313	-1	-2	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,399	780	1,399	789	-1	9	0%	1%
Shasta	2,749	1,615	2,748	1,636	-1	20	0%	1%
Oroville	2,184	1,246	2,187	1,251	3	4	0%	0%
Folsom	539	336	539	337	0	1	0%	0%
CVP San Luis (August)	174	97	176	97	1	0	1%	0%
SWP San Luis (August)	255	124	253	125	-2	1	-1%	1%
Deliveries (TAF/yr)								
CVP SOD Ag	951	424	952	424	0	0	0%	0%
CVP SOD M&I	118	100	118	100	0	0	0%	0%
SWP Table A + Article 56	2,630	1,566	2,633	1,564	3	-3	0%	0%
SWP Article 21	97	0	97	0	1	0	1%	NA

TABLE C4-7:
ANNUAL VALUES BY WATER YEAR TYPE, 2005 LOD, MODERATE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
CCWD and LV Diversions (TAF/yr)							
Average Total Diversions Existing Condition	**127**	**135**	**122**	**132**	**134**	**133**	**119**
Changes under Alternative 1	241	159	281	253	249	231	146
Changes under Alternative 2	260	176	302	274	269	248	161
Changes under Alternative 3	3	-13	8	17	10	9	-37
Changes under Alternative 4	1	-9	8	5	3	-3	-13
Improved Fish Screening Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	202	130	242	204	204	179	144
Changes under Alternative 2	195	127	234	200	192	171	143
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta (cfs)							
Sacramento River at Hood Existing Condition	**22,427**	**12,975**	**33,129**	**25,438**	**18,578**	**15,496**	**11,113**
Changes under Alternative 1	-4	-19	0	27	-21	3	-30
Changes under Alternative 2	-2	35	-1	3	-34	13	5
Changes under Alternative 3	-4	22	0	22	8	18	-86
Changes under Alternative 4	-5	-19	-9	15	-1	1	-32
San Joaquin River at Vernalis Existing Condition	**4,285**	**1,596**	**7,529**	**4,017**	**3,337**	**2,246**	**1,686**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta Outflow Existing Condition	**22,064**	**8,535**	**40,180**	**24,043**	**14,617**	**10,505**	**6,857**
Changes under Alternative 1	-43	-41	-39	-34	-39	-61	-35
Changes under Alternative 2	-78	-25	-88	-82	-91	-88	-23
Changes under Alternative 3	-47	2	-45	-30	-18	-42	-111
Changes under Alternative 4	-10	-4	-8	-9	-3	-18	-8
Banks Pumping Plant Existing Condition	**3,833**	**2,206**	**4,933**	**4,076**	**3,740**	**3,241**	**2,207**
Changes under Alternative 1	-291	-182	-358	-283	-301	-253	-203
Changes under Alternative 2	-282	-185	-341	-286	-288	-244	-201
Changes under Alternative 3	32	43	26	29	26	29	60
Changes under Alternative 4	6	-1	3	15	4	15	-7
Jones Pumping Plant Existing Condition	**3,153**	**2,417**	**3,596**	**3,295**	**3,193**	**2,994**	**2,241**
Changes under Alternative 1	1	-15	12	4	-24	-1	7
Changes under Alternative 2	1	3	9	0	-26	5	6
Changes under Alternative 3	7	-3	9	-2	-12	20	15
Changes under Alternative 4	1	-2	0	-3	-7	8	2
Banks + Jones Exports Existing Condition	**6,986**	**4,623**	**8,529**	**7,371**	**6,934**	**6,235**	**4,448**
Changes under Alternative 1	-290	-197	-346	-279	-325	-254	-196
Changes under Alternative 2	-282	-182	-332	-285	-314	-239	-195
Changes under Alternative 3	39	40	34	28	14	49	75
Changes under Alternative 4	7	-3	3	12	-3	24	-5
Banks + Jones + CCWD + LV Diversions Existing Condition	**7,162**	**4,810**	**8,697**	**7,552**	**7,118**	**6,419**	**4,612**
Changes under Alternative 1	41	22	42	69	17	64	4
Changes under Alternative 2	76	60	85	90	57	102	27
Changes under Alternative 3	43	20	45	50	28	61	24
Changes under Alternative 4	8	-15	13	19	1	19	-23
QWEST Existing Condition	**2,861**	**43**	**7,142**	**2,839**	**1,205**	**-125**	**21**
Changes under Alternative 1	-41	-24	-42	-62	-22	-63	-8
Changes under Alternative 2	-79	-53	-84	-107	-65	-98	-25
Changes under Alternative 3	-46	-18	-45	-61	-24	-59	-40
Changes under Alternative 4	-9	12	-14	-16	-2	-21	17
X2 Position (km) Existing Condition	**75.03**	**81.60**	**68.64**	**73.21**	**76.51**	**79.24**	**82.64**
Changes under Alternative 1	0.03	0.05	0.02	0.03	0.03	0.06	0.04
Changes under Alternative 2	0.06	0.03	0.05	0.05	0.08	0.08	0.03
Changes under Alternative 3	0.03	0.05	0.01	0.01	0.00	0.05	0.11
Changes under Alternative 4	0.01	0.00	0.01	0.01	0.00	0.02	0.00
Upstream River Flows (cfs)							
Sacramento River at Keswick Existing Condition	**8,559**	**6,348**	**11,610**	**8,649**	**7,042**	**6,834**	**6,215**
Changes under Alternative 1	0	-5	4	7	-14	9	-16
Changes under Alternative 2	-2	28	-1	-6	-27	16	4
Changes under Alternative 3	-2	14	-1	14	-6	16	-44
Changes under Alternative 4	-1	-16	2	0	-3	6	-15
American River below Nimbus Existing Condition	**3,492**	**1,667**	**5,471**	**3,894**	**2,944**	**2,169**	**1,425**
Changes under Alternative 1	0	-1	0	1	-9	7	-2
Changes under Alternative 2	0	13	-1	-6	-9	9	5
Changes under Alternative 3	0	0	-1	0	0	7	-10
Changes under Alternative 4	0	-1	0	0	0	0	-1

TABLE C4-7:
ANNUAL VALUES BY WATER YEAR TYPE, 2005 LOD, MODERATE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
Feather River below Thermalito							
Existing Condition	**4,403**	**2,315**	**6,777**	**4,514**	**3,462**	**3,012**	**2,335**
Changes under Alternative 1	-2	-10	-2	29	-6	-14	-11
Changes under Alternative 2	-2	-2	-1	19	-4	-13	-2
Changes under Alternative 3	-1	2	1	8	17	-6	-32
Changes under Alternative 4	-1	-2	3	10	1	-4	-17
Reservoir Carryover Storage (TAF)							
Trinity Existing Condition	**1,399**	**780**	**1,856**	**1,635**	**1,274**	**1,134**	**719**
Changes under Alternative 1	-2	-13	-1	-2	-3	-2	-3
Changes under Alternative 2	-5	-20	-1	-8	-5	-5	-9
Changes under Alternative 3	4	-17	1	4	8	5	3
Changes under Alternative 4	-1	9	-1	-1	-2	0	0
Shasta Existing Condition	**2,749**	**1,615**	**3,335**	**3,229**	**2,874**	**2,431**	**1,328**
Changes under Alternative 1	-5	-10	0	-2	-9	-9	-7
Changes under Alternative 2	-11	-62	0	-3	-11	-14	-37
Changes under Alternative 3	-5	-23	0	-2	-1	-15	-9
Changes under Alternative 4	-1	20	-1	0	-1	-5	7
Oroville Existing Condition	**2,184**	**1,246**	**3,042**	**2,394**	**2,106**	**1,582**	**1,110**
Changes under Alternative 1	7	24	1	2	1	10	26
Changes under Alternative 2	4	7	1	1	-3	7	16
Changes under Alternative 3	7	25	0	10	-5	9	32
Changes under Alternative 4	3	4	-2	-1	2	6	14
Folsom Existing Condition	**539**	**336**	**646**	**605**	**590**	**447**	**318**
Changes under Alternative 1	-1	-3	0	-1	0	-5	1
Changes under Alternative 2	-3	-14	0	-1	-2	-7	-5
Changes under Alternative 3	0	-3	0	0	-2	-4	6
Changes under Alternative 4	0	1	0	0	0	0	1
CVP San Luis (August) Existing Condition	**174**	**97**	**240**	**147**	**150**	**132**	**152**
Changes under Alternative 1	2	0	0	-2	-3	4	10
Changes under Alternative 2	-1	0	-3	-3	-8	3	9
Changes under Alternative 3	2	-1	5	-1	-2	2	4
Changes under Alternative 4	1	0	0	0	-2	3	5
SWP San Luis (August) Existing Condition	**255**	**124**	**487**	**176**	**144**	**140**	**132**
Changes under Alternative 1	-1	0	1	-1	-1	1	-11
Changes under Alternative 2	0	-2	4	-2	0	0	-9
Changes under Alternative 3	-3	-2	1	0	-1	-2	-14
Changes under Alternative 4	-2	1	-2	-1	0	0	-8
CVP and SWP Deliveries (TAF/year)							
CVP SOD Ag Existing Condition	**951**	**424**	**1,346**	**1,046**	**923**	**737**	**355**
Changes under Alternative 1	0	-1	6	3	-11	4	-7
Changes under Alternative 2	0	-2	6	3	-10	4	-9
Changes under Alternative 3	-2	-5	0	0	-10	4	-7
Changes under Alternative 4	0	0	0	-2	-1	6	-3
CVP SOD M&I Existing Condition	**118**	**100**	**133**	**118**	**116**	**111**	**97**
Changes under Alternative 1	0	0	0	1	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	1	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
SWP Table A + Article 56 Existing Condition	**2,630**	**1,566**	**3,184**	**2,825**	**2,710**	**2,365**	**1,539**
Changes under Alternative 1	7	2	1	7	2	10	19
Changes under Alternative 2	6	13	2	4	-2	13	18
Changes under Alternative 3	8	15	3	1	5	5	38
Changes under Alternative 4	3	-3	4	0	3	5	3
SWP Article 21 Existing Condition	**97**	**0**	**215**	**97**	**54**	**19**	**5**
Changes under Alternative 1	0	0	0	2	0	0	0
Changes under Alternative 2	0	0	-1	1	0	0	0
Changes under Alternative 3	9	0	17	1	3	5	15
Changes under Alternative 4	1	0	-2	3	0	5	0
Improved Fish Screening for CVP South Bay							
Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	78	70	79	79	82	76	73
Changes under Alternative 2	75	71	76	76	78	73	73
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay							
Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	140	70	181	141	138	118	82
Changes under Alternative 2	135	69	177	139	131	113	81
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
CVP Delta Supply Restoration							
Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	4	4	3	3	3	4	6
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-7:
ANNUAL VALUES BY WATER YEAR TYPE, 2005 LOD, MODERATE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
SWP Delta Supply Restoration							
Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	16	29	8	9	11	20	41
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from Dedicated Storage Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	46	51	35	37	45	54	69
Changes under Alternative 3	12	31	1	5	16	23	23
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-8:
AVERAGE MONTHLY VALUES, 2005 LOD, MODERATE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CCWD and LV Diversions (TAF)												
Average Total Diversions												
Existing Condition	**7**	**6**	**6**	**6**	**8**	**8**	**2**	**11**	**22**	**21**	**18**	**12**
Changes under Alternative 1	14	17	20	21	17	27	-1	35	19	23	24	25
Changes under Alternative 2	15	20	24	25	19	29	-1	35	20	24	24	25
Changes under Alternative 3	-1	-1	-1	0	1	3	-1	8	-9	5	0	0
Changes under Alternative 4	0	0	0	0	0	0	-1	0	0	0	1	0
CVP-SWP Improved Fish Screening												
Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	13	16	19	20	16	23	0	11	17	20	23	24
Changes under Alternative 2	13	16	18	19	15	20	0	10	17	19	23	24
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta (cfs)												
Sacramento River at Hood												
Existing Condition	**12,136**	**15,406**	**25,620**	**34,425**	**40,290**	**35,005**	**24,146**	**19,826**	**16,705**	**17,866**	**14,287**	**13,406**
Changes under Alternative 1	43	9	-3	-5	-89	39	-87	65	63	39	-86	-32
Changes under Alternative 2	5	-3	-12	-23	-36	39	-84	55	82	54	-78	-23
Changes under Alternative 3	20	26	9	9	-128	75	-1	-10	-114	35	-90	120
Changes under Alternative 4	-24	-16	-1	6	-21	40	-7	9	-5	-9	-54	20
San Joaquin River at Vernalis												
Existing Condition	**2,548**	**2,731**	**3,484**	**4,857**	**6,595**	**6,478**	**6,023**	**6,066**	**4,684**	**3,247**	**2,131**	**2,571**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta Outflow Existing Condition	**5,216**	**9,457**	**23,899**	**43,760**	**54,987**	**44,781**	**29,264**	**21,649**	**13,342**	**8,461**	**4,492**	**5,456**
Changes under Alternative 1	-9	-18	-37	-104	-84	-42	95	-311	29	16	-31	-18
Changes under Alternative 2	-66	-76	-115	-230	-89	-108	91	-332	24	27	-39	-24
Changes under Alternative 3	-4	28	-7	-176	-186	-128	1	-140	49	-14	1	8
Changes under Alternative 4	15	-20	2	-72	-33	-12	-1	15	-6	2	2	-8
Banks Pumping Plant Existing Condition	**4,451**	**4,860**	**4,977**	**4,092**	**3,788**	**3,270**	**1,472**	**1,799**	**2,420**	**4,728**	**5,229**	**4,915**
Changes under Alternative 1	-165	-261	-302	-269	-301	-367	-247	-171	-280	-323	-403	-409
Changes under Alternative 2	-174	-265	-310	-259	-292	-327	-246	-160	-268	-310	-377	-400
Changes under Alternative 3	20	19	36	167	44	132	34	3	-4	-30	-113	77
Changes under Alternative 4	20	1	11	46	0	29	-1	-2	-3	5	-53	18
Jones Pumping Plant Existing Condition	**3,998**	**4,010**	**3,652**	**3,515**	**2,982**	**2,619**	**1,719**	**1,676**	**2,039**	**3,574**	**3,957**	**4,094**
Changes under Alternative 1	-5	9	16	23	-5	10	88	-28	-10	-25	-40	-18
Changes under Alternative 2	-12	8	22	46	4	9	89	-30	-14	-48	-53	-14
Changes under Alternative 3	20	0	10	8	-9	16	-13	-4	-5	1	19	41
Changes under Alternative 4	-10	3	-8	27	6	12	9	1	3	-23	-15	2
Banks + Jones Exports												
Existing Condition	**8,448**	**8,869**	**8,629**	**7,607**	**6,770**	**5,889**	**3,191**	**3,475**	**4,459**	**8,302**	**9,186**	**9,009**
Changes under Alternative 1	-170	-251	-287	-245	-306	-356	-159	-199	-290	-348	-443	-428
Changes under Alternative 2	-185	-256	-288	-213	-288	-317	-157	-189	-282	-358	-430	-414
Changes under Alternative 3	40	18	46	175	34	147	21	0	-9	-29	-94	119
Changes under Alternative 4	10	4	3	73	6	41	8	0	1	-18	-69	21

TABLE C4-8:
AVERAGE MONTHLY VALUES, 2005 LOD, MODERATE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Banks + Jones + CCWD + LV Diversions												
Existing Condition	**8,564**	**8,977**	**8,722**	**7,698**	**6,912**	**6,024**	**3,218**	**3,659**	**4,837**	**8,636**	**9,482**	**9,213**
Changes under Alternative 1	50	28	46	102	-3	87	-182	376	34	23	-55	-13
Changes under Alternative 2	62	73	109	201	54	152	-175	387	58	27	-39	1
Changes under Alternative 3	22	3	33	175	49	200	-2	130	-162	50	-91	112
Changes under Alternative 4	12	5	5	77	5	42	-6	-6	1	-11	-56	28
QWEST Existing Condition	**-1,036**	**-1,104**	**1,354**	**6,195**	**9,051**	**7,891**	**7,564**	**5,840**	**3,552**	**-720**	**-2,684**	**-1,568**
Changes under Alternative 1	-35	-27	-46	-103	-9	-82	170	-368	-17	-11	30	4
Changes under Alternative 2	-58	-74	-145	-205	-59	-147	164	-380	-36	-11	16	-8
Changes under Alternative 3	-15	2	-65	-173	-66	-190	2	-131	131	-39	64	-77
Changes under Alternative 4	-13	-8	-4	-77	-8	-36	5	8	-2	9	40	-22
X2 Position (km) Existing Condition	**85.22**	**85.33**	**82.71**	**76.84**	**69.57**	**64.18**	**63.91**	**66.55**	**69.78**	**74.56**	**78.06**	**83.60**
Changes under Alternative 1	0.04	0.00	0.02	0.03	0.06	0.06	0.03	-0.01	0.13	0.02	-0.02	0.04
Changes under Alternative 2	0.05	0.07	0.09	0.09	0.12	0.06	0.05	0.00	0.14	0.03	-0.03	0.05
Changes under Alternative 3	-0.02	-0.01	-0.02	0.04	0.10	0.13	0.07	0.02	0.07	-0.01	0.01	0.00
Changes under Alternative 4	0.01	0.00	0.02	0.00	0.04	0.03	0.01	0.00	-0.01	0.00	0.00	-0.01
E/I Ratio Existing Condition	**0.57**	**0.53**	**0.41**	**0.27**	**0.15**	**0.15**	**0.11**	**0.14**	**0.21**	**0.38**	**0.53**	**0.57**
Changes under Alternative 1	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 2	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 3	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream River Flows (cfs)												
Sacramento River at Keswick Dam												
Existing Condition	**6,305**	**5,876**	**7,238**	**8,658**	**10,907**	**8,800**	**7,015**	**7,797**	**10,501**	**13,005**	**10,107**	**6,498**
Changes under Alternative 1	3	21	4	-2	-51	23	-14	29	17	10	-18	-27
Changes under Alternative 2	-43	21	1	-17	-6	25	-14	16	24	23	-20	-30
Changes under Alternative 3	10	31	-5	-9	-106	2	-3	-25	-88	25	62	77
Changes under Alternative 4	14	-13	-7	-2	-13	10	-5	8	2	-11	10	0
American River below Nimbus Dam												
Existing Condition	**1,807**	**2,770**	**3,441**	**4,541**	**5,301**	**3,875**	**3,482**	**3,892**	**3,793**	**3,788**	**2,582**	**2,630**
Changes under Alternative 1	-1	-12	2	3	-19	7	-13	8	32	19	-32	6
Changes under Alternative 2	12	-23	-2	-11	-24	11	-14	7	38	18	-25	13
Changes under Alternative 3	-3	-13	8	-6	-5	13	0	4	-24	50	-26	0
Changes under Alternative 4	-9	-3	-2	10	-3	2	-2	1	2	-6	-9	18
Feather River below Thermalito												
Existing Condition	**3,367**	**2,492**	**4,357**	**5,576**	**6,565**	**6,730**	**3,148**	**3,758**	**3,806**	**6,195**	**4,694**	**2,153**
Changes under Alternative 1	42	2	7	-3	-18	8	-58	26	15	6	-38	-13
Changes under Alternative 2	29	-3	0	0	-5	-2	-56	29	20	16	-37	-9
Changes under Alternative 3	24	9	19	11	-25	44	5	11	-1	-44	-120	48
Changes under Alternative 4	26	0	18	-1	-13	17	0	-1	-9	8	-57	3
CVP and SWP Deliveries (TAF)												
CVP SOD Ag Existing Condition	**30**	**22**	**32**	**55**	**65**	**43**	**62**	**99**	**159**	**197**	**141**	**46**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	1	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	-1	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C4-8:
AVERAGE MONTHLY VALUES, 2005 LOD, MODERATE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CVP SOD M&I Existing Condition	**9**	**11**	**12**	**8**	**4**	**12**	**10**	**9**	**9**	**11**	**11**	**13**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP Table A + Article 56 Existing Condition	**207**	**177**	**163**	**139**	**134**	**131**	**190**	**246**	**307**	**347**	**340**	**248**
Changes under Alternative 1	0	0	0	0	0	0	0	1	2	1	1	0
Changes under Alternative 2	0	0	0	0	0	0	0	1	2	1	0	0
Changes under Alternative 3	1	1	1	1	1	1	0	0	2	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP Article 21 Existing Condition	**6**	**7**	**9**	**11**	**23**	**25**	**5**	**4**	**1**	**1**	**1**	**2**
Changes under Alternative 1	0	0	0	0	1	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	1	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	1	6	2	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	1	1	0	0	0	0	0	0
Improved Fish Screening for CVP South Bay Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	7	10	10	5	2	8	5	2	6	6	8	9
Changes under Alternative 2	7	10	9	5	2	7	5	2	5	6	7	9
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	6	6	9	15	14	15	11	9	12	14	15	15
Changes under Alternative 2	6	6	9	14	13	14	11	8	11	13	15	15
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
CVP South Bay Delta Supply Restoration Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	1	1	1	1	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP South Bay Delta Supply Restoration Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	4	3	3	0	0	1	0	0	1	0	2	2
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from Dedicated Storage Existing Condition	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	13	9	6	5	4	1	0	1	1	0	2	2
Changes under Alternative 3	2	0	0	0	0	0	0	0	0	1	2	7
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C4-9:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-159	-112	-419	-165	-219	-405	-428	-475	-470
1923	-198	-274	-346	-521	-382	-470	-157	-195	-335	-384	-535	-424
1924	-170	-168	-312	-260	-214	-300	-251	-177	222	-267	-278	-162
1925	39	-361	-17	2845	-370	-267	0	0	0	-793	-780	-229
1926	-188	-95	-265	-226	-200	-300	-143	-135	-1	-623	-733	-601
1927	-129	-167	-1	0	-468	-204	-166	-222	-459	-456	-628	-804
1928	186	-305	-376	-468	-458	-469	-165	-210	-348	-329	-412	-632
1929	-180	-369	-4	-289	-246	-393	0	-314	-183	-209	-399	-268
1930	-105	-194	-136	0	0	-399	337	-220	-112	-386	-947	-206
1931	-133	-179	-239	-199	-169	-291	-249	-193	606	773	233	-83
1932	-136	173	-132	0	-122	-377	111	0	-146	0	500	-42
1933	-137	-176	102	-53	-32	-353	-249	-192	0	-243	-299	-288
1934	-10	-218	554	-666	-127	-384	0	-206	0	37	-255	-328
1935	-162	-135	276	-147	-131	-352	0	0	191	-905	-788	-428
1936	-206	-273	-316	-152	-121	0	-294	-361	-372	-340	-436	-429
1937	-189	-239	-310	-235	-270	-470	-329	-165	-1103	-398	-1036	-629
1938	-189	-249	-320	585	-463	-232	-304	-221	-470	-482	114	-470
1939	-1041	-470	-470	-470	-278	-179	-240	-310	-394	-124	-433	-431
1940	-101	-168	-339	-193	-161	0	-167	0	-387	-202	-438	-460
1941	-225	-307	-318	-319	-305	-354	-316	-248	-469	-479	-480	-470
1942	-240	-325	-394	-467	-464	-470	-248	-232	-470	-482	-480	-470
1943	-254	-464	-465	-470	-319	-401	-316	-641	-470	-470	-470	-470
1944	207	86	-1013	-470	-467	-470	-143	-93	-330	-390	-409	-717
1945	-612	-237	-301	-282	-419	321	-157	-217	-433	-753	-253	-473
1946	-237	-288	-358	-470	-871	-470	-157	-219	-338	-460	-537	-363
1947	-133	-245	-305	-270	-232	-455	-143	24	-117	-430	-552	-458
1948	-182	346	-611	-204	0	-347	-140	-228	-217	-396	-413	-240
1949	-196	-236	-231	-350	-208	-433	-286	-289	0	-77	-328	-363
1950	-106	-194	-322	-248	0	-400	-157	-218	-318	-457	-451	-325
1951	-129	-221	-286	-462	-223	-742	-163	-220	-442	-446	-469	-470
1952	-244	-302	-372	-443	-241	-468	-316	-222	-428	-456	-470	-470
1953	-471	-470	-243	-409	-406	-183	-157	-223	-416	-437	-495	-466
1954	-206	-267	-339	-470	-459	-470	-165	-197	-393	-427	-448	-413
1955	-157	-252	-323	2560	-404	-470	0	-223	-720	-500	-356	-836
1956	-126	-218	-210	438	2	-125	-169	-225	-470	-467	-470	-469
1957	-260	-333	-400	-470	-470	-470	-320	-227	-355	-441	-423	-421
1958	-187	-259	-323	-1497	-394	-371	241	-284	-470	-482	-470	-470
1959	-347	-472	-469	-348	-470	-470	0	-300	-362	-546	-375	-411
1960	-215	-198	-337	-412	-352	-470	-279	0	0	-156	-191	-345
1961	-73	-200	-542	-226	-201	-429	0	-291	-10	333	-420	-462
1962	-254	-628	-199	-369	-238	-456	-157	-300	0	-409	-94	-429
1963	-169	-246	-318	-423	-391	-469	-169	-236	-348	-379	-410	-418
1964	-61	-239	-340	-320	-283	-470	-134	-292	-334	-401	-434	-624
1965	43	-237	-21	-126	-206	-444	-169	-195	-576	-275	-428	-421
1966	-145	-234	-306	-414	-384	-470	-157	-236	-371	-453	-394	-434
1967	-162	-242	-314	-417	-404	-132	-316	-240	-401	-431	-468	-474
1968	-455	-469	-456	-438	-163	-323	-381	-218	-427	-380	-470	-451
1969	-215	-291	-359	1042	-1390	-529	-303	-208	-470	-470	-470	-470
1970	-470	-458	-252	-459	-467	-329	-10	-216	-470	-394	-468	-469
1971	-190	-328	-398	-467	-470	-470	-169	-221	-213	-390	-407	-424
1972	-171	-238	-300	-272	-235	-470	-314	-219	-373	-554	-530	-435
1973	41	-247	-290	-416	-397	-462	-165	-218	-438	-441	-479	-449
1974	-217	-286	-357	-466	-470	-365	-169	-222	-470	-495	-469	-460
1975	-275	-352	-420	-470	-470	-460	-169	-222	-430	-448	-470	-471
1976	-213	-288	-470	-470	-200	-172	0	-301	-381	-607	-605	-430
1977	-160	-104	-312	-232	-300	-335	-208	-113	-37	-132	-1503	-356
1978	2144	496	-123	-83	-170	-373	-1	1	1	-51	-469	1
1979	-280	-363	-408	-367	0	-414	-73	-219	-354	-498	-472	-404
1980	-144	-239	-307	-441	-316	-425	-309	-222	-470	-469	-469	-469
1981	-253	-248	-404	-470	-470	-212	0	-266	-345	-385	-392	-755
1982	-115	-235	-77	-316	-463	-449	-319	-233	-470	-469	-470	-470
1983	-284	-357	-497	-470	-390	-435	-316	-239	-470	-470	-470	-470
1984	-470	-456	-451	-470	-354	-396	0	-217	-429	-450	-467	-435
1985	-153	-287	-358	-470	-463	-470	0	-217	-377	-527	-557	-421
1986	-79	-221	-313	-416	-382	-36	-316	-123	-421	536	-1168	-470
1987	-209	-284	103	-1438	-425	-470	-344	0	-330	-334	-364	-493
1988	-169	-229	-298	-248	-208	6	-133	-375	-171	-230	-195	-245
1989	-122	-153	-199	-112	-58	-302	-225	0	0	-17	-295	-483
1990	-232	-365	-312	-288	-246	0	-244	-156	57	-128	-264	-216
1991	81	-30	45	55	-48	-319	0	-152	-166	-693	-196	-216
1992	-107	-97	-187	-75	-49	-265	0	158	0	257	-478	-263
1993	-86	-21	-31	-111	-139	-444	-23	0	0	-27	-685	-475
1994	-53	-267	-320	-467	-434	-468	-133	-289	-233	-406	-425	-396
1995	-273	-135	-321	-253	3	-469	-558	0	0	0	0	-422
1996	-419	-472	-252	-467	-464	-464	-169	-228	-497	-455	-455	-469
1997	-273	-346	-415	-467	-470	-419	-169	-218	-411	-448	-469	-469
1998	-151	-295	-349	-470	-440	-355	-253	-237	-470	-470	-470	-470
1999	-470	-470	-452	-466	-365	-331	-166	-223	-451	-465	-465	-469
2000	-231	-330	-330	-470	-454	-470	-8	-367	-392	-355	-380	-442
2001	-177	-228	-310	-427	-381	-13	-143	-220	-318	-434	-466	-545
2002	-223	-572	-285	-242	0	-428	-143	-252	-183	-442	-445	-433
2003	-194	-190	-269	-56	-240	-447	-165	-232	-230	-307	-283	-491
Average	**-170**	**-251**	**-287**	**-245**	**-306**	**-356**	**-159**	**-199**	**-290**	**-348**	**-443**	**-428**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-9:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-159	-112	-408	-165	-219	-405	-428	-475	-470
1923	-198	-274	-346	-364	-382	-470	-157	-122	-335	-384	-535	-424
1924	-170	-150	-311	-260	-214	-300	-254	-174	213	-271	-282	-159
1925	41	-359	-259	2845	-133	-300	0	0	0	-793	-965	-114
1926	-221	-121	-263	-225	-199	-300	-143	-128	-1	-593	-710	-566
1927	-135	-169	-1	0	0	-9	-169	-222	-459	-456	-522	-804
1928	182	-304	-375	-468	-458	-469	-165	-210	-348	-331	-412	-629
1929	-172	-369	5	-290	-246	-394	0	-312	-179	-204	-396	-255
1930	-98	-188	-136	0	0	0	337	-1	-112	-381	-943	-207
1931	-131	-177	-237	-199	-169	-291	-249	-193	616	756	222	-74
1932	-234	42	-132	0	-121	-375	108	0	-148	0	257	-38
1933	-135	-173	208	-71	-56	-353	-249	-192	0	-243	-320	-285
1934	-5	-223	562	-675	-127	-385	0	-206	0	34	-254	-328
1935	-162	-134	277	-147	-131	-352	0	0	191	-896	-778	-430
1936	-208	-275	-316	-151	-121	0	-294	-362	-372	-70	-688	-428
1937	-195	-239	-310	-261	462	-478	-329	-167	-1094	-387	-1200	-629
1938	-195	-249	-167	1052	-463	-167	-317	-222	-470	-482	114	-470
1939	-1044	-471	-470	-470	-278	-179	-287	-310	-394	-86	-427	-429
1940	-82	-152	-342	-194	-162	0	-167	0	-387	-424	-438	-457
1941	-98	-188	-318	-347	-332	0	-316	-240	-447	-457	-481	-470
1942	-241	-325	-395	-426	-457	-470	-248	-232	-470	-482	-480	-470
1943	-254	-464	-465	-436	-321	-401	-316	-642	-470	-470	-470	-470
1944	215	87	-1019	-470	-467	-470	-143	-92	-91	-390	-409	-726
1945	-623	-237	-301	-282	-419	433	-157	-125	-432	-756	-255	-473
1946	-242	-288	-307	-470	-868	-470	-157	-219	-338	-460	-537	-363
1947	-133	-246	-305	-270	-232	-455	-143	26	0	-294	-558	-456
1948	-190	-249	-315	-190	0	0	-157	-224	-217	-393	-411	-236
1949	-195	-236	-238	-345	-208	-433	-286	-290	0	156	-268	-339
1950	-76	-172	-338	-249	0	0	-157	0	-271	-532	-516	-323
1951	-138	-220	-240	-439	-223	-743	-163	-220	-442	-446	-469	-469
1952	-150	-303	-373	-449	-262	-469	-316	-222	-428	-456	-470	-470
1953	-468	-468	-243	-405	-411	-183	-132	-223	-416	-439	-494	-468
1954	-206	-268	-339	-470	-460	-470	-165	-197	-393	-428	-448	-403
1955	-154	-252	-324	2679	-405	-470	0	-223	-720	-500	-359	-836
1956	-132	-217	-209	424	2	99	-169	-225	-470	-467	-470	-469
1957	-260	-333	-400	-470	-470	-470	-320	-227	-355	-441	-423	-421
1958	-187	-259	-323	-283	-452	-428	-291	-284	-470	-482	-470	-470
1959	-358	-472	-470	-348	-470	-474	0	-300	-362	-545	-374	-411
1960	-211	-202	-336	-412	-352	-470	-283	0	0	34	-193	-345
1961	-74	-233	-746	-226	-201	-429	0	-290	-9	567	-427	-447
1962	-331	-820	-156	-366	-232	-453	-157	-300	0	-405	252	-432
1963	-170	0	-319	-424	-391	-469	-169	-236	-348	-379	-410	-413
1964	-47	-239	-457	-320	-283	-470	-144	-291	-334	-388	-422	-666
1965	33	-236	-21	0	-206	-445	-169	-195	-575	-275	-428	-421
1966	-146	-234	-281	-414	-384	-470	-157	-235	-371	-453	-396	-431
1967	-164	-269	-314	-417	-404	0	-316	-115	-401	-431	-468	-442
1968	-460	-473	-462	-442	-158	-323	-380	-218	-427	-379	-469	-451
1969	-214	-293	-359	1042	-1282	-504	-303	-208	-470	-470	-470	-470
1970	-470	-458	-252	-427	-467	-329	-12	-216	-470	-394	-467	-469
1971	-180	-328	-398	-465	-470	-470	-169	-221	-213	-389	-407	-424
1972	-203	-238	-300	-272	-235	-470	-314	-219	-373	-538	-514	-436
1973	21	-247	-104	-415	-396	-462	-165	-218	-439	-444	-480	-450
1974	-217	-286	-357	-462	-470	-368	-169	-222	-470	-491	-469	-459
1975	-275	-352	-420	-470	-470	-460	-169	-222	-430	-448	-470	-471
1976	-213	-288	-470	-470	-201	-172	0	-301	-381	-650	-636	-422
1977	-160	-157	-312	-228	-297	-343	0	-109	-70	-132	-1495	6
1978	1096	270	-123	-83	-170	-371	1	-189	4	64	-470	-1
1979	-280	-363	-473	-344	0	-309	-72	-219	-355	-488	-465	-408
1980	-153	-240	-308	-221	-273	-425	-309	-222	-470	-469	-469	-469
1981	-253	-248	-404	-470	-470	-65	0	-266	-345	-378	-388	-756
1982	-119	-235	0	-315	-470	-456	-319	-233	-470	-469	-470	-470
1983	-284	-357	-472	-421	-389	-409	-316	-239	-470	-470	-470	-470
1984	-470	-456	-452	-469	-354	-396	0	-217	-429	-450	-468	-440
1985	-156	-287	-355	-470	-463	-470	0	-217	-377	-527	-557	-426
1986	-77	-216	-313	-416	-382	-32	-316	0	-375	-902	215	-470
1987	-209	-284	-398	-16	-427	-470	-341	0	-337	-343	-369	-271
1988	-182	-234	-294	-255	-218	5	-133	-372	-38	-306	-241	-247
1989	-117	-158	-180	-110	-57	-296	-268	0	0	36	-324	-481
1990	-217	-270	-312	-285	-239	0	-245	-157	157	-101	-240	-217
1991	70	-11	44	1	-49	-321	0	-152	-167	-653	-196	-216
1992	-107	-111	-165	-116	-49	-261	0	0	0	-79	-269	-265
1993	-143	-21	-44	-110	-134	-442	0	0	0	6	-673	-465
1994	-208	-268	-330	-464	-429	-470	-133	-287	-232	-406	-425	-424
1995	-277	-135	-336	-252	3	-469	-526	0	0	0	0	-52
1996	-412	-472	-252	-443	-423	-464	-169	-228	-497	-455	-456	-469
1997	-272	-346	-415	-443	-470	-419	-169	-218	-411	-448	-469	-469
1998	-151	-295	-349	-1684	-440	-3	282	-212	-470	-470	-470	-470
1999	-470	-470	-452	-466	-365	-331	-166	-223	-451	-465	-465	-469
2000	-231	-331	-329	-470	-454	-422	-7	-367	-392	-355	-381	-443
2001	-173	-227	-306	-427	-381	0	-143	0	-317	-438	-488	-527
2002	-187	-227	-285	-242	0	-83	-143	-251	-183	-510	-512	-473
2003	-220	-188	-268	0	-270	-447	-165	-232	-230	-302	-284	-501
Average	**-185**	**-256**	**-288**	**-213**	**-288**	**-317**	**-157**	**-189**	**-282**	**-358**	**-430**	**-414**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-9:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	0	-11	0
1923	-8	0	0	0	0	0	0	0	0	0	0	0
1924	53	55	-6	0	0	0	-1	-7	207	-178	-124	77
1925	127	-189	110	2940	0	2988	0	0	0	-786	-3529	873
1926	-177	-8	8	0	0	0	0	59	0	-18	117	811
1927	-7	0	0	0	0	0	0	0	0	43	0	85
1928	-42	0	0	0	0	0	0	0	0	-363	0	504
1929	-13	247	-445	0	0	2	0	-73	-94	-25	65	43
1930	-17	-30	0	0	0	0	0	0	29	196	146	-12
1931	2	1	0	0	0	76	0	130	74	-50	-32	168
1932	233	29	0	0	0	-179	104	0	-52	0	789	259
1933	4	3	1188	3160	1618	0	0	0	0	0	-1882	39
1934	547	-505	1372	998	1659	-2	0	0	0	-233	502	-6
1935	-110	53	506	0	0	0	0	0	191	201	143	147
1936	-3	-213	99	0	0	0	0	0	-1	-26	80	234
1937	9	44	35	1	-332	439	447	90	-854	-349	-955	-147
1938	25	-1	0	2138	-31	-263	-25	-2	0	-12	133	0
1939	-128	-1	-1	0	0	0	0	0	0	-8	7	187
1940	31	27	14	0	0	0	0	0	0	245	0	0
1941	-177	-183	0	0	0	1	0	50	-52	-50	-10	0
1942	0	0	0	0	0	24	0	0	0	-12	-11	0
1943	0	0	0	0	5	0	3	-146	-2	-2	-2	0
1944	196	145	-233	0	0	0	0	-44	0	-1	-1	-76
1945	-441	0	0	0	42	480	0	0	0	-131	378	-3
1946	-74	-1	0	0	-543	0	0	0	0	0	0	15
1947	-15	85	0	24	0	0	0	6	0	-10	158	368
1948	17	68	-5	0	0	0	0	0	0	0	0	192
1949	-201	229	18	88	0	0	0	0	0	-317	-198	284
1950	-121	-85	87	0	0	0	0	0	0	195	183	73
1951	50	0	0	174	0	844	0	0	0	21	0	0
1952	-138	0	0	0	0	0	0	0	0	0	0	0
1953	-4	-4	0	0	0	0	0	0	0	1	-23	2
1954	-5	0	0	0	0	0	0	0	0	-186	0	186
1955	-111	0	0	2781	-2	0	0	0	-459	-110	-35	88
1956	31	48	1	771	2	1903	0	0	0	2	99	0
1957	0	0	0	0	0	0	0	0	0	53	0	191
1958	0	0	0	-1214	0	99	552	0	0	-12	0	0
1959	0	-2	4	0	0	1	0	0	0	-278	117	393
1960	-256	458	-189	0	0	0	0	0	0	-114	-102	502
1961	-24	9	101	0	0	0	0	0	124	-282	16	542
1962	-120	550	-84	310	0	8	0	0	0	18	87	59
1963	0	0	0	0	0	0	0	0	0	6	0	-47
1964	111	0	-32	0	-1	0	77	0	0	-62	-62	-5
1965	-62	0	0	0	0	0	0	0	0	-2	-35	0
1966	-1	0	0	0	0	0	0	-15	0	-11	14	-19
1967	18	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	599	87	0	0	0	-73	149	177
1969	-43	68	0	1512	-1324	-65	14	13	0	170	27	0
1970	0	13	0	12	0	1008	-43	0	0	43	111	-1
1971	-37	0	0	0	0	0	0	0	0	0	0	0
1972	-49	10	0	0	0	0	0	0	0	-148	204	71
1973	-70	0	0	0	0	0	0	0	0	-7	-7	51
1974	0	0	0	0	0	1056	0	0	0	-520	0	0
1975	0	0	0	0	0	0	0	0	0	-132	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	676
1977	244	-456	0	161	826	-58	0	-19	49	0	-931	-344
1978	2229	623	0	0	0	132	-571	75	186	-350	-363	1
1979	147	-1	24	0	0	0	0	0	0	98	6	-17
1980	177	0	0	-133	82	-1	0	0	0	173	100	1
1981	69	-1	0	0	0	0	0	0	0	-240	-169	444
1982	130	0	0	0	0	9	-12	0	0	171	0	0
1983	0	0	-281	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	795	0	0	0	86	6	-32
1985	49	0	0	0	0	0	0	0	0	-1	0	-11
1986	-58	-13	0	0	0	-5	445	47	0	2467	-1418	0
1987	2	-2	768	475	257	740	0	0	0	-381	-1003	237
1988	796	135	167	0	-35	-3	0	-356	0	-247	-70	359
1989	-2	-6	2	0	0	0	0	0	0	37	6	477
1990	144	-171	0	0	-4	0	0	0	-73	156	168	-1
1991	168	120	175	131	0	0	0	0	0	-318	0	209
1992	95	64	-41	-1	0	0	0	176	0	-405	-83	5
1993	16	147	119	0	0	0	0	0	0	5	-519	4
1994	30	76	-16	0	0	0	0	0	-1	-6	-4	719
1995	-28	127	235	-1	3	1	-32	0	0	0	0	0
1996	0	-2	0	0	0	0	0	0	-26	13	13	0
1997	-4	0	0	0	0	1197	0	0	0	-93	-140	43
1998	59	15	0	0	0	0	787	0	0	0	0	0
1999	-2	-2	0	0	0	772	0	0	0	-12	-12	0
2000	0	-7	30	0	0	0	0	-12	0	-135	199	105
2001	-99	-56	58	0	0	0	0	0	0	28	5	322
2002	142	-1	0	0	0	0	0	0	0	-74	25	238
2003	-11	0	0	0	-8	0	0	0	0	-7	0	-15
Average	**40**	**18**	**46**	**175**	**34**	**147**	**21**	**0**	**-9**	**-29**	**-94**	**119**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-9:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	0	-4	0
1923	-3	0	0	0	0	0	0	0	0	0	0	0
1924	0	0	-3	0	0	0	0	-4	-5	4	3	82
1925	114	-164	107	2940	0	2988	0	0	0	-1030	-3789	872
1926	-179	-6	9	0	0	0	0	83	0	204	293	297
1927	105	0	0	0	0	0	0	0	0	-5	-1	459
1928	-162	0	0	0	0	0	0	0	0	-9	0	77
1929	-11	36	-79	0	0	0	0	-47	-46	-55	-41	-21
1930	-5	-21	0	0	0	0	0	0	-44	26	-27	-21
1931	-6	-5	-4	0	0	69	0	-4	362	0	1	0
1932	-59	125	0	0	0	0	104	0	22	0	589	246
1933	-4	-3	-555	35	42	0	0	0	0	0	96	7
1934	-19	45	-66	96	0	0	0	0	0	196	-27	-4
1935	-1	-3	40	0	0	0	0	0	191	-582	-503	40
1936	-6	-4	853	0	0	0	0	0	0	-21	-145	0
1937	-4	1	0	0	129	-1	-2	-5	-5	-4	-5	0
1938	0	0	0	-40	-4	-8	0	0	0	-4	-12	0
1939	17	0	0	0	0	0	0	0	0	0	0	-7
1940	-2	1	-3	0	0	0	0	0	0	23	0	-1
1941	112	42	0	0	0	0	0	0	-4	-3	-4	0
1942	0	0	0	0	0	0	0	0	0	-4	-4	0
1943	0	0	0	0	-1	0	0	0	0	0	0	0
1944	5	0	1	0	0	0	0	0	0	0	0	-4
1945	6	0	0	0	4	-4	0	0	0	1	-65	0
1946	-10	0	0	0	68	0	0	0	0	0	0	-2
1947	-1	-4	0	0	0	0	0	1	0	-1	-14	-1
1948	4	0	2	0	0	0	0	0	0	0	0	-59
1949	6	2	-8	34	0	0	0	0	0	-73	-64	-22
1950	-27	-19	7	0	0	0	0	0	0	49	45	-54
1951	8	0	0	138	0	-6	0	0	0	-9	0	0
1952	14	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	-8	0
1954	-2	0	0	0	0	0	0	0	0	-24	0	-3
1955	2	0	0	2781	-2	0	0	0	-459	-219	-29	-249
1956	4	-22	1	1034	2	249	0	0	0	3	0	0
1957	0	-1	0	0	0	0	0	0	0	-9	0	-2
1958	0	0	0	0	0	0	7	0	0	-4	0	0
1959	0	-1	0	0	0	0	0	0	0	-8	0	0
1960	2	0	-2	0	0	0	0	0	0	0	0	1
1961	0	0	7	0	0	0	0	0	0	-7	0	0
1962	-3	7	2	0	0	-2	0	0	0	0	0	14
1963	0	0	0	0	0	0	0	0	0	-142	0	1
1964	0	0	5	0	-1	0	3	0	0	-5	-4	-15
1965	1	0	0	0	1	0	0	0	0	2	0	0
1966	1	0	0	0	0	0	0	0	0	-7	1	-2
1967	1	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	1	0	0	0	0	-7	0	0
1969	-1	1	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	-7	0	0
1971	-4	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	-7	-1	0
1973	8	0	0	0	0	0	0	0	0	0	-2	0
1974	0	0	0	0	0	2	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0
1977	8	127	0	125	0	54	0	-7	23	0	-1374	165
1978	1247	395	0	0	0	-2	1	-191	4	81	4	-1
1979	-190	2	-41	0	0	0	0	0	0	15	-171	-38
1980	-212	0	0	237	217	1	0	0	0	1	1	1
1981	1	9	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0	1	0	0
1983	0	0	-1	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	-4
1985	-8	0	0	0	0	0	0	0	0	0	0	-1
1986	-3	0	0	0	0	-1	0	0	0	135	-196	0
1987	-1	0	-12	-133	0	0	0	0	0	1	-23	-52
1988	4	1	-3	0	1	0	0	0	0	-2	-1	-1
1989	-1	0	0	0	0	0	0	0	0	7	5	-2
1990	6	0	0	0	-2	0	0	0	12	5	-12	-1
1991	10	-6	23	-88	0	0	0	0	0	34	0	0
1992	0	-5	1	6	0	0	0	165	0	40	-167	2
1993	50	0	-57	0	0	0	0	0	0	-6	-1	-2
1994	27	2	9	0	0	1	0	0	0	0	0	2
1995	2	1	5	0	0	0	0	0	0	0	0	0
1996	0	-196	0	0	0	0	0	0	9	-4	-4	0
1997	0	0	0	0	0	0	0	0	0	-10	0	0
1998	16	-4	0	-1214	0	-3	544	0	0	0	0	0
1999	0	0	0	0	0	0	0	0	0	2	2	0
2000	0	-8	5	0	0	0	0	0	0	-10	1	-3
2001	3	-2	3	0	0	0	0	2	0	-5	-4	-1
2002	-5	0	0	0	0	0	0	0	0	3	3	2
2003	-2	0	0	0	0	0	0	0	0	-4	0	1
Average	**10**	**4**	**3**	**73**	**6**	**41**	**8**	**0**	**1**	**-18**	**-69**	**21**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-10:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	182	-54	636	0	670	339	440	475	458
1923	247	327	390	535	383	452	0	670	328	397	414	459
1924	175	249	312	264	257	305	0	177	202	182	168	162
1925	-12	26	60	-12	261	311	-162	645	470	470	470	378
1926	142	204	277	252	12	300	0	415	470	384	249	360
1927	136	222	470	470	384	199	0	670	333	482	481	458
1928	312	251	487	470	465	470	0	670	217	400	420	446
1929	184	247	311	294	292	388	0	178	424	363	245	267
1930	124	160	125	470	470	570	0	670	102	138	216	335
1931	133	179	239	240	190	287	-181	13	-1	27	49	83
1932	-61	71	152	470	-72	370	0	670	470	470	470	294
1933	138	176	155	184	160	394	-42	304	470	62	288	288
1934	-48	1	17	23	-59	385	0	206	470	470	181	328
1935	147	56	15	18	-65	270	-111	615	470	470	532	430
1936	206	273	338	183	-59	570	0	670	300	497	436	457
1937	190	259	326	265	232	370	0	670	470	237	347	432
1938	195	362	461	440	420	469	0	670	348	482	481	478
1939	474	472	470	477	298	352	0	310	394	402	308	470
1940	203	271	337	217	185	541	-117	653	319	234	327	458
1941	172	246	397	323	313	570	0	670	298	482	481	478
1942	306	352	418	462	470	472	0	670	355	482	481	478
1943	321	469	468	466	326	446	0	670	347	482	481	458
1944	258	339	407	471	471	370	0	670	470	216	335	401
1945	178	322	349	291	474	570	0	670	259	285	435	458
1946	208	285	601	470	456	473	0	670	192	400	416	439
1947	172	240	420	267	245	470	0	670	470	244	362	451
1948	180	252	324	218	470	552	-136	657	261	224	300	457
1949	150	222	291	231	202	470	0	440	470	470	328	414
1950	161	227	294	258	470	570	-73	652	145	194	268	459
1951	123	211	556	468	237	372	0	670	340	477	481	458
1952	334	288	405	439	470	369	0	670	336	482	481	478
1953	475	470	277	411	415	275	0	670	347	452	481	478
1954	206	317	361	467	377	558	0	670	340	426	458	458
1955	220	347	377	470	290	474	0	670	93	300	318	311
1956	127	177	265	344	414	433	0	670	349	482	481	477
1957	327	333	424	467	467	512	0	670	308	416	433	446
1958	300	355	361	282	396	469	0	670	408	482	480	478
1959	414	472	467	350	469	474	0	480	496	413	296	440
1960	164	239	313	410	344	370	0	670	470	220	245	368
1961	132	318	271	224	211	370	0	442	470	439	285	428
1962	174	240	306	174	161	457	-136	280	470	470	411	436
1963	292	368	167	425	399	471	0	670	237	400	421	458
1964	257	274	375	323	287	473	0	443	472	401	407	421
1965	153	312	59	470	65	447	0	670	341	398	428	449
1966	154	190	457	417	391	474	0	670	224	402	436	426
1967	157	338	359	419	213	570	0	670	295	424	481	478
1968	475	471	470	445	173	361	0	670	280	461	479	449
1969	204	285	434	467	442	364	0	670	325	482	481	478
1970	473	471	288	463	471	352	0	670	344	482	481	458
1971	313	355	439	470	472	472	0	670	190	401	454	453
1972	228	237	326	277	265	474	0	670	226	406	439	438
1973	270	297	356	397	402	471	0	670	308	471	481	458
1974	343	354	395	469	472	471	0	670	347	481	481	460
1975	359	379	443	469	468	469	0	670	349	463	480	478
1976	400	369	471	471	219	213	0	301	388	409	444	339
1977	7	115	179	228	157	268	-181	-33	-91	-79	99	158
1978	87	129	147	65	175	470	0	470	470	470	470	406
1979	287	477	441	376	470	658	0	670	208	403	424	458
1980	181	347	153	689	265	466	0	670	342	481	481	458
1981	266	249	478	474	275	670	0	670	173	397	389	440
1982	180	328	470	89	470	467	0	670	357	482	481	476
1983	348	379	468	464	418	450	0	670	364	482	480	477
1984	474	466	465	471	364	419	0	670	304	465	481	458
1985	221	311	512	470	471	471	0	670	204	409	413	447
1986	177	251	386	430	395	529	-86	653	297	272	358	477
1987	210	284	361	472	441	370	0	670	228	297	377	420
1988	170	235	298	295	11	570	0	670	446	36	179	245
1989	122	171	157	113	-54	470	-162	655	470	384	338	437
1990	170	244	207	233	250	570	-80	149	102	27	24	63
1991	-68	-17	-21	-50	-102	233	-181	100	148	36	196	216
1992	107	152	142	100	62	303	0	623	470	433	219	303
1993	132	21	17	4	85	470	-121	470	470	470	470	365
1994	208	280	348	476	475	470	0	288	233	401	450	438
1995	38	135	217	195	470	270	-114	634	470	470	533	658
1996	475	472	282	465	466	472	0	670	352	482	481	478
1997	273	395	434	462	472	474	0	670	345	446	480	458
1998	220	295	400	479	451	521	0	670	297	394	481	478
1999	475	470	464	469	379	354	0	670	347	482	481	478
2000	237	356	383	474	466	532	0	670	218	413	459	444
2001	191	272	342	466	398	570	0	670	144	190	284	405
2002	157	226	387	249	470	561	0	429	470	163	328	370
2003	140	240	315	470	73	479	0	670	109	295	295	433
Average	**220**	**279**	**332**	**348**	**303**	**444**	**-23**	**575**	**324**	**371**	**388**	**414**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-10:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	415	-62	636	0	670	339	440	475	458
1923	247	473	473	535	382	452	0	670	328	397	414	459
1924	174	248	311	263	343	304	0	176	199	180	167	159
1925	-14	24	322	102	16	470	-162	645	470	470	470	375
1926	141	200	275	473	11	300	0	471	470	384	251	359
1927	134	478	470	470	470	570	0	670	333	482	481	458
1928	473	389	565	470	471	470	0	670	217	401	420	446
1929	176	241	307	292	380	388	0	178	410	363	235	255
1930	116	155	417	470	470	570	0	670	396	138	216	330
1931	131	177	237	450	165	284	-181	9	-5	20	41	74
1932	106	151	452	470	9	370	0	670	470	470	470	291
1933	135	173	152	394	135	470	-42	304	470	62	286	285
1934	-49	0	15	270	-73	385	0	206	470	470	181	328
1935	146	55	15	271	-69	270	0	615	470	470	532	430
1936	208	275	340	419	-68	570	0	670	300	497	654	457
1937	195	264	330	482	303	370	0	670	470	412	348	433
1938	201	490	470	459	463	469	0	670	348	482	481	478
1939	474	472	470	479	419	470	0	310	394	402	308	473
1940	207	274	340	461	181	541	-117	653	319	470	327	458
1941	180	252	475	471	464	570	0	670	298	482	481	478
1942	474	471	469	462	470	472	0	670	355	482	481	478
1943	474	469	468	466	452	471	0	670	347	482	481	458
1944	265	343	410	473	473	370	0	670	470	216	334	401
1945	184	482	479	480	477	570	0	670	259	284	435	458
1946	213	370	678	470	456	473	0	670	192	400	416	439
1947	176	244	472	270	365	470	0	670	470	410	362	457
1948	184	255	326	448	470	552	-136	657	296	223	299	457
1949	152	223	291	231	202	470	0	441	470	470	329	420
1950	168	233	298	467	470	570	-73	652	470	192	267	459
1951	132	362	684	468	355	402	0	670	340	478	481	458
1952	462	412	466	467	470	369	0	670	336	482	481	478
1953	475	470	464	469	473	473	0	670	347	452	481	478
1954	206	469	469	469	381	555	0	670	340	427	458	458
1955	226	467	467	470	290	474	0	670	92	300	318	319
1956	132	182	463	344	414	587	0	670	349	482	481	477
1957	474	333	470	470	470	507	0	670	308	416	433	446
1958	466	492	468	465	464	469	0	670	408	482	480	478
1959	475	472	470	470	470	469	0	480	496	413	296	440
1960	169	244	315	413	444	370	0	670	470	411	245	375
1961	136	442	273	226	333	370	0	441	470	439	284	433
1962	178	243	308	169	276	455	-136	280	470	470	411	441
1963	471	470	475	467	469	471	0	670	237	400	421	458
1964	469	469	493	468	286	473	0	442	472	400	406	424
1965	158	469	440	470	168	448	0	670	349	398	428	458
1966	159	399	681	469	471	474	0	670	224	402	436	432
1967	164	406	471	472	270	570	0	670	295	424	481	478
1968	475	471	470	466	289	391	0	670	280	461	479	449
1969	211	290	471	471	442	516	0	670	325	482	481	478
1970	473	471	466	463	471	398	0	670	344	482	481	458
1971	473	471	481	470	472	472	0	670	347	401	454	458
1972	294	237	473	473	524	474	0	670	226	406	439	438
1973	265	474	356	447	467	471	0	670	308	471	481	458
1974	469	375	578	469	472	471	0	670	347	481	481	460
1975	491	472	468	472	465	469	0	670	349	463	480	478
1976	472	472	471	473	330	470	0	301	395	416	451	345
1977	11	119	182	228	157	270	-181	-27	-50	132	145	158
1978	5	129	470	156	170	470	0	470	470	470	470	406
1979	287	480	442	475	470	658	0	670	209	404	425	458
1980	183	481	270	689	382	472	0	670	342	481	481	458
1981	266	249	479	474	275	670	0	670	173	397	389	440
1982	180	482	470	304	550	467	0	670	357	482	481	476
1983	472	465	468	464	466	465	0	670	364	482	480	477
1984	474	466	465	471	471	465	0	670	304	465	481	458
1985	222	417	672	470	471	471	0	670	204	409	413	451
1986	180	254	480	482	477	529	-86	653	470	272	358	477
1987	210	284	364	474	474	370	0	670	423	304	385	435
1988	182	244	306	475	18	570	0	670	446	33	176	247
1989	124	171	157	114	-52	470	-162	655	470	384	338	444
1990	174	248	210	374	247	570	-80	150	106	32	28	67
1991	-66	-16	-21	-40	48	467	0	114	149	184	196	216
1992	107	152	142	100	176	470	0	623	470	433	218	302
1993	132	21	17	257	77	470	0	470	470	470	470	365
1994	207	282	350	477	475	470	0	287	231	399	451	438
1995	38	135	216	411	470	270	-114	634	470	470	533	658
1996	475	472	464	465	466	472	0	670	352	482	481	478
1997	273	468	464	462	472	474	0	670	345	446	480	458
1998	222	297	482	480	475	521	0	670	297	394	481	478
1999	475	470	464	469	473	400	0	670	347	482	481	478
2000	237	451	384	474	477	570	0	670	218	413	459	444
2001	191	272	342	475	476	570	0	670	249	190	284	404
2002	156	225	473	470	470	570	0	470	470	163	327	369
2003	137	471	471	470	281	473	0	670	110	295	295	433
Average	**247**	**329**	**397**	**414**	**343**	**470**	**-18**	**576**	**340**	**385**	**391**	**415**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-10:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	30	-29	0	152	-131	12	11	8
1923	4	4	4	-17	1	5	0	161	-142	12	11	7
1924	7	7	6	4	3	-44	0	9	-100	-25	-52	-77
1925	-116	-113	-100	-108	-114	0	-162	-224	-433	370	370	5
1926	7	6	6	5	157	-109	0	1	-433	284	96	5
1927	4	4	370	370	369	-94	0	142	-137	12	11	8
1928	1	1	-2	0	1	0	0	-149	-375	547	11	8
1929	10	8	6	3	3	0	0	-222	-455	263	15	20
1930	13	9	-47	370	370	142	0	192	-173	-170	-85	-4
1931	-2	-1	-1	-1	-1	-76	-181	-170	-255	-197	-185	-168
1932	-168	-147	-133	370	240	244	0	570	370	125	-174	-7
1933	-4	-3	-2	-1	-2	0	-42	113	-455	210	-7	-17
1934	-178	-156	-142	-137	173	0	0	-222	-455	370	4	8
1935	4	-129	-145	-137	209	282	-136	-226	370	370	432	15
1936	7	6	4	2	122	203	0	164	-175	-144	11	8
1937	-10	-7	-5	-3	-6	131	0	379	-173	-170	-94	8
1938	-20	-13	41	-11	-7	-1	0	144	-122	12	11	8
1939	4	2	0	-6	-7	0	0	0	-233	302	-14	-17
1940	-14	-11	-7	-5	-10	441	-117	239	-173	-170	-112	8
1941	-39	-28	-20	-7	-5	160	0	117	-172	12	11	8
1942	4	1	-15	6	0	2	0	133	-115	12	11	8
1943	4	-1	-2	-4	0	1	0	144	-123	12	11	8
1944	-33	-24	-12	-8	-10	278	0	255	-174	-170	-45	-2
1945	-37	-33	-32	-28	-27	-192	0	570	32	-170	-35	8
1946	-40	44	-5	0	-102	96	0	168	-146	12	11	8
1947	-32	-28	-21	-16	-11	0	0	570	-433	277	-61	-55
1948	-31	-26	-13	-16	-327	452	-136	437	-174	-170	-112	8
1949	-54	-39	-28	-13	-16	0	0	151	370	-50	-50	-44
1950	-39	-31	-22	-14	370	48	-73	149	-173	-170	-112	8
1951	-56	58	-5	-2	0	3	0	151	-130	12	11	8
1952	-53	-40	-21	-34	269	-101	0	143	-134	12	11	8
1953	5	0	-6	-1	3	3	0	142	-123	12	11	8
1954	5	1	-26	-11	40	1	0	-149	-24	207	11	8
1955	-37	-27	-28	190	-203	87	0	151	-428	298	11	-50
1956	-31	-24	-21	0	213	-73	0	140	-121	12	11	7
1957	4	2	-1	-8	-10	53	0	144	-162	12	11	8
1958	-51	58	-2	-5	-7	-1	0	81	-62	12	10	8
1959	5	2	-20	-7	-7	-177	0	180	-395	447	11	5
1960	-24	-18	-9	-10	-33	298	0	151	-433	309	-85	-48
1961	-26	-21	-13	-13	-12	360	0	151	-433	339	46	-58
1962	-29	-23	-16	-137	-100	-92	-136	-20	-71	370	149	-46
1963	-30	113	-198	-3	-1	1	0	129	-111	12	11	8
1964	-38	-26	67	-2	3	3	0	151	-129	12	9	-35
1965	-37	-28	-22	262	-148	3	0	-149	178	12	10	8
1966	-34	38	-3	-1	1	4	0	169	-147	12	11	-38
1967	-28	-23	-12	-23	304	-25	0	125	-175	-46	11	8
1968	5	1	0	-4	0	2	0	168	-394	251	9	8
1969	-33	-25	-21	-25	247	-106	0	145	-145	12	11	8
1970	3	1	-4	-7	1	3	0	149	-126	12	11	8
1971	-34	-15	44	0	-93	88	0	144	-123	12	11	8
1972	5	-5	-17	-16	41	4	0	168	-394	251	11	7
1973	-22	-26	59	-23	-3	1	0	154	-131	12	11	8
1974	-34	35	-3	-1	2	1	0	143	-123	11	11	-9
1975	20	2	-2	-16	15	-1	0	143	-121	12	10	8
1976	2	2	1	-13	-9	0	0	-222	-155	-37	-40	-138
1977	-187	-153	-147	-141	-161	-144	-181	-222	-255	-259	-258	-22
1978	0	0	0	-27	0	0	0	370	370	370	370	306
1979	400	1	1	1	370	328	0	167	-394	251	11	8
1980	5	4	-7	-6	-4	2	0	149	-128	11	11	8
1981	5	2	4	2	-10	0	0	193	-431	262	11	6
1982	4	4	215	-230	0	-3	0	132	-113	12	11	6
1983	2	-5	-2	-6	-4	-5	0	126	-106	12	10	7
1984	4	-4	-5	1	1	3	0	148	-125	12	11	8
1985	-7	6	-1	0	1	1	0	194	-173	12	11	-13
1986	-8	-7	-5	-7	-5	429	-86	200	-173	-170	-112	7
1987	5	2	-6	-3	-4	102	0	-199	-433	369	54	-20
1988	-12	-9	-7	-4	-327	-244	0	570	-455	356	0	-8
1989	-4	-2	-2	-2	-114	0	-162	-214	370	284	60	-13
1990	-8	-6	-111	-109	0	470	-80	-7	-255	-188	-200	-178
1991	-175	-153	-152	-140	-161	-133	-181	-52	-18	-219	-222	-209
1992	-95	0	0	0	-1	0	0	523	370	333	0	26
1993	7	-147	-133	-111	-63	0	-121	370	370	370	370	19
1994	5	8	6	4	3	-144	0	0	-255	0	21	-14
1995	-148	-127	-109	-63	370	259	-114	534	370	303	-111	8
1996	5	2	-6	-5	-4	2	0	137	-118	12	11	8
1997	4	-2	-6	-8	2	4	0	147	-125	12	10	8
1998	6	4	3	2	1	121	0	128	-173	-76	11	8
1999	5	0	-6	-1	3	3	0	142	-123	12	11	8
2000	5	1	-1	0	-1	55	0	151	-418	237	10	8
2001	-1	0	-40	0	0	315	0	191	-433	79	-67	-8
2002	-5	-4	-2	0	-332	470	0	244	-174	-171	4	-1
2003	-14	-14	-10	166	-265	121	0	140	-121	12	10	8
Average	**-18**	**-16**	**-14**	**0**	**15**	**52**	**-23**	**130**	**-153**	**78**	**3**	**-6**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-10:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2005 LOD, MODERATE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	-1	0	0	10	4	4	3
1923	2	2	2	-9	1	2	0	0	9	4	4	3
1924	4	4	4	3	2	3	0	6	8	-28	-56	-82
1925	-121	-117	-104	-111	-118	0	-162	-25	0	0	0	4
1926	5	4	4	3	0	0	0	1	0	0	0	6
1927	4	4	0	0	0	0	0	0	38	182	184	69
1928	11	46	203	150	0	0	0	0	10	4	4	3
1929	10	8	6	3	3	0	0	0	0	0	16	20
1930	13	10	-47	0	0	0	0	0	0	0	0	9
1931	6	5	3	3	3	-70	-181	-161	-198	-187	-147	0
1932	0	0	-6	0	0	0	0	0	0	0	0	5
1933	4	3	2	2	2	0	-42	-15	0	0	8	-7
1934	0	0	0	0	0	0	0	0	0	0	0	4
1935	2	-5	0	0	0	0	0	0	0	0	62	15
1936	4	3	2	1	0	0	0	0	-71	27	184	43
1937	6	4	3	2	3	0	0	0	0	0	79	113
1938	0	0	0	194	234	98	0	0	10	4	4	3
1939	1	1	0	1	1	0	0	0	0	0	17	5
1940	6	5	3	2	4	-29	-117	-17	-68	0	62	54
1941	-5	-4	-3	-1	-1	0	0	0	2	123	4	3
1942	1	0	-2	-1	0	1	0	0	8	4	4	3
1943	2	0	-1	-2	0	0	0	0	5	9	4	3
1944	-4	-3	-2	-1	-1	0	0	0	0	0	0	5
1945	-4	-3	-3	-3	-2	0	0	0	0	0	62	3
1946	-5	7	-2	0	1	1	0	0	10	4	4	3
1947	-4	-3	-3	-2	-1	0	0	0	0	0	0	-6
1948	-4	-3	-2	-2	0	-18	-136	-13	0	0	62	45
1949	-7	-5	-4	-2	-2	0	0	0	0	0	0	-5
1950	-7	-6	-4	-3	0	0	-73	-18	0	0	62	46
1951	-7	61	142	-1	0	1	0	0	10	4	4	3
1952	-6	-4	-3	-2	0	0	0	0	21	4	4	3
1953	2	0	-2	0	1	1	0	0	9	4	4	3
1954	2	0	-1	-1	3	1	0	0	-24	37	4	3
1955	-4	-3	-3	0	10	1	0	0	4	9	4	-4
1956	-3	-3	-2	0	0	13	0	0	9	4	4	3
1957	1	1	0	0	-1	0	0	0	10	4	4	3
1958	-4	6	-1	-2	-2	0	0	0	8	4	4	3
1959	2	1	-2	-1	-1	4	0	0	10	4	4	2
1960	-5	-4	-2	-2	-28	0	0	0	0	0	0	-8
1961	-5	-4	-2	-2	-2	0	0	0	0	0	0	-10
1962	-6	-5	-4	-121	-92	0	-136	-200	0	0	0	-13
1963	-10	0	5	219	214	102	0	0	62	137	4	3
1964	-4	-3	8	-1	1	1	0	0	2	12	4	-3
1965	-4	-3	-3	0	16	1	0	0	9	4	4	3
1966	-4	5	-1	0	0	2	0	0	10	4	4	-3
1967	-2	-2	-1	-2	0	0	0	0	0	22	4	3
1968	2	0	0	-1	0	1	0	0	10	4	3	3
1969	-3	-2	-2	-2	0	0	0	0	16	4	4	3
1970	1	0	-1	-3	0	1	0	0	10	4	4	3
1971	-5	-1	4	0	1	1	0	0	9	4	4	3
1972	2	0	-2	-2	5	2	0	0	10	4	4	3
1973	-3	-4	0	3	-1	0	0	0	10	4	4	3
1974	-5	5	-1	-1	1	0	0	0	9	4	4	-1
1975	5	1	-1	-2	1	0	0	0	10	4	4	3
1976	1	1	0	-2	-1	0	0	0	-5	-3	-2	-109
1977	-170	-134	-138	-130	-147	-119	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	16
1979	193	-1	-1	0	0	88	0	0	28	182	184	47
1980	12	11	0	219	-2	1	0	0	10	4	4	3
1981	11	-8	7	3	-13	0	0	0	1	13	4	18
1982	11	11	0	-40	0	-1	0	0	9	4	4	2
1983	1	-2	-1	-2	-2	-2	0	0	9	4	4	3
1984	2	-2	-2	0	0	1	0	0	10	4	4	3
1985	-1	0	0	0	0	0	0	0	1	13	4	-1
1986	0	0	0	0	0	0	-86	-17	0	0	62	60
1987	2	1	-2	-1	-2	0	0	0	0	19	4	-4
1988	-2	-2	-1	-1	0	0	0	0	0	0	0	1
1989	1	1	1	1	-112	0	-162	-15	0	0	0	-8
1990	-5	-4	-110	-107	0	0	-80	-7	-86	-182	-19	0
1991	0	0	0	0	0	0	0	-36	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	-6
1993	6	0	0	0	0	0	0	0	0	0	0	0
1994	-1	-1	-1	0	0	0	0	0	0	0	-2	5
1995	0	0	0	0	0	0	0	0	0	0	63	188
1996	193	197	209	137	-1	1	0	0	9	4	4	3
1997	1	-1	-2	-3	1	1	0	0	10	4	4	3
1998	5	4	2	2	1	0	0	0	0	-6	4	3
1999	2	0	-2	0	1	1	0	0	9	4	4	3
2000	2	0	0	0	0	0	0	0	0	12	4	3
2001	0	0	0	0	0	0	0	0	0	0	5	2
2002	2	2	1	0	0	0	0	0	0	0	15	0
2003	2	2	1	0	10	1	0	0	9	4	4	3
Average	**1**	**1**	**2**	**5**	**0**	**1**	**-14**	**-6**	**0**	**6**	**13**	**8**

NOTE: Values with a grey background indicate months of Delta excess conditions.

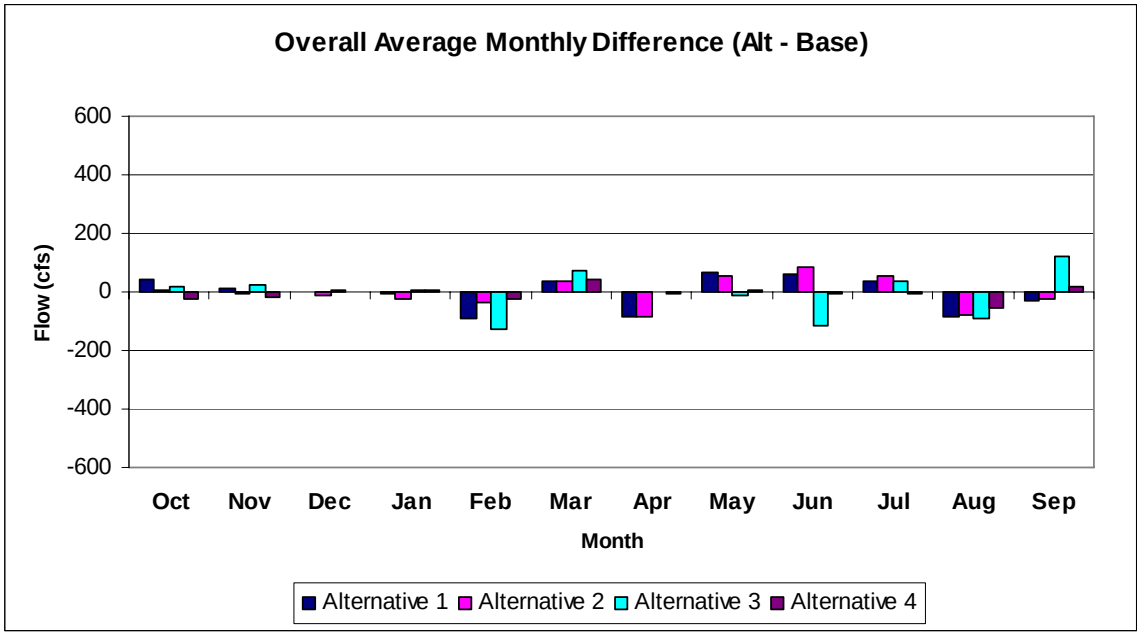


Figure C4-22: Changes in Average Monthly Sacramento River at Hood flow, 2005 LOD, Moderate Fishery Restrictions

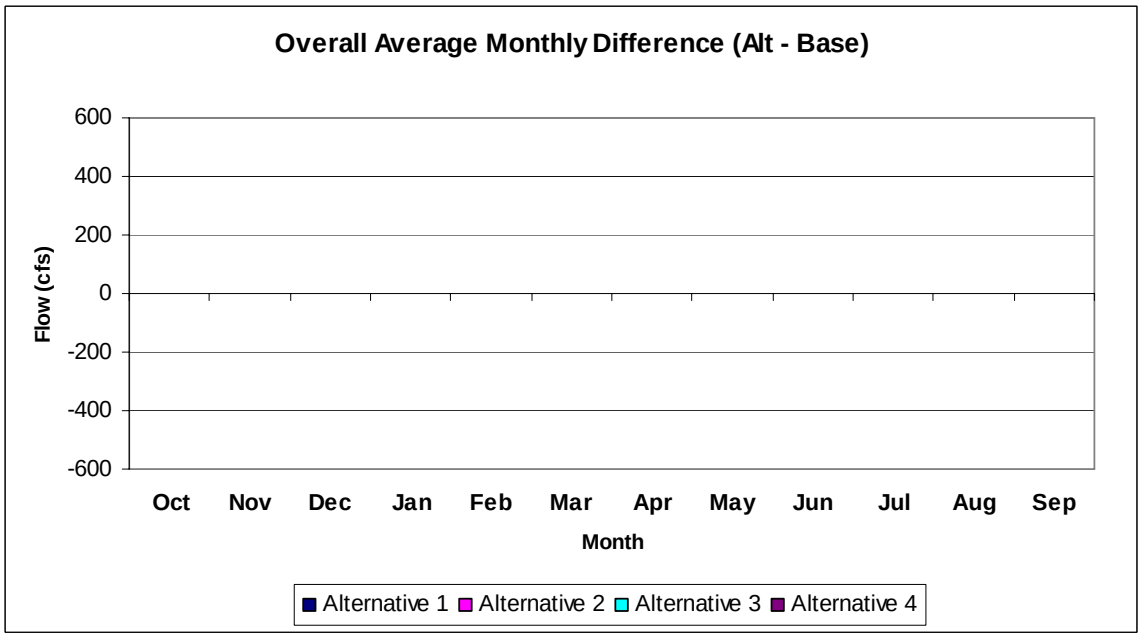


Figure C4-23: Changes in Average Monthly San Joaquin River at Vernalis Flow, 2005 LOD, Moderate Fishery Restrictions

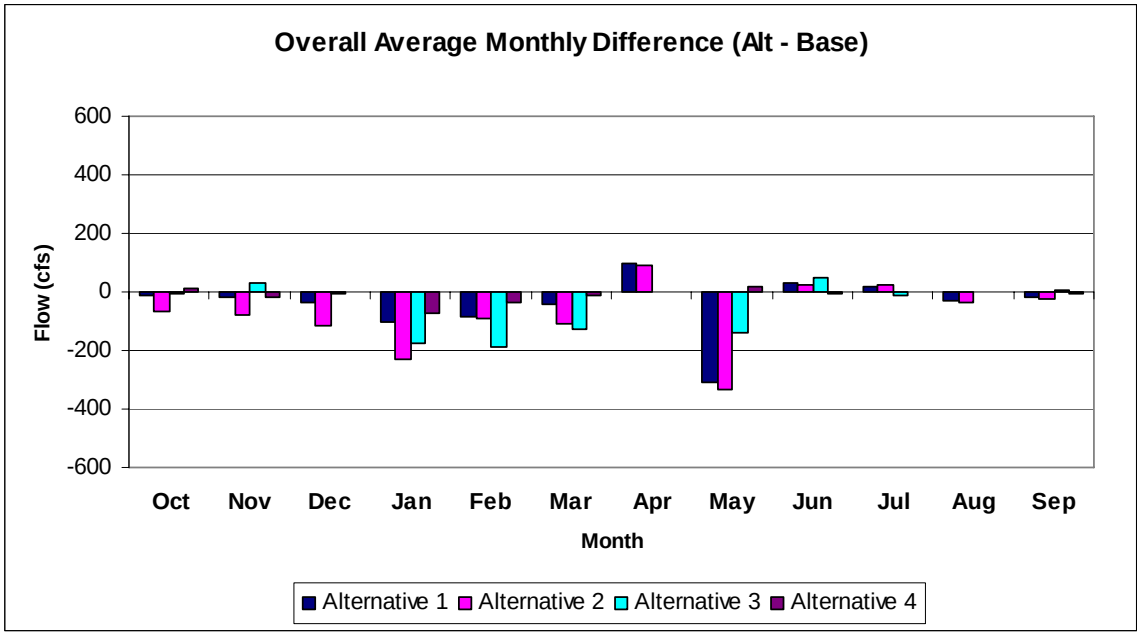


Figure C4-24: Changes in Average Monthly Delta Outflow, 2005 LOD, Moderate Fishery Restrictions

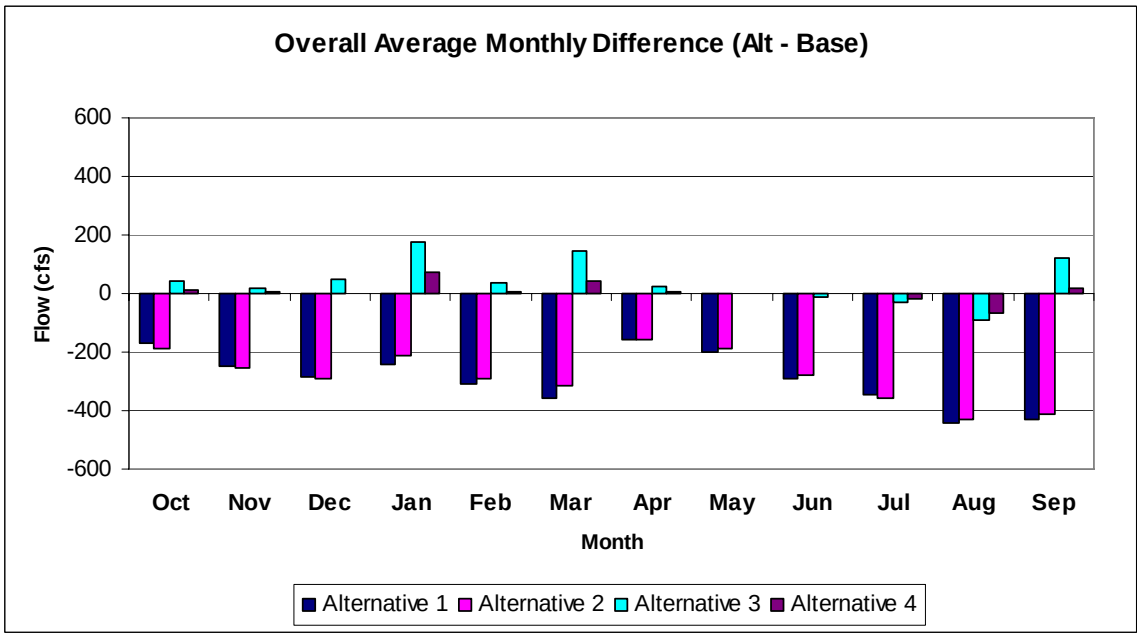


Figure C4-25: Changes in Average Monthly Banks + Jones Diversions, 2005 LOD, Moderate Fishery Restrictions

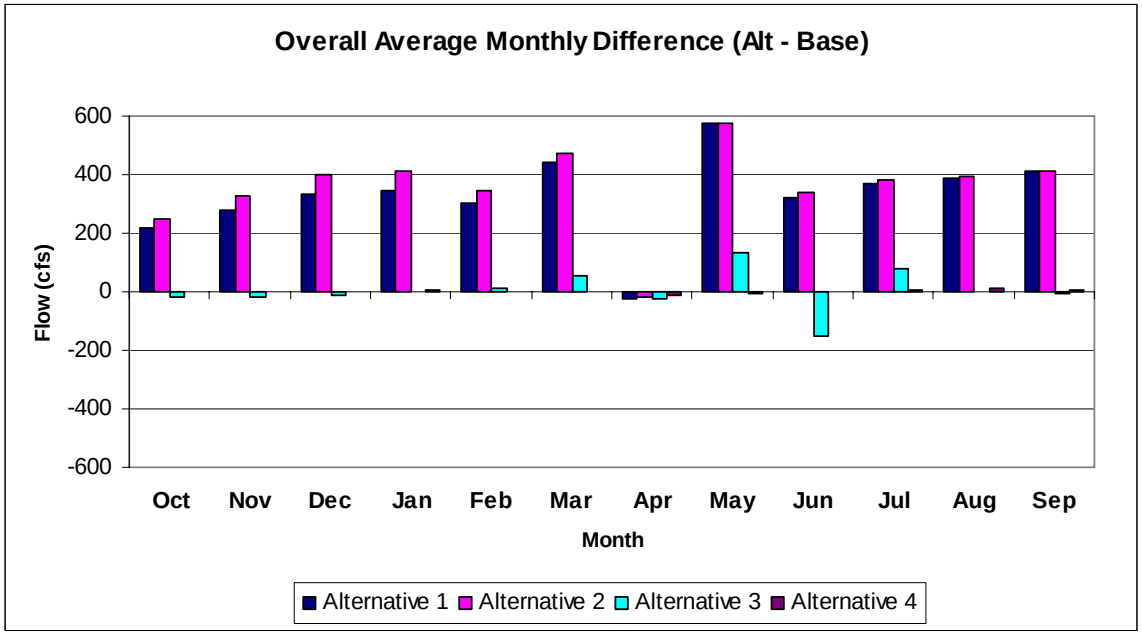


Figure C4-26: Changes in Average Monthly CCWD + LV Diversions, 2005 LOD, Moderate Fishery Restrictions

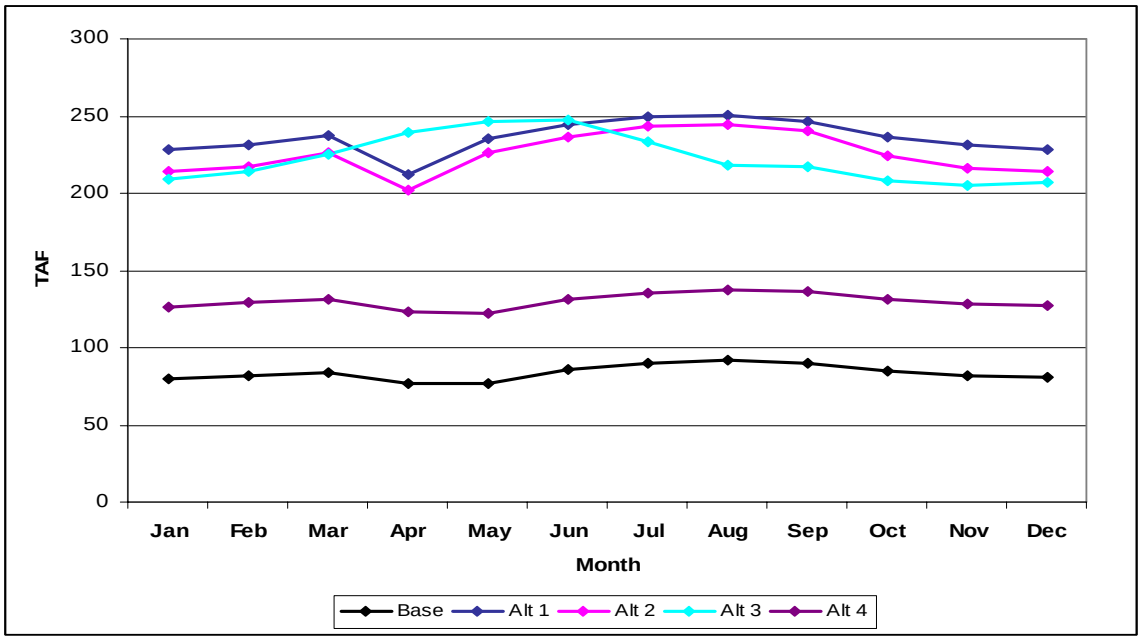


Figure C4-27: Monthly Average Los Vaqueros storage, 2005 LOD, Moderate Fishery Restrictions

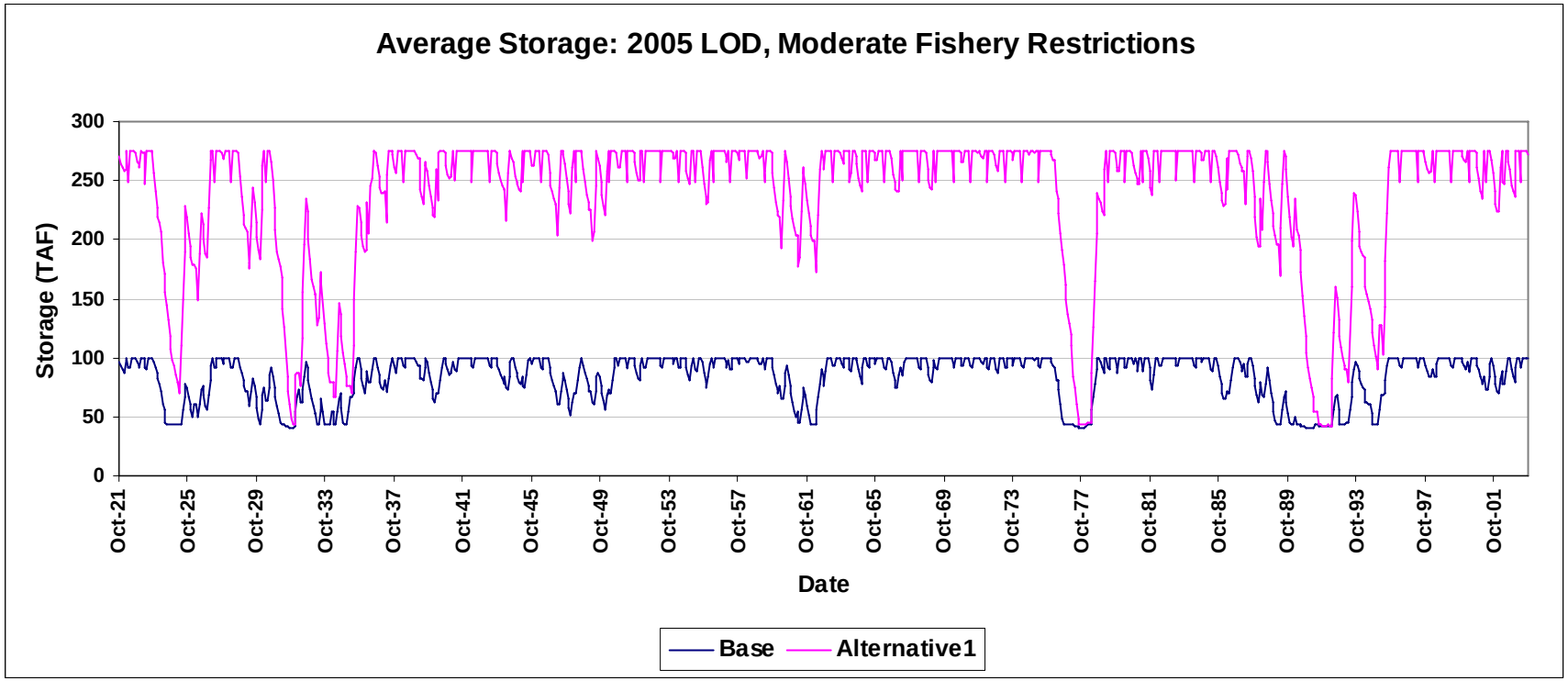


Figure C4-28: Timeseries of Alternative 1 and Base Los Vaqueros storage 2005 LOD, Moderate Fishery Restrictions

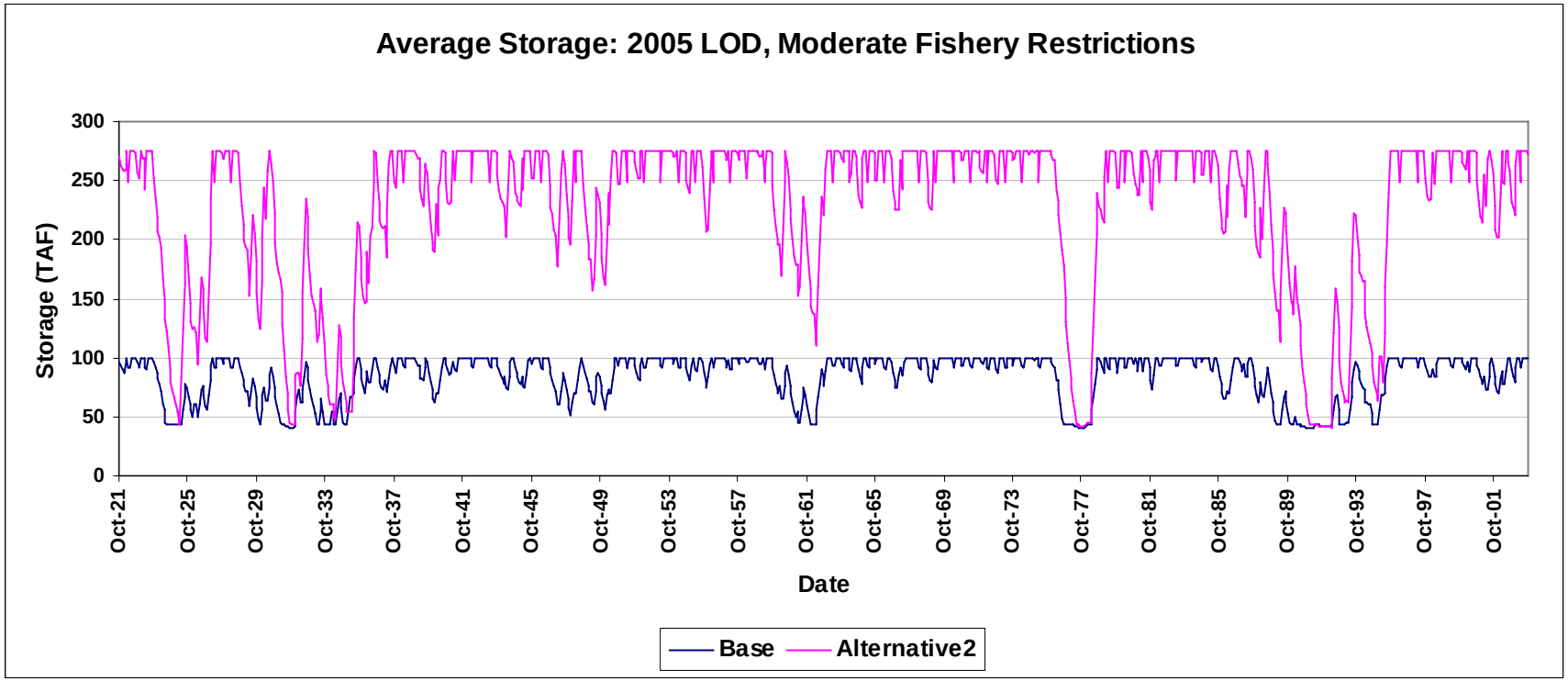


Figure C4-29: Timeseries of Alternative 2 and Base Los Vaqueros storage 2005 LOD, Moderate Fishery Restrictions

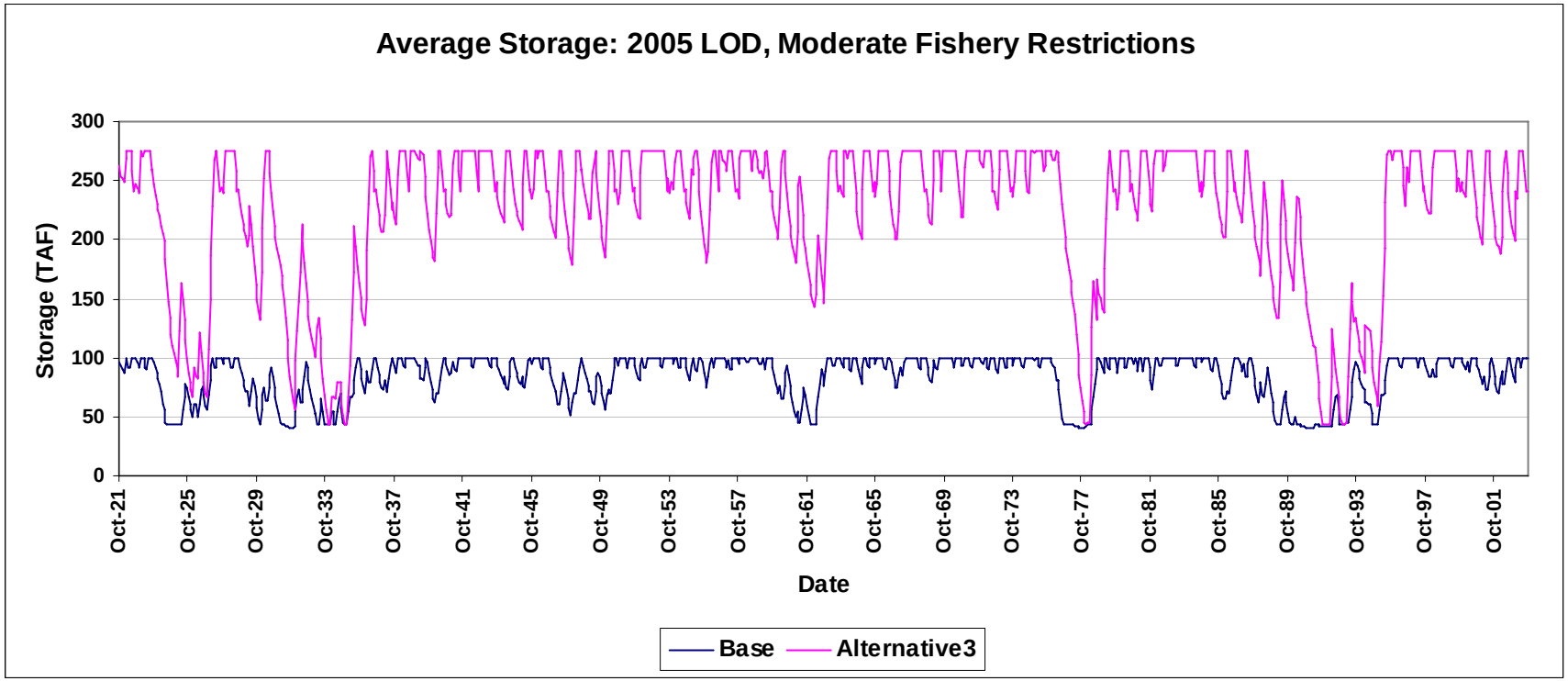


Figure C4-30: Timeseries of Alternative 3 and Base Los Vaqueros storage 2005 LOD, Moderate Fishery Restrictions

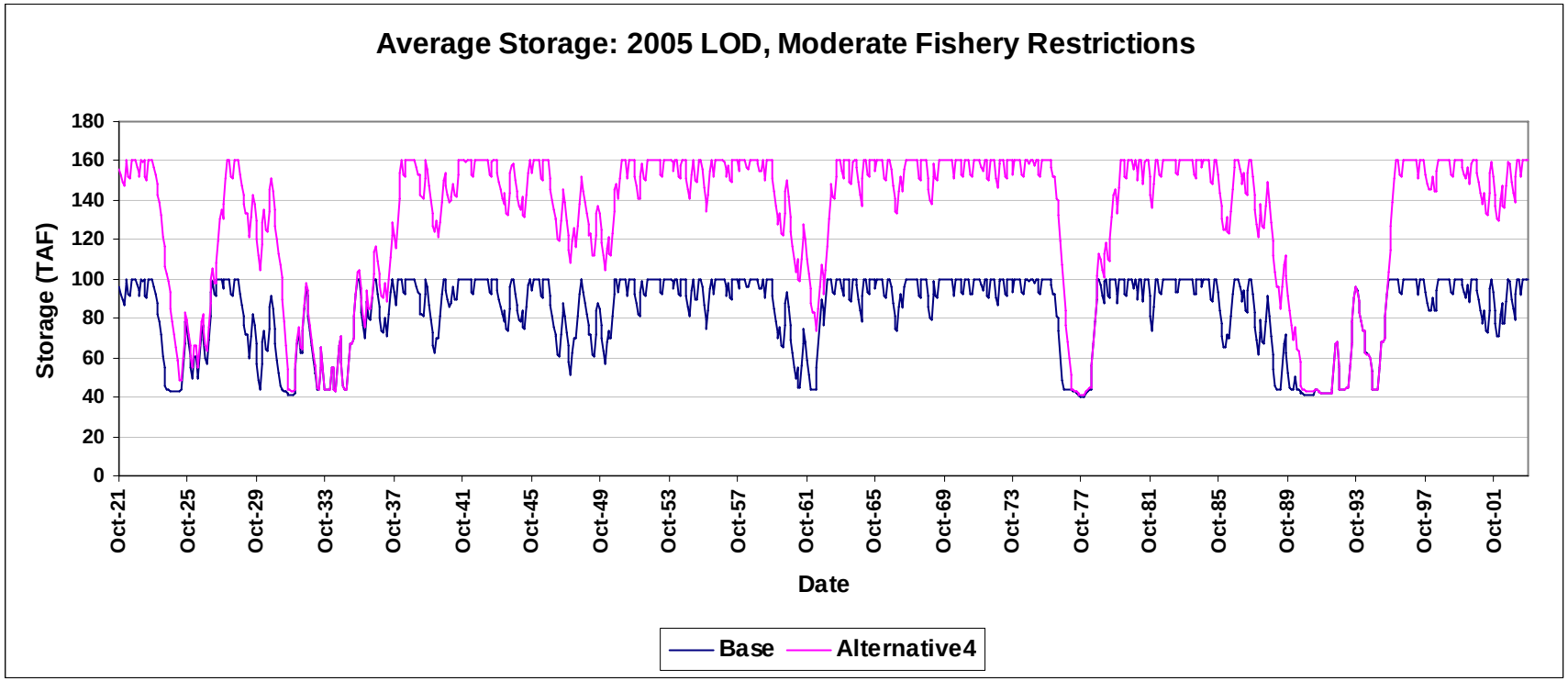


Figure C4-31: Timeseries of Alternative 4 and Base Los Vaqueros storage 2005 LOD, Moderate Fishery Restrictions

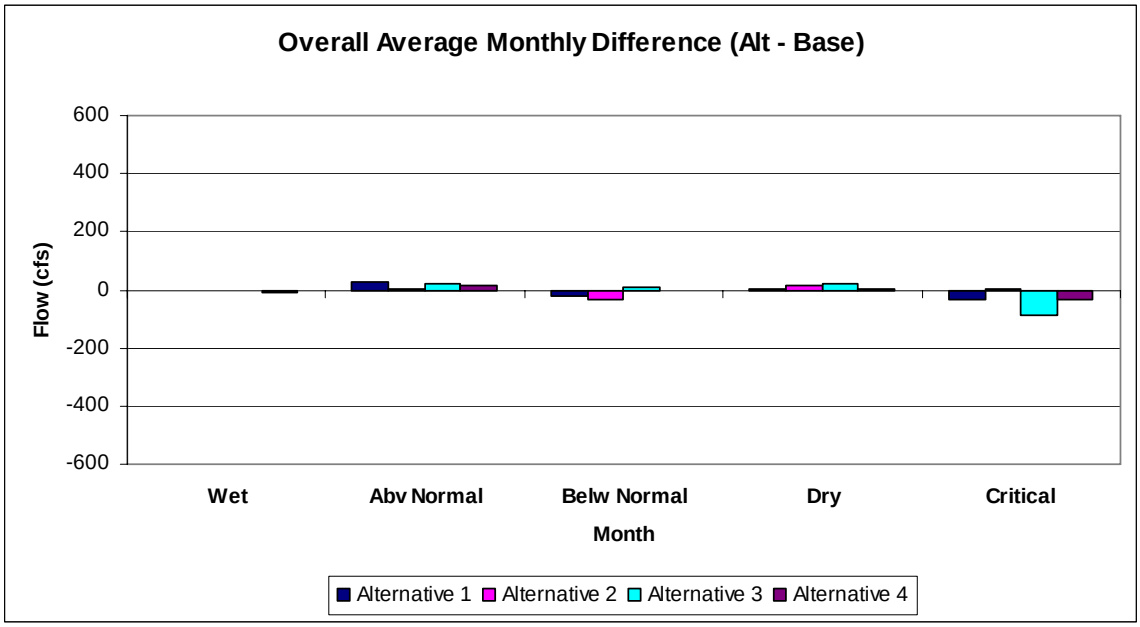


Figure C4-32: Changes in Sacramento River at Hood flow by water year type, 2005 LOD, Moderate Fishery Restrictions

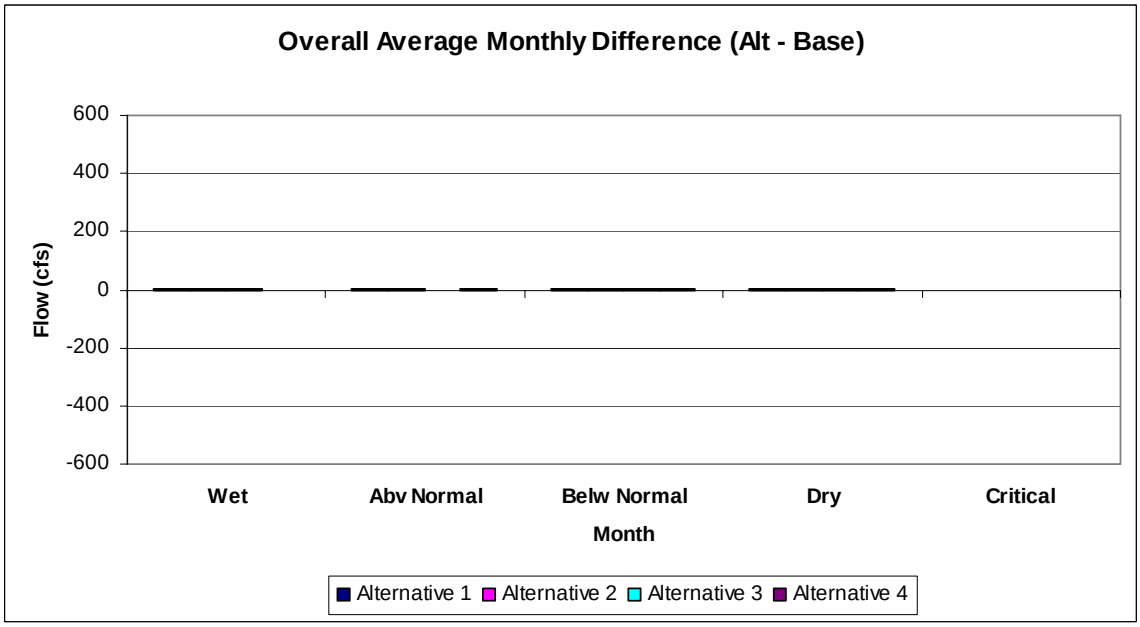


Figure C4-33: Changes in San Joaquin River at Vernalis flow by water year type, 2005 LOD, Moderate Fishery Restrictions

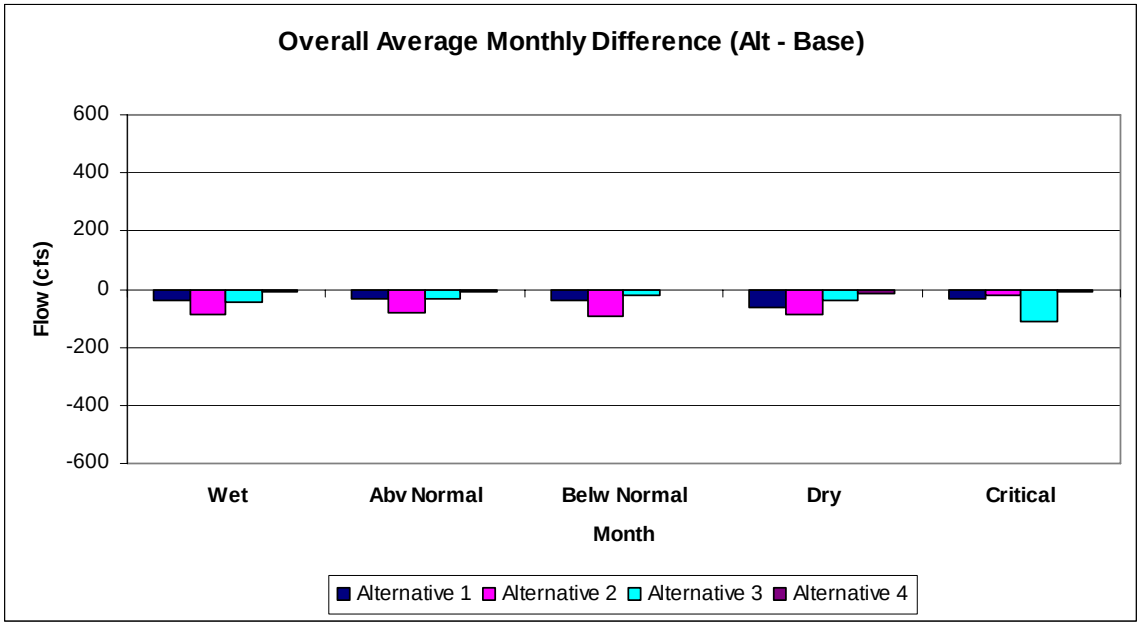


Figure C4-34: Changes in Delta Outflow by Year Type, 2005 LOD, Moderate Fishery Restrictions

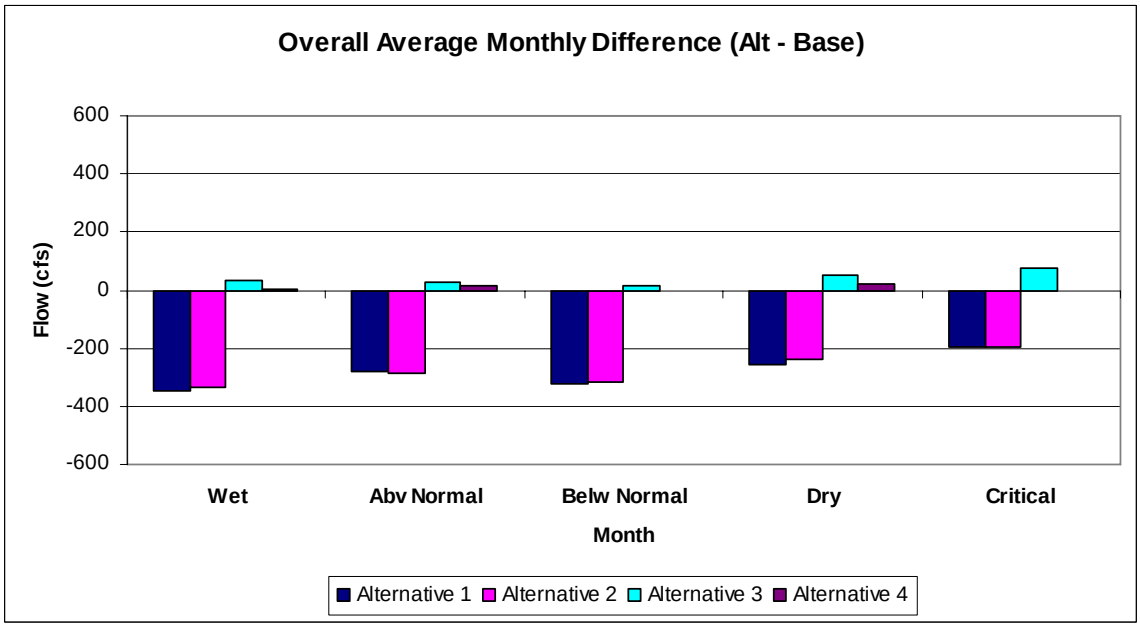


Figure C4-35: Changes in Banks + Jones Diversions by Year Type, 2005 LOD, Moderate Fishery Restrictions

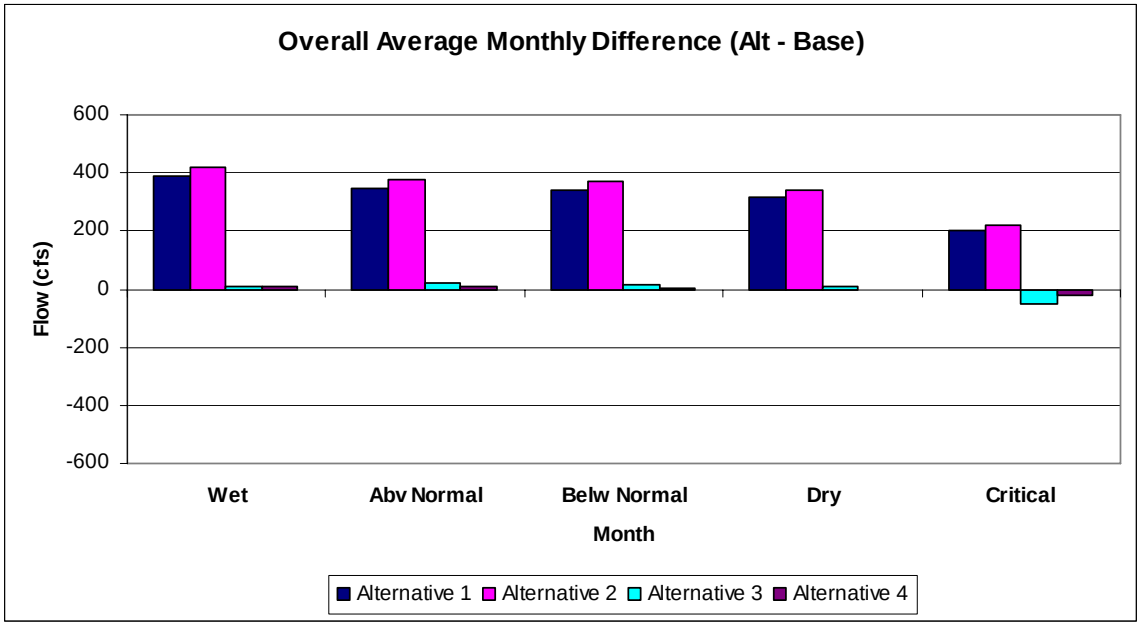


Figure C4-36: Changes in Project diversions by water year type, 2005 LOD, Moderate Fishery Restrictions

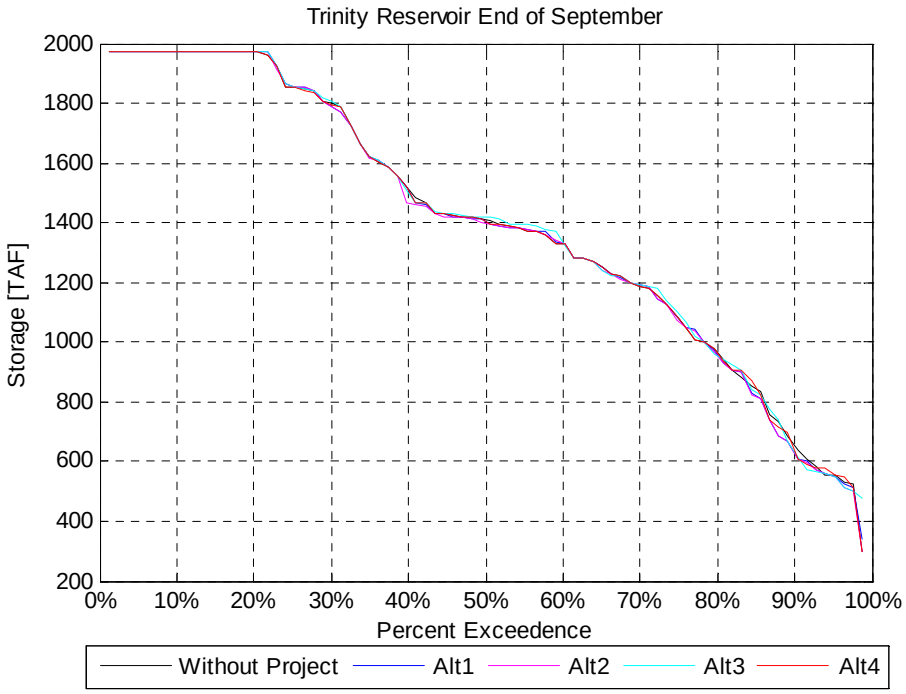


Figure C4-37: Trinity Reservoir end of September storage, 2005 LOD, Moderate Fishery Restrictions

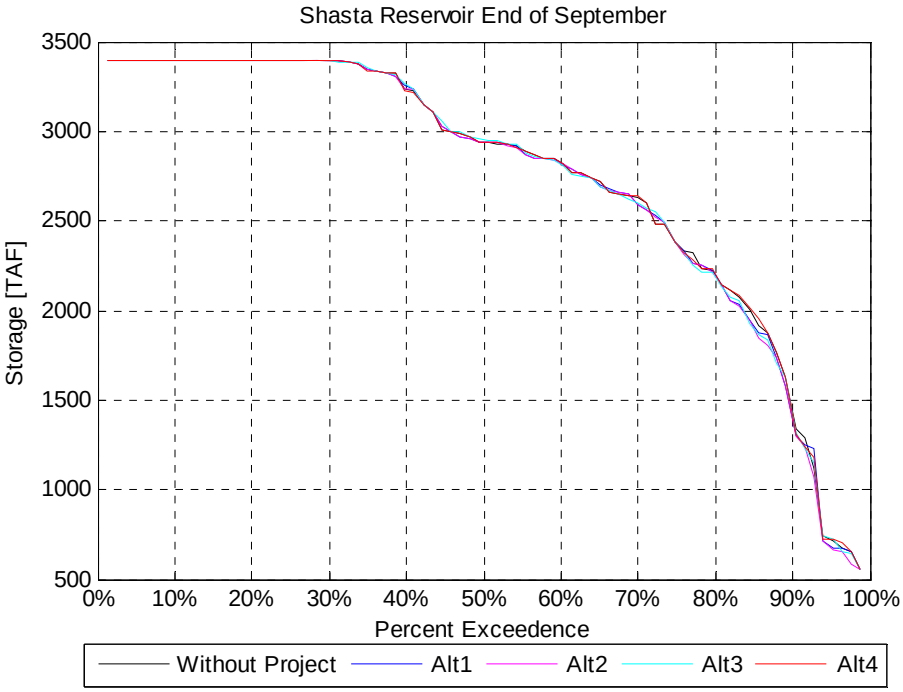


Figure C4-38: Shasta Reservoir end of September storage, 2005 LOD, Moderate Fishery Restrictions

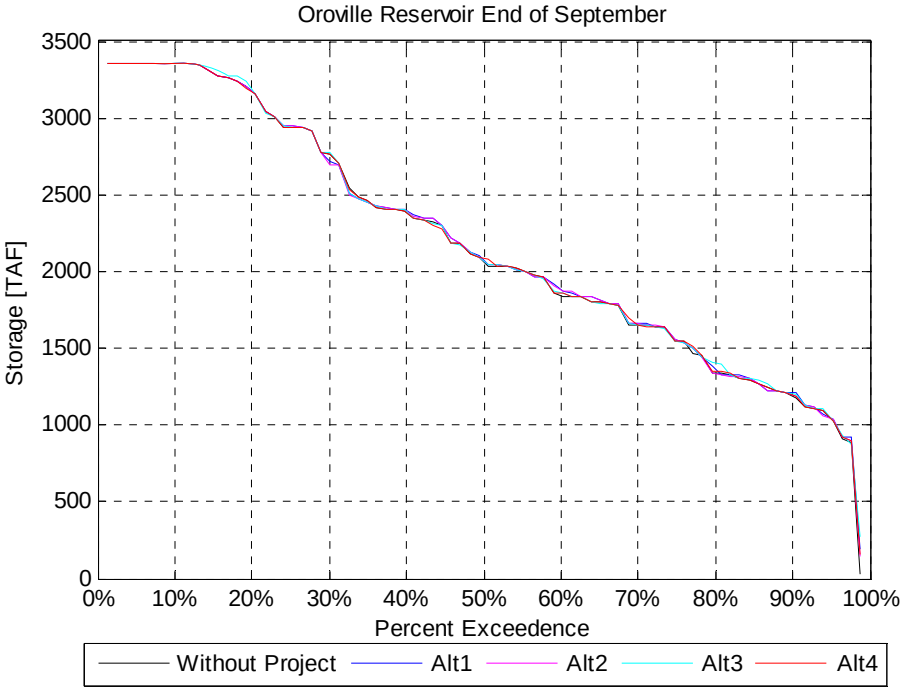


Figure C4-39: Oroville Reservoir end of September storage, 2005 LOD, Moderate Fishery Restrictions

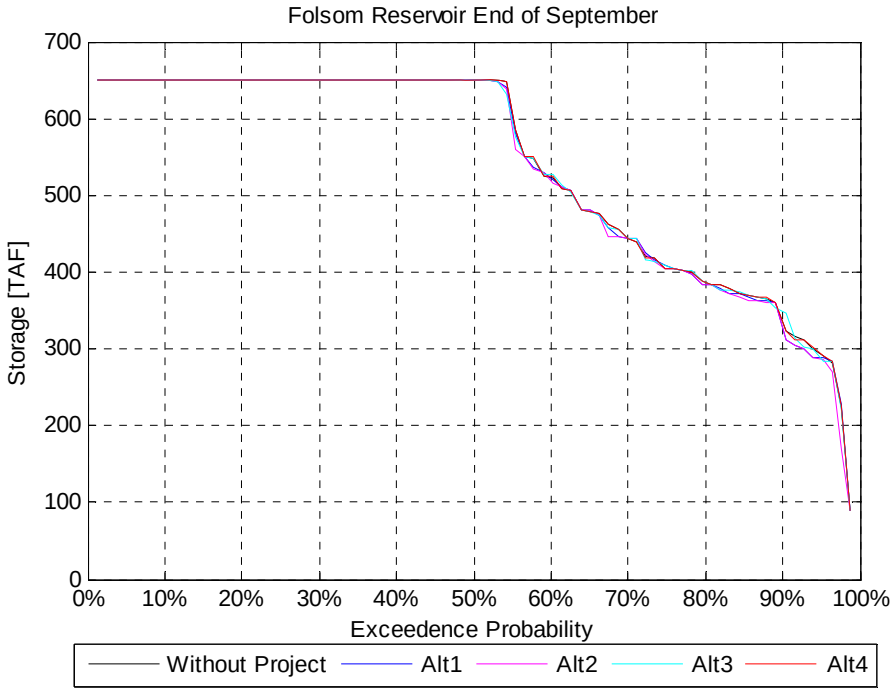


Figure C4-40: Folsom Reservoir end of September storage, 2005 LOD, Moderate Fishery Restrictions

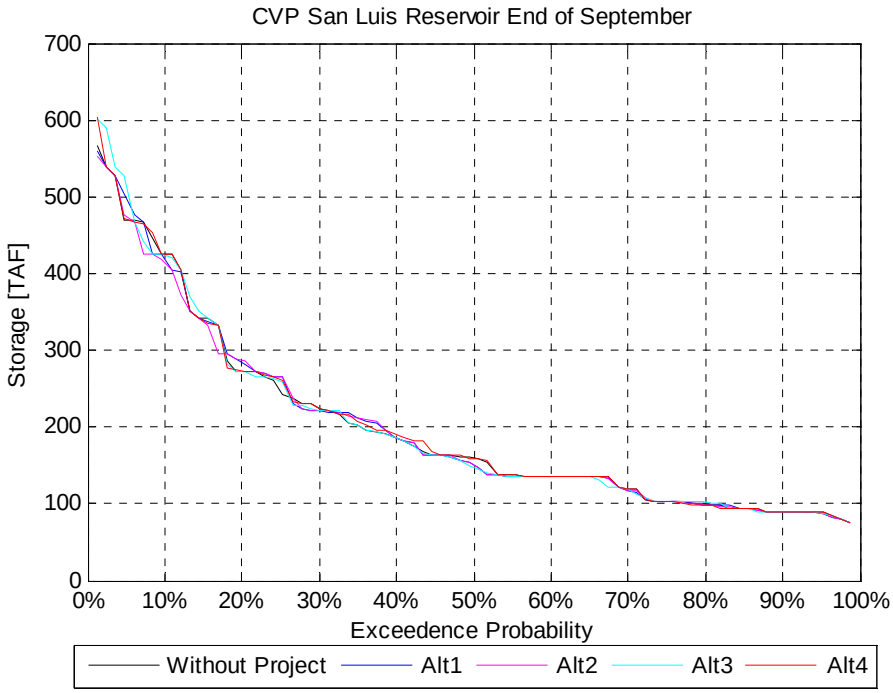


Figure C4-41: CVP San Luis Reservoir end of September storage, 2005 LOD, Moderate Fishery Restrictions

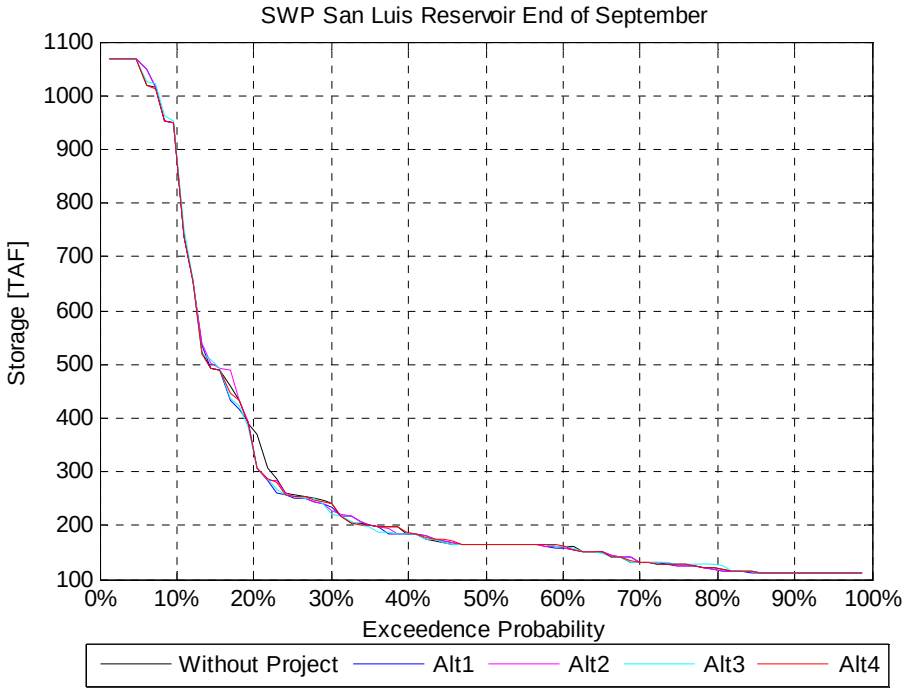


Figure C4-42: SWP San Luis Reservoir end of September storage, 2005 LOD, Moderate Fishery Restrictions

2030 Level of Development, Severe Fishery Restrictions

Model results for each project alternative are presented in **Table C4-11 (A-D)** as average values for full hydrologic study period (1921 to 2003) and a six-year dry period (1987 to 1992). These results include upstream and Delta flows and diversions (e.g. flow in Sacramento River and major tributaries, San Joaquin River flow, exports at Banks and Jones Pumping Plants, Net Delta Outflow, X2 position and QWEST), CVP and SWP south of Delta deliveries, CVP and SWP reservoir carry-over storages (at Folsom, Oroville, San Luis, Shasta and Trinity Reservoirs), and parameters specific to project alternative operations (CCWD and Los Vaqueros Reservoir (LV) diversions; additional south of Delta Environmental Water Supply deliveries; and Delta Supply Restoration deliveries to South Bay water agencies).

Table C4-12 and **Table C4-13** present the change in Delta channel flows and indices, upstream reservoir storages and local operation parameters for each project alternative as compared to the Future Without Project condition. Results are summarized in these tables as averages by water year type and by month, respectively.

Table C4-14 (A-D) presents the changes from the Future Without Project condition in monthly Banks and Jones export diversions for each project alternative, and **Table C4-15 (A-D)** presents changes from the Future Without Project condition in monthly CCWD and Los Vaqueros Reservoir (LV) diversions for each project alternative. These tables also indicate whether the Delta is in excess or balanced conditions.

Monthly and year type average changes in various Delta parameters (Sacramento River flow at Hood, San Joaquin River flow at Vernalis, Delta Outflow, combined Banks/Jones diversions, and combined CCWD and LV diversions) are presented in **Figure C4-43** through **Figure C4-47** and **Figure C4-53** through **Figure C4-57**, respectively. **Figure C4-48** shows the monthly average Los Vaqueros storage and **Figure C4-49** through **Figure C4-52** show time-series of storage for each alternative and the Future Without Project condition.

Figure C4-58 through **Figure C4-63** are exceedence plots of the end of September storage in upstream reservoirs (Trinity, Shasta, Oroville, and Folsom) and San Luis Reservoir (CVP and SWP).

TABLE C4-11:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2030 LOD, SEVERE FISHERY RESTRICTIONS

(A) ALTERNATIVE 1 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 1		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	169	389	314	226	145	139%	85%
Banks Pumping Plant	2573	1507	2377	1370	-196	-137	-8%	-9%
Jones Pumping Plant	2158	1627	2161	1644	3	17	0%	1%
Total	4894	3304	4927	3328	33	25	1%	1%
Delta (cfs)								
Sacramento River at Hood	22,315	12,958	22,319	12,976	4	18	0%	0%
San Joaquin River at Vernalis	4,242	1,540	4,242	1,540	0	0	0%	0%
Delta Outflow	22,362	8,766	22,317	8,752	-44	-14	0%	0%
QWEST	3,226	312	3,180	286	-46	-27	-1%	-8%
X2 Position (km)	74.95	81.39	74.98	81.39	0.03	0.00	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,561	6,333	8,559	6,345	-1	12	0%	0%
American River below Nimbus Dam	3,289	1,504	3,289	1,515	0	11	0%	1%
Feather River below Thermalito	4,386	2,349	4,386	2,346	0	-3	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,397	810	1,394	817	-3	7	0%	1%
Shasta	2,732	1,671	2,726	1,621	-6	-50	0%	-3%
Oroville	2,206	1,203	2,203	1,209	-3	6	0%	0%
Folsom	513	331	511	319	-2	-13	0%	-4%
CVP San Luis (August)	175	106	174	100	0	-6	0%	-6%
SWP San Luis (August)	220	117	219	117	0	1	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	880	353	883	366	2	13	0%	4%
CVP SOD M&I	115	95	116	96	0	1	0%	1%
SWP Table A + Article 56	2,436	1,459	2,434	1,467	-2	8	0%	1%
SWP Article 21	71	0	69	0	-2	0	-2%	NA
Delta Supply Restoration + Dry Year	0	0	32	27	32	27	NA	NA

(B) ALTERNATIVE 2 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 2		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	169	405	327	242	158	149%	93%
Banks Pumping Plant	2573	1507	2383	1372	-190	-135	-7%	-9%
Jones Pumping Plant	2158	1627	2160	1642	2	15	0%	1%
Total	4894	3304	4948	3341	54	38	1%	1%
Delta (cfs)								
Sacramento River at Hood	22,315	12,958	22,316	12,979	2	21	0%	0%
San Joaquin River at Vernalis	4,242	1,540	4,242	1,540	0	0	0%	0%
Delta Outflow	22,362	8,766	22,285	8,735	-77	-31	0%	0%
QWEST	3,226	312	3,148	267	-78	-45	-2%	-15%
X2 Position (km)	75	81	75	81	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,561	6,333	8,558	6,347	-3	14	0%	0%
American River below Nimbus Dam	3,289	1,504	3,290	1,515	0	11	0%	1%
Feather River below Thermalito	4,386	2,349	4,386	2,344	0	-5	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,397	810	1,392	814	-4	4	0%	1%
Shasta	2,732	1,671	2,720	1,616	-12	-55	0%	-3%
Oroville	2,206	1,203	2,202	1,207	-4	4	0%	0%
Folsom	513	331	511	319	-2	-13	0%	-4%
CVP San Luis (August)	175	106	174	101	0	-6	0%	-5%
SWP San Luis (August)	220	117	220	117	0	0	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	880	353	881	363	1	10	0%	3%
CVP SOD M&I	115	95	116	97	0	2	0%	2%
SWP Table A + Article 56	2,436	1,459	2,436	1,466	0	7	0%	0%
SWP Article 21	71	0	69	0	-1	0	-2%	NA
Additional SOD Env Water Supply	0	0	52	40	52	40	NA	NA

TABLE C4-11:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2030 LOD, SEVERE FISHERY RESTRICTIONS

(C) ALTERNATIVE 3 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 3		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	169	166	141	3	-28	2%	-17%
Banks Pumping Plant	2573	1507	2596	1564	23	57	1%	4%
Jones Pumping Plant	2158	1627	2164	1661	6	35	0%	2%
Total	4894	3304	4926	3367	32	63	1%	2%
Delta (cfs)								
Sacramento River at Hood	22,315	12,958	22,307	12,935	-7	-23	0%	0%
San Joaquin River at Vernalis	4,242	1,540	4,242	1,540	0	0	0%	0%
Delta Outflow	22,362	8,766	22,312	8,654	-50	-112	0%	-1%
QWEST	3,226	312	3,183	219	-43	-93	-1%	-30%
X2 Position (km)	75	81	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,561	6,333	8,557	6,321	-4	-12	0%	0%
American River below Nimbus Dam	3,289	1,504	3,289	1,507	0	3	0%	0%
Feather River below Thermalito	4,386	2,349	4,386	2,352	0	3	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,397	810	1,398	830	1	20	0%	2%
Shasta	2,732	1,671	2,733	1,692	1	20	0%	1%
Oroville	2,206	1,203	2,212	1,211	6	8	0%	1%
Folsom	513	331	513	326	0	-6	0%	-2%
CVP San Luis (August)	175	106	174	105	-1	-1	-1%	-1%
SWP San Luis (August)	220	117	222	119	2	3	1%	2%
Deliveries (TAF/yr)								
CVP SOD Ag	880	353	880	366	0	13	0%	4%
CVP SOD M&I	115	95	116	97	0	1	0%	2%
SWP Table A + Article 56	2,436	1,459	2,451	1,520	15	61	1%	4%
SWP Article 21	71	0	76	0	6	0	8%	NA
Additional SOD Env Water Supply	0	0	8	21	8	21	NA	NA

(D) ALTERNATIVE 4 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 4		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	169	163	160	0	-9	0%	-5%
Banks Pumping Plant	2573	1507	2571	1508	-2	1	0%	0%
Jones Pumping Plant	2158	1627	2158	1633	0	6	0%	0%
Total	4894	3304	4892	3301	-2	-2	0%	0%
Delta (cfs)								
Sacramento River at Hood	22,315	12,958	22,312	12,959	-2	1	0%	0%
San Joaquin River at Vernalis	4,242	1,540	4,242	1,540	0	0	0%	0%
Delta Outflow	22,362	8,766	22,363	8,770	1	4	0%	0%
QWEST	3,226	312	3,230	315	3	3	0%	1%
X2 Position (km)	75	81	75	81	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,561	6,333	8,559	6,334	-2	1	0%	0%
American River below Nimbus Dam	3,289	1,504	3,289	1,504	0	0	0%	0%
Feather River below Thermalito	4,386	2,349	4,386	2,349	0	0	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,397	810	1,398	813	1	3	0%	0%
Shasta	2,732	1,671	2,733	1,671	1	0	0%	0%
Oroville	2,206	1,203	2,203	1,203	-3	0	0%	0%
Folsom	513	331	512	330	-1	-1	0%	0%
CVP San Luis (August)	175	106	174	105	-1	-2	-1%	-1%
SWP San Luis (August)	220	117	219	117	-1	0	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	880	353	880	360	-1	7	0%	2%
CVP SOD M&I	115	95	116	96	0	1	0%	1%
SWP Table A + Article 56	2,436	1,459	2,435	1,459	-1	0	0%	0%
SWP Article 21	71	0	70	0	-1	0	-1%	NA

TABLE C4-12:
ANNUAL VALUES BY WATER YEAR TYPE, 2030 LOD, SEVERE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
CCWD and LV Diversions (TAF/yr)							
Average Total Diversions Future Without Project	**163**	**169**	**161**	**173**	**172**	**157**	**155**
Changes under Alternative 1	226	145	277	235	223	208	135
Changes under Alternative 2	242	158	292	255	242	224	148
Changes under Alternative 3	3	-28	21	19	12	-6	-49
Changes under Alternative 4	0	-9	9	9	-1	-8	-13
CVP and SWP Improved Fish Screening							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	177	138	214	173	170	161	136
Changes under Alternative 2	174	137	208	166	167	161	136
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta (cfs)							
Sacramento River at Hood							
Future Without Project	**22,315**	**12,958**	**33,040**	**25,208**	**18,396**	**15,409**	**11,111**
Changes under Alternative 1	4	18	8	-6	8	12	-13
Changes under Alternative 2	2	21	6	-25	4	16	-5
Changes under Alternative 3	-7	-23	17	-31	-6	16	-71
Changes under Alternative 4	-2	1	10	-19	0	-5	-11
San Joaquin River at Vernalis							
Future Without Project	**4,242**	**1,540**	**7,508**	**3,963**	**3,304**	**2,184**	**1,625**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta Outflow Future Without Project	**22,362**	**8,766**	**40,357**	**24,361**	**15,075**	**10,918**	**7,042**
Changes under Alternative 1	-44	-14	-71	-75	-12	-33	-11
Changes under Alternative 2	-77	-31	-96	-135	-74	-48	-20
Changes under Alternative 3	-50	-112	-40	-80	-82	-1	-76
Changes under Alternative 4	1	4	5	-31	4	11	3
Banks Pumping Plant Future Without Project	**3,544**	**2,082**	**4,725**	**3,636**	**3,306**	**2,942**	**2,072**
Changes under Alternative 1	-270	-190	-319	-269	-278	-243	-194
Changes under Alternative 2	-262	-186	-312	-255	-258	-242	-195
Changes under Alternative 3	32	78	38	18	45	13	49
Changes under Alternative 4	-3	1	-5	1	-1	-3	0
Jones Pumping Plant Future Without Project	**2,973**	**2,247**	**3,471**	**3,126**	**2,932**	**2,746**	**2,128**
Changes under Alternative 1	4	24	9	7	-8	3	7
Changes under Alternative 2	3	21	4	4	4	-2	6
Changes under Alternative 3	8	48	-1	-2	14	14	22
Changes under Alternative 4	-1	8	-3	-1	0	-2	4
Banks + Jones Exports Future Without Project	**6,517**	**4,329**	**8,196**	**6,762**	**6,238**	**5,687**	**4,200**
Changes under Alternative 1	-265	-166	-310	-262	-286	-240	-187
Changes under Alternative 2	-259	-165	-308	-251	-254	-243	-189
Changes under Alternative 3	40	126	37	16	59	27	70
Changes under Alternative 4	-3	9	-8	0	-1	-6	4
Banks + Jones + CCWD + LV Diversions							
Future Without Project	**6,741**	**4,563**	**8,418**	**7,000**	**6,475**	**5,904**	**4,414**
Changes under Alternative 1	45	32	71	61	21	46	-2
Changes under Alternative 2	74	52	94	100	79	65	14
Changes under Alternative 3	44	87	65	42	75	17	3
Changes under Alternative 4	-3	-3	4	12	-3	-16	-15
QWEST Future Without Project	**3,226**	**312**	**7,392**	**3,276**	**1,759**	**325**	**215**
Changes under Alternative 1	-46	-27	-87	-43	-18	-42	-1
Changes under Alternative 2	-78	-45	-109	-104	-77	-60	-16
Changes under Alternative 3	-43	-93	-63	-29	-76	-11	-21
Changes under Alternative 4	3	3	-1	-15	4	17	12
X2 Position (km) Future Without Project	**74.95**	**81.39**	**68.73**	**73.17**	**76.35**	**79.01**	**82.48**
Changes under Alternative 1	0.03	0.00	0.04	0.04	0.00	0.03	0.02
Changes under Alternative 2	0.05	0.02	0.05	0.10	0.05	0.04	0.03
Changes under Alternative 3	0.03	0.15	0.00	0.06	0.03	0.00	0.09
Changes under Alternative 4	0.00	-0.01	0.01	0.04	-0.01	-0.03	0.00
Upstream River Flows (cfs)							
Sacramento River at Keswick Dam							
Future Without Project	**8,561**	**6,333**	**11,557**	**8,682**	**7,087**	**6,906**	**6,148**
Changes under Alternative 1	-1	12	7	-5	-16	8	-12
Changes under Alternative 2	-3	14	-6	-15	3	8	-5
Changes under Alternative 3	-4	-12	6	-12	-2	11	-42
Changes under Alternative 4	-2	1	0	-4	1	-1	-9

TABLE C4-12:
ANNUAL VALUES BY WATER YEAR TYPE, 2030 LOD, SEVERE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
American River below Nimbus Dam							
Future Without Project	**3,289**	**1,504**	**5,208**	**3,687**	**2,751**	**1,980**	**1,324**
Changes under Alternative 1	0	11	-2	0	-5	8	0
Changes under Alternative 2	0	11	-2	2	-5	8	0
Changes under Alternative 3	0	3	2	2	0	1	-8
Changes under Alternative 4	0	0	0	1	0	1	-2
Feather River below Thermalito							
Future Without Project	**4,386**	**2,349**	**6,871**	**4,392**	**3,367**	**2,948**	**2,341**
Changes under Alternative 1	0	-3	-4	-8	19	-1	-3
Changes under Alternative 2	0	-5	6	-22	8	2	-4
Changes under Alternative 3	0	3	18	-29	-2	4	-13
Changes under Alternative 4	0	0	10	-17	0	-3	-1
Reservoir Carryover Storage (TAF)							
Trinity Future Without Project	**1,397**	**810**	**1,854**	**1,624**	**1,271**	**1,129**	**726**
Changes under Alternative 1	-3	7	-2	2	-4	-9	-2
Changes under Alternative 2	-4	4	-2	-4	-7	-7	-4
Changes under Alternative 3	1	20	-1	1	4	0	6
Changes under Alternative 4	1	3	0	2	0	1	2
Shasta Future Without Project	**2,732**	**1,671**	**3,331**	**3,200**	**2,839**	**2,396**	**1,343**
Changes under Alternative 1	-6	-50	-4	-6	13	-12	-23
Changes under Alternative 2	-12	-55	-4	-8	-12	-15	-30
Changes under Alternative 3	1	20	-4	-1	6	-8	24
Changes under Alternative 4	1	0	0	-1	2	2	3
Oroville Future Without Project	**2,206**	**1,203**	**3,002**	**2,483**	**2,183**	**1,655**	**1,058**
Changes under Alternative 1	-3	6	1	0	-16	-3	4
Changes under Alternative 2	-4	4	-7	-5	-3	-4	2
Changes under Alternative 3	6	8	5	2	12	-2	17
Changes under Alternative 4	-3	0	-9	-3	3	-1	1
Folsom Future Without Project	**513**	**331**	**636**	**573**	**555**	**401**	**306**
Changes under Alternative 1	-2	-13	0	-1	2	-7	-3
Changes under Alternative 2	-2	-13	0	-2	2	-7	-4
Changes under Alternative 3	0	-6	0	1	0	-1	3
Changes under Alternative 4	-1	-1	0	0	0	-2	1
CVP San Luis (August) Future Without Project	**175**	**106**	**249**	**160**	**127**	**133**	**146**
Changes under Alternative 1	0	-6	0	0	-1	-4	3
Changes under Alternative 2	0	-6	0	-1	0	-4	3
Changes under Alternative 3	-1	-1	0	0	-1	-2	-3
Changes under Alternative 4	-1	-2	0	-1	-2	-3	0
SWP San Luis (August) Future Without Project	**220**	**117**	**384**	**166**	**151**	**138**	**121**
Changes under Alternative 1	0	1	-2	0	0	0	0
Changes under Alternative 2	0	0	-1	-1	0	0	0
Changes under Alternative 3	2	3	7	0	0	0	-1
Changes under Alternative 4	-1	0	-2	-1	0	0	-1
CVP and SWP Deliveries (TAF/year)							
CVP SOD Ag Future Without Project	**880**	**353**	**1,333**	**965**	**790**	**630**	**299**
Changes under Alternative 1	2	13	5	9	-8	4	-2
Changes under Alternative 2	1	10	2	6	1	-1	-3
Changes under Alternative 3	0	13	-2	1	2	-6	6
Changes under Alternative 4	-1	7	-3	0	1	0	2
CVP SOD M&I Future Without Project	**115**	**95**	**131**	**115**	**114**	**109**	**93**
Changes under Alternative 1	0	1	1	0	0	0	0
Changes under Alternative 2	0	2	0	0	0	0	0
Changes under Alternative 3	0	1	0	0	0	0	1
Changes under Alternative 4	0	1	0	0	0	0	1
SWP Table A + Article 56 Future Without Project	**2,436**	**1,459**	**3,122**	**2,494**	**2,360**	**2,126**	**1,445**
Changes under Alternative 1	-2	8	3	-10	-7	-1	2
Changes under Alternative 2	0	7	4	-2	-5	-2	1
Changes under Alternative 3	15	61	12	5	22	8	32
Changes under Alternative 4	-1	0	0	-1	-1	-4	0
SWP Article 21 Future Without Project	**71**	**0**	**144**	**72**	**63**	**1**	**24**
Changes under Alternative 1	-2	0	-1	4	-9	-1	1
Changes under Alternative 2	-1	0	-4	0	0	0	0
Changes under Alternative 3	6	0	8	7	13	1	-1
Changes under Alternative 4	-1	0	-4	2	0	0	0
Improved Fish Screening for CVP South Bay							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	74	75	74	71	76	76	72
Changes under Alternative 2	72	74	72	70	75	74	72
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	117	71	157	116	106	98	74
Changes under Alternative 2	115	71	153	110	106	98	74
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-12:
ANNUAL VALUES BY WATER YEAR TYPE, 2030 LOD, SEVERE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
LV CVP Delta Supply Restoration							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	7	7	5	6	5	9	10
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
SWP South Bay Delta Supply Restoration							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	25	19	16	19	21	39	34
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from							
Dedicated Storage Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	52	40	42	47	49	70	58
Changes under Alternative 3	8	21	3	5	6	18	13
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-13:
AVERAGE MONTHLY VALUES, 2030 LOD, SEVERE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CCWD and LV Diversions (TAF)												
Average Total Diversions												
Future Without Project	**10**	**9**	**7**	**9**	**11**	**9**	**3**	**15**	**28**	**26**	**21**	**14**
Changes under Alternative 1	12	16	21	18	16	28	-2	33	19	21	22	22
Changes under Alternative 2	13	18	23	24	18	28	-2	34	20	21	22	22
Changes under Alternative 3	-2	-2	-1	0	1	2	-2	10	-6	4	1	-1
Changes under Alternative 4	0	-1	0	0	0	0	-1	0	-1	1	1	0
CVP and SWP Improved Fish												
Screening Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	11	15	17	17	13	22	0	9	13	17	20	22
Changes under Alternative 2	11	15	17	16	13	21	0	9	13	17	20	22
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta (cfs)												
Sacramento River at Hood												
Future Without Project	**11,263**	**15,242**	**25,678**	**34,526**	**40,358**	**35,075**	**24,196**	**19,785**	**15,451**	**18,539**	**14,870**	**12,791**
Changes under Alternative 1	-15	11	4	-17	-8	3	-51	28	90	50	-30	-16
Changes under Alternative 2	-9	-76	-21	-40	-9	13	-42	29	130	89	-22	-20
Changes under Alternative 3	11	-16	-26	-7	-23	23	-10	-24	-58	-16	-10	68
Changes under Alternative 4	-1	-37	-3	-22	-23	2	-6	-2	0	29	39	-2
San Joaquin River at Vernalis												
Future Without Project	**2,533**	**2,703**	**3,447**	**4,824**	**6,506**	**6,339**	**5,990**	**6,040**	**4,619**	**3,236**	**2,097**	**2,569**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta Outflow												
Future Without Project	**4,891**	**9,389**	**24,113**	**43,838**	**55,898**	**46,668**	**29,842**	**22,122**	**13,826**	**8,100**	**4,549**	**5,105**
Changes under Alternative 1	-35	-20	-14	18	-91	-116	101	-342	-19	30	-24	-21
Changes under Alternative 2	-41	-144	-139	-49	-163	-121	106	-354	-2	35	-27	-20
Changes under Alternative 3	4	-14	-64	-23	-175	-160	-7	-171	44	-43	13	1
Changes under Alternative 4	1	-29	-4	97	-51	-13	6	5	7	-6	6	-9
Banks Pumping Plant												
Future Without Project	**3,824**	**4,550**	**4,633**	**4,164**	**3,382**	**2,227**	**1,324**	**1,476**	**1,407**	**5,344**	**5,512**	**4,683**
Changes under Alternative 1	-179	-242	-325	-316	-236	-352	-197	-151	-219	-289	-343	-387
Changes under Alternative 2	-176	-242	-285	-330	-226	-342	-198	-147	-212	-265	-329	-392
Changes under Alternative 3	43	12	42	59	99	148	36	1	0	-49	-37	32
Changes under Alternative 4	-1	-1	-3	-62	-1	-1	0	0	4	22	15	-2
Jones Pumping Plant												
Future Without Project	**4,011**	**4,181**	**3,814**	**3,538**	**2,535**	**1,657**	**1,329**	**1,392**	**1,183**	**3,900**	**4,100**	**4,033**
Changes under Alternative 1	8	4	-2	-32	15	21	77	-18	4	-26	-15	15
Changes under Alternative 2	3	11	9	-61	27	18	75	-15	2	-27	-20	13
Changes under Alternative 3	2	17	39	-37	34	4	0	-10	1	4	-7	49
Changes under Alternative 4	4	6	8	-59	19	11	1	0	-1	-5	-2	7
Banks + Jones Exports												
Future Without Project	**7,835**	**8,731**	**8,448**	**7,702**	**5,917**	**3,884**	**2,653**	**2,867**	**2,590**	**9,243**	**9,612**	**8,716**
Changes under Alternative 1	-171	-239	-327	-349	-221	-330	-120	-169	-215	-315	-358	-372
Changes under Alternative 2	-173	-230	-276	-391	-200	-323	-123	-162	-209	-292	-349	-379
Changes under Alternative 3	44	29	82	22	132	152	36	-9	2	-44	-44	80
Changes under Alternative 4	3	6	5	-121	18	10	1	0	3	17	13	5

TABLE C4-13:
AVERAGE MONTHLY VALUES, 2030 LOD, SEVERE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Banks + Jones + CCWD + LV												
Diversions Future Without Project	**8,003**	**8,886**	**8,565**	**7,847**	**6,105**	**4,035**	**2,708**	**3,120**	**3,056**	**9,663**	**9,957**	**8,949**
Changes under Alternative 1	22	28	13	-50	56	126	-153	370	109	19	-6	5
Changes under Alternative 2	33	67	105	3	124	139	-149	383	132	54	4	0
Changes under Alternative 3	6	-1	69	14	148	181	-4	147	-102	27	-24	66
Changes under Alternative 4	-2	-6	1	-119	25	13	-11	-8	-7	35	32	7
QWEST Future Without Project	**-724**	**-1,071**	**1,468**	**6,053**	**9,814**	**9,790**	**8,069**	**6,362**	**5,012**	**-1,555**	**-3,032**	**-1,474**
Changes under Alternative 1	-26	-30	22	47	-58	-126	146	-367	-85	-69	-3	-10
Changes under Alternative 2	-34	-84	-109	-9	-126	-138	143	-379	-97	-92	-10	-6
Changes under Alternative 3	-2	-6	-43	-15	-151	-178	3	-150	86	-31	21	-46
Changes under Alternative 4	1	-4	-2	116	-28	-13	11	7	7	-27	-20	-8
X2 Position (km)												
Future Without Project	**85.57**	**85.80**	**82.95**	**77.11**	**69.61**	**64.07**	**63.21**	**66.12**	**69.27**	**74.04**	**78.17**	**83.52**
Changes under Alternative 1	0.04	0.05	0.06	-0.01	-0.03	0.00	0.03	-0.02	0.13	0.06	-0.01	0.03
Changes under Alternative 2	0.04	0.06	0.16	0.08	0.04	0.04	0.04	-0.02	0.14	0.05	-0.02	0.03
Changes under Alternative 3	-0.01	-0.01	0.02	0.09	0.06	0.05	0.04	0.01	0.07	-0.02	0.04	-0.01
Changes under Alternative 4	0.01	0.00	0.04	0.01	-0.04	0.00	0.00	0.00	0.00	-0.01	0.00	-0.01
E/I Ratio Future Without Project	**0.56**	**0.52**	**0.41**	**0.27**	**0.13**	**0.08**	**0.08**	**0.10**	**0.10**	**0.42**	**0.55**	**0.57**
Changes under Alternative 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 3	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream River Flows (cfs)												
Sacramento River at Keswick Dam												
Future Without Project	**6,073**	**5,609**	**7,192**	**8,668**	**10,785**	**8,712**	**6,903**	**7,841**	**10,266**	**13,292**	**10,903**	**6,482**
Changes under Alternative 1	-28	-10	2	-7	-9	11	-18	16	36	42	-25	-26
Changes under Alternative 2	-21	-43	-16	-27	-4	11	-12	14	68	52	-36	-19
Changes under Alternative 3	-23	12	-15	-26	-35	14	-4	-27	-62	31	16	71
Changes under Alternative 4	3	-2	8	-20	-15	13	-2	-1	1	-1	2	-8
American River below Nimbus Dam												
Future Without Project	**1,682**	**2,592**	**3,304**	**4,331**	**5,096**	**3,768**	**3,343**	**3,652**	**3,327**	**3,696**	**2,450**	**2,228**
Changes under Alternative 1	16	5	0	-9	1	-15	-13	7	25	3	-1	-15
Changes under Alternative 2	15	5	0	-10	-1	-10	-15	5	28	10	-7	-14
Changes under Alternative 3	-7	-5	3	2	7	-3	2	0	7	22	5	-33
Changes under Alternative 4	4	-2	0	0	-2	-8	0	0	-1	0	7	1
Feather River below Thermalito												
Future Without Project	**2,798**	**2,482**	**4,287**	**5,810**	**6,812**	**6,708**	**3,179**	**3,692**	**3,186**	**6,768**	**4,816**	**2,093**
Changes under Alternative 1	-2	12	-17	-13	-26	12	-22	7	30	3	-6	24
Changes under Alternative 2	-2	-41	-5	-10	-33	17	-20	7	32	27	18	8
Changes under Alternative 3	46	-28	35	15	0	19	-8	4	-5	-74	-30	29
Changes under Alternative 4	-7	-31	-9	5	-9	-6	-4	-1	0	29	29	4
CVP and SWP Deliveries (TAF)												
CVP SOD Ag Future Without Project	**28**	**21**	**29**	**51**	**60**	**42**	**59**	**92**	**145**	**178**	**132**	**43**
Changes under Alternative 1	0	0	0	0	0	0	0	0	1	1	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	1	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
CVP SOD M&I												
Future Without Project	**9**	**11**	**12**	**8**	**4**	**12**	**10**	**9**	**9**	**10**	**11**	**13**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C4-13:
AVERAGE MONTHLY VALUES, 2030 LOD, SEVERE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
SWP Table A + Article 56												
Future Without Project	**175**	**152**	**139**	**145**	**176**	**135**	**174**	**222**	**249**	**333**	**316**	**220**
Changes under Alternative 1	0	0	0	-1	0	-1	0	0	1	0	0	0
Changes under Alternative 2	0	0	0	-1	0	1	1	0	0	0	0	0
Changes under Alternative 3	1	1	1	0	1	2	2	2	3	1	1	1
Changes under Alternative 4	0	0	0	0	0	1	1	0	0	0	0	0
SWP Article 21												
Future Without Project	**6**	**6**	**13**	**12**	**10**	**11**	**3**	**2**	**1**	**1**	**1**	**3**
Changes under Alternative 1	0	0	-1	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	-1	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	2	2	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	-1	0	0	0	0	0	0	0
Improved Fish Screening for CVP South Bay Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	7	10	9	6	2	7	3	3	4	6	8	9
Changes under Alternative 2	7	10	8	6	2	7	3	3	4	6	8	9
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	4	5	8	12	11	15	11	7	9	11	12	13
Changes under Alternative 2	4	5	8	11	10	14	11	7	8	11	12	13
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
CVP South Bay Delta Supply Restoration Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	1	1	1	1	0	1	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP South Bay Delta Supply Restoration Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	6	4	3	0	1	1	0	1	2	1	2	4
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from Dedicated Storage Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	12	9	5	5	6	2	0	2	2	1	3	4
Changes under Alternative 3	1	0	0	0	0	0	0	0	0	1	2	5
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C4-14:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-233	-260	-426	-140	0	-297	-338	-369	-385
1923	-6	-205	-284	-445	-378	-425	-131	-198	-267	-362	-335	-352
1924	-117	-173	-260	-246	-205	-300	-105	-213	-222	-304	-310	-150
1925	106	-374	-141	-3132	-167	-300	0	0	179	724	61	157
1926	-141	-169	-171	-205	-181	-300	0	0	-1	-893	-621	-442
1927	-219	-160	0	0	-266	-470	-148	0	1	88	-441	-545
1928	-252	-313	-362	-260	-244	-392	-47	-220	-274	-265	-266	-360
1929	-141	-178	-263	-236	-207	-336	-100	-199	0	-617	-487	-385
1930	71	18	-166	-153	0	-405	-159	-215	0	-2	-334	-617
1931	-139	-128	-145	-203	-170	-300	0	-177	-198	-154	-153	-247
1932	-141	-93	-127	0	-113	-359	0	0	0	5	-458	-611
1933	-117	-153	-133	125	-120	-345	0	-171	0	-125	-265	-212
1934	42	-99	-16	-413	-110	-300	0	-194	0	-256	-373	-273
1935	9	199	-237	-117	-126	-348	0	0	-350	-423	-763	-173
1936	-176	-132	-221	-245	-215	0	-131	-661	0	-48	-310	-571
1937	-214	-789	-234	-252	865	64	-220	-13	-281	-438	-172	-401
1938	-171	-287	-268	-104	-305	-453	-278	-221	-470	-483	-571	-470
1939	-306	-418	-425	-470	-157	-350	-86	-275	-300	-418	-428	-408
1940	-177	-229	-212	-214	-183	-470	-140	0	-432	-422	0	-409
1941	-211	-305	-356	-148	0	362	-278	-248	-437	-379	-391	-470
1942	-318	-332	-382	-408	-339	-470	-149	-232	-424	-423	-450	-470
1943	-214	-317	-368	-465	-467	-510	-278	-645	-387	-490	-157	-447
1944	-209	-370	-401	-232	-268	-388	-115	0	-104	-284	-393	-321
1945	-136	-175	-212	-470	-383	-4	-131	0	-300	-453	-450	-388
1946	-179	-280	-332	-380	-327	-379	-131	-211	-241	-366	-370	-324
1947	-109	117	-206	-405	-357	-350	-115	0	0	-441	-484	-413
1948	-61	-73	-182	-244	-208	-300	-119	0	0	0	0	-374
1949	-234	-117	-220	-230	-199	-438	-215	-277	0	0	-386	-361
1950	-169	-158	-182	-240	0	-435	0	0	0	-178	-726	-199
1951	-157	-223	-180	-462	-799	-314	-70	-220	-300	-495	-574	-411
1952	-185	-285	-336	-386	0	-470	-278	-222	-404	-416	-430	-470
1953	-453	-470	-358	-234	-283	-470	0	-215	-348	-366	-376	-388
1954	-245	-239	-296	-382	-340	-404	-140	-15	-274	-253	-363	-361
1955	-116	-181	-261	0	-380	-337	-115	-272	-175	-398	-410	-491
1956	-136	-225	-286	-445	0	-352	-149	-225	-427	-424	-434	-470
1957	-209	-316	-229	-310	-284	-390	-280	-113	-187	-344	-335	-331
1958	-118	-175	-412	-240	-365	-447	-162	-284	-470	-482	-470	-470
1959	-293	-396	-435	-398	-307	-392	0	-157	-270	-108	-297	-310
1960	-115	-174	-271	-238	-204	-300	-115	-258	0	-343	-359	-570
1961	-132	-201	-109	-233	-200	-300	-96	-300	0	-417	-406	-631
1962	-131	-328	-166	-234	-167	-438	0	-282	-220	0	-419	-428
1963	-182	0	0	0	0	-444	-149	0	-253	-365	-183	-350
1964	-117	-170	-438	-462	-405	-300	-96	-247	-171	-362	-430	-426
1965	-140	-207	-12	0	-401	-436	-149	-216	-286	-336	-357	-373
1966	-212	-203	-270	-465	-430	-437	0	-248	-288	-317	-344	-789
1967	-127	-211	-271	-454	-435	0	-278	-26	-310	-355	-470	-479
1968	-407	-437	-411	-272	-408	-470	-262	-218	-300	-494	-371	-296
1969	-150	-217	-288	-405	0	-462	-278	-220	-470	-470	-481	-470
1970	-298	-471	-274	-471	-157	-470	-273	-216	-450	-426	-460	-430
1971	-261	-329	-372	-397	-335	-376	-103	-185	-46	-306	-281	-281
1972	-127	-161	-4632	-3334	-345	-414	-246	-220	-288	55	121	-348
1973	-126	-201	-59	-462	-208	-462	-140	-218	-414	-893	-901	-213
1974	-255	-296	-347	-462	-158	-77	-149	-222	-470	-470	-470	-470
1975	-288	-388	-423	-390	-304	-409	-149	-222	-292	-361	-354	-382
1976	-127	-208	-420	-470	-119	-300	-105	-297	-280	-526	-515	-374
1977	-155	-103	-203	129	-139	-300	0	-118	-98	-63	-196	-169
1978	50	-358	-123	-85	-68	-473	185	-3	0	-80	-29	-577
1979	-167	-428	-503	-226	0	0	-131	0	-247	-306	-220	-359
1980	24	-177	-470	-268	-369	-465	-140	-222	-470	-470	-470	-421
1981	-274	-334	-403	-360	-287	-381	-10	0	-136	-273	-473	-302
1982	-127	-170	0	-387	-463	-472	-278	-233	-470	-470	-484	-470
1983	-301	-399	-413	-448	-430	-446	-278	-239	-470	-470	-470	-470
1984	-470	-456	-424	-469	-424	-360	0	-217	-389	-391	-663	-390
1985	-162	-272	-325	-381	-327	-392	-115	-215	-282	-333	-431	-319
1986	-213	286	-343	-257	-422	2	-278	0	-246	-392	-383	-454
1987	-239	-337	-500	-391	-241	-380	-194	-205	0	-295	-300	-324
1988	-176	-186	-190	-184	-148	-300	-105	-202	0	-322	-331	-240
1989	73	-31	-346	950	-6	-345	0	-277	-174	-386	-367	87
1990	-169	-237	-310	-160	-133	-300	0	-176	-78	5	-34	-292
1991	-106	-214	-142	-25	-92	-337	0	-145	-78	-249	-170	-206
1992	-100	-150	-143	-80	-47	-245	0	-352	0	-113	-272	-205
1993	-98	-180	-146	-137	-294	-470	0	0	0	0	81	-501
1994	-164	-254	-350	-344	-261	-300	-56	-214	-136	-279	-281	-148
1995	7	-179	-192	-196	0	0	-280	0	0	0	0	-342
1996	-322	-420	-413	-400	-316	-464	-149	-228	-399	-468	-480	-470
1997	-249	-337	-385	-409	-237	-470	-149	-218	-436	-448	-443	-370
1998	-273	-317	-365	-1555	-338	482	-278	-237	-470	-470	-470	-470
1999	-315	-411	-413	-467	-470	-324	-149	-223	-422	-467	-480	-387
2000	-300	-308	-360	-330	-283	-412	-140	-220	-304	-389	-204	-377
2001	-166	-234	-304	-267	-228	-440	-115	0	0	-334	-426	-408
2002	-155	-342	-271	-231	160	-393	-106	-240	-146	-742	-322	79
2003	67	-220	-272	0	-99	-300	-108	0	-16	-199	-303	-328
Average	**-171**	**-239**	**-327**	**-349**	**-221**	**-330**	**-120**	**-169**	**-215**	**-315**	**-358**	**-372**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-14:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-233	-260	-426	-140	0	-297	-338	-369	-385
1923	-6	-205	-284	-225	-378	-425	-131	-128	-267	-362	-335	-352
1924	-117	-173	-258	-246	-205	-300	-105	-213	-222	-304	-310	-146
1925	110	-376	-136	-3132	-167	-300	0	0	179	715	48	131
1926	-141	-168	-170	-204	-180	-300	0	0	-1	-903	-627	-446
1927	-223	-160	0	0	-266	-470	-148	0	1	88	-300	-537
1928	-252	-313	-215	-251	-244	-393	-47	-220	-276	-236	-243	-341
1929	-110	-187	-254	-236	-208	-336	-105	-199	0	-622	-508	-408
1930	-163	24	-164	-151	0	-404	-159	-237	0	-12	-355	-603
1931	-133	-122	-160	-201	-168	-300	0	-177	-198	-168	-235	-247
1932	-121	-125	-127	0	-112	-359	0	0	0	1	-457	-612
1933	-118	-154	-130	135	-120	-345	0	-171	0	-103	-265	-212
1934	25	-141	-21	-353	-110	-300	0	-194	-1	-256	-364	-272
1935	7	200	-236	-117	-126	-347	0	0	-350	-480	-810	-139
1936	-177	-133	-220	-245	-215	0	-131	-429	0	-178	-353	-551
1937	-59	-207	-637	-253	7	-31	-258	-18	-187	-350	-333	-398
1938	-260	-280	-126	-377	-367	-453	-278	-221	-470	-481	-570	-470
1939	-303	-410	-424	-470	-157	-352	-87	-278	-300	-463	-462	-403
1940	-157	-232	-215	-210	-180	-470	-140	0	-431	-422	0	-409
1941	-213	-304	-355	-148	0	550	-278	0	-437	-379	-391	-470
1942	-319	-333	-382	-408	-339	-470	-149	-232	-424	-423	-451	-470
1943	-214	-317	-368	-436	-467	-510	-278	-645	-387	-490	-157	-447
1944	-209	-370	-402	-232	-268	-388	-115	0	0	-278	-387	-320
1945	-138	-175	-212	-470	-381	-8	-131	0	-300	-452	-449	-387
1946	-181	-280	-200	-1594	352	-378	-131	-208	-237	-451	-452	-320
1947	-107	138	-196	-403	-356	-350	-115	0	0	-484	-642	-413
1948	-41	-77	-185	-240	-203	-300	-116	0	0	0	0	-483
1949	-188	-134	-216	-230	-198	-438	-215	-277	0	0	-386	-351
1950	-168	-156	-181	-240	0	-435	0	0	0	-146	-693	-187
1951	-154	-217	0	0	-465	-304	-70	-220	-300	-504	-586	-406
1952	-189	-285	-336	-386	0	-470	-278	-222	-404	-416	-430	-470
1953	-453	-469	-358	-234	-283	-470	0	-215	-348	-366	-376	-388
1954	-245	-239	-296	-382	-340	-404	-140	0	-274	-328	-362	-342
1955	-116	-181	-261	0	-380	-337	-115	-272	-175	-390	-404	-495
1956	-139	-225	-286	-445	0	-16	-149	-225	-428	-426	-435	-470
1957	-209	-324	-226	-310	-284	-390	-280	-66	-187	-350	-335	-319
1958	-118	-175	-412	-240	-364	-447	-154	-284	-470	-482	-470	-470
1959	-292	-395	-435	-398	-307	-392	0	-154	-270	-106	-296	-306
1960	-120	-176	-276	-238	-204	-300	-115	-258	0	-370	-386	-615
1961	-138	-222	-417	-233	-200	-300	0	-300	0	-414	-405	-464
1962	-147	-426	-123	-244	-174	-440	0	-283	-220	0	-420	-403
1963	-182	0	0	0	0	-444	-149	0	-230	-373	-185	-350
1964	-117	-170	-471	-460	-405	-300	-115	-246	-171	-339	-424	-425
1965	-140	-206	-12	0	-199	-436	-149	-216	-286	-337	-358	-373
1966	-216	-203	-198	-465	-430	-437	0	-248	-288	-317	-344	-786
1967	-132	-215	-271	-454	-435	0	-278	0	-310	-355	-470	-478
1968	-406	-436	-412	-279	-409	-470	-262	-218	-300	-493	-371	-296
1969	-156	-216	-288	-405	0	-338	-278	-220	-470	-470	-481	-470
1970	-298	-471	-274	-438	-157	-470	-279	-216	-450	-426	-460	-427
1971	-265	-329	-224	-397	-335	-376	-124	-185	-46	-281	-294	-281
1972	-183	-162	-470	-451	-124	-368	-246	-219	-300	-428	-391	-373
1973	-158	-232	0	-460	-248	-462	-140	-218	-399	-402	-410	-348
1974	-181	-280	-288	-462	-146	-434	-149	-222	-470	-470	-470	-470
1975	-288	-388	-423	-391	-305	-410	-149	-222	-294	-334	-356	-384
1976	-127	-211	-420	-470	-119	-300	-105	-297	-280	-518	-507	-376
1977	-153	-108	-201	112	-138	-300	0	-118	-98	-139	-146	-169
1978	-85	-137	-123	-85	-66	-472	40	-18	0	-4	-6	-578
1979	-144	-418	-512	-222	0	0	-131	0	-247	-305	-221	-341
1980	77	-177	-470	-127	-384	-465	-140	-222	-470	-470	-470	-421
1981	-274	-335	-397	-360	-287	-381	-10	0	-137	-270	-469	-302
1982	-126	-169	0	-245	-463	-461	-278	-233	-470	-470	-484	-470
1983	-301	-399	-396	-421	-425	-409	-278	-239	-470	-470	-470	-470
1984	-470	-456	-400	-469	-424	-360	0	-217	-389	-391	-663	-390
1985	-162	-272	-261	-381	-327	-392	-115	-215	-282	-326	-425	-317
1986	-217	286	-349	-257	-419	2	-278	0	0	-392	-640	-454
1987	-239	-225	-354	-386	-231	-381	-194	-206	0	-280	-266	-308
1988	-139	-145	-195	-185	-149	-300	-105	-201	0	-388	-383	-259
1989	74	-36	-334	930	-117	-345	0	-276	-174	-386	-350	53
1990	-166	-235	-312	-160	-133	-300	0	-176	-78	-15	-48	-296
1991	-107	-207	-141	-33	-92	-337	0	-145	-78	-228	-185	-206
1992	-107	-138	-152	-73	-47	-244	0	-352	0	-125	-283	-205
1993	-93	-161	-145	-140	-294	-470	0	0	0	0	80	-499
1994	-162	-253	-349	-344	-261	-300	-69	-214	-136	-273	-277	-148
1995	-73	-181	-190	-196	0	0	-279	0	0	0	0	-342
1996	-322	-420	-402	-399	-316	-464	-149	-228	-398	-469	-480	-470
1997	-249	-336	-385	-409	-267	-470	-149	-218	-436	-449	-444	-370
1998	-272	-317	-365	-1555	-338	688	-278	-230	-470	-470	-470	-470
1999	-315	-411	-400	-6392	1526	-262	-149	-223	-404	1074	1132	-387
2000	-279	-422	-816	-322	-280	-416	-140	-220	-305	-429	-262	-380
2001	-170	-235	-306	-268	-229	-438	-115	0	0	-323	-419	-412
2002	-153	-333	-270	-231	-411	-393	-106	-239	-145	0	-404	-484
2003	70	-216	-271	0	-161	-300	-140	0	1	-248	-305	-318
Average	**-173**	**-230**	**-276**	**-391**	**-200**	**-323**	**-123**	**-162**	**-209**	**-292**	**-349**	**-379**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-14:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	9	0	0	0	0	0	0	0	-1	-11	0
1923	175	0	0	1984	0	0	0	0	0	96	65	3
1924	84	62	-3	0	0	0	0	0	0	44	-114	162
1925	243	-340	519	0	0	0	0	0	0	-178	39	732
1926	199	202	103	0	0	0	0	0	0	-189	-75	646
1927	-70	0	0	0	0	0	0	0	0	88	0	517
1928	-21	0	0	0	0	0	0	0	0	-251	201	204
1929	71	-6	11	0	0	0	0	0	0	-173	-65	11
1930	-89	166	0	0	0	0	0	23	0	-93	-91	14
1931	-6	49	75	0	0	0	0	0	0	243	-404	253
1932	-239	492	0	0	0	0	0	0	0	-31	-620	146
1933	5	4	8	1849	1002	0	0	0	0	-959	-834	33
1934	319	-121	871	598	1098	0	0	0	0	-56	-632	-2
1935	287	94	388	0	0	0	0	0	0	359	312	346
1936	112	141	72	0	0	0	0	-661	0	196	-107	-157
1937	-34	-546	100	0	1180	3215	522	42	0	-1017	-731	35
1938	30	0	0	1443	36	0	702	0	0	-13	-101	0
1939	0	-8	1	0	0	0	0	0	0	1	1	13
1940	9	10	86	0	0	0	0	0	0	-35	0	0
1941	41	13	0	0	0	1612	216	0	0	-899	-533	0
1942	112	-6	0	0	463	0	0	0	0	8	-13	0
1943	-22	0	0	0	0	249	0	-158	72	9	162	32
1944	-91	137	-7	0	0	0	0	0	0	-34	-5	-13
1945	18	0	0	0	1021	515	0	0	0	-115	-116	-2
1946	33	0	0	0	-39	0	0	0	0	102	10	3
1947	94	-91	0	12	0	0	0	1	0	-12	-52	52
1948	41	165	112	0	0	0	0	0	0	0	0	-34
1949	6	97	78	0	0	0	0	0	0	0	0	318
1950	-15	75	112	0	0	0	0	0	0	-40	-229	158
1951	20	0	0	0	1243	172	0	0	0	-42	-126	-6
1952	6	0	0	0	0	0	81	0	0	0	0	0
1953	-18	1	0	0	0	0	0	0	0	0	0	0
1954	-12	0	28	0	0	0	0	0	0	-263	136	-64
1955	120	0	0	-2786	0	0	0	22	-2	448	411	479
1956	-77	78	1	0	7	-1	0	0	1	-30	-32	0
1957	0	-3	228	542	12	0	0	0	0	172	121	-56
1958	0	0	0	0	0	0	706	46	0	-12	0	0
1959	0	-3	0	0	0	0	0	-56	0	248	222	-32
1960	33	198	38	0	0	0	0	0	0	0	0	563
1961	237	4	517	0	0	0	0	0	0	0	0	-50
1962	-356	482	70	-28	0	0	0	0	0	0	0	-17
1963	0	0	0	0	0	0	0	0	0	-32	-2	0
1964	0	0	-76	0	0	0	0	6	0	10	6	13
1965	-7	0	0	0	0	0	0	0	0	40	182	36
1966	434	0	0	0	0	0	0	0	0	-91	-55	-5
1967	11	1	0	0	0	0	0	0	0	0	0	-56
1968	-40	-36	-9	466	73	0	0	0	0	42	67	-91
1969	166	23	0	0	0	-24	0	0	0	163	-12	0
1970	0	-1	0	4	1595	787	-367	0	0	-597	-582	477
1971	-405	0	0	0	0	0	0	0	0	104	13	0
1972	-13	68	0	0	0	0	0	0	0	60	149	-61
1973	22	0	0	0	0	0	0	0	0	-1	-1	91
1974	-4	0	0	0	0	392	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	22	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	190
1977	-16	83	108	92	1	0	0	0	0	125	-13	0
1978	136	-226	0	0	0	-4	224	-3	0	-124	-74	-203
1979	109	-44	39	0	0	0	0	0	0	26	66	-65
1980	185	0	0	-11	7	0	0	0	0	0	6	0
1981	-6	-10	23	0	0	0	0	0	0	0	2	-2
1982	-4	0	0	0	0	41	0	0	0	1	-14	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	1581	720	0	0	0	79	54	-1
1985	101	0	0	0	0	0	0	0	0	5	4	-3
1986	39	28	0	0	-6	1	481	31	0	-237	323	0
1987	-6	-2	-431	2365	0	0	0	0	0	-467	140	662
1988	387	621	3737	1284	-220	0	0	0	1	-579	-368	563
1989	496	91	130	320	187	0	0	0	0	0	0	-150
1990	192	187	53	0	0	0	0	0	0	-68	-75	53
1991	0	13	-17	-19	0	0	0	0	0	-6	29	0
1992	16	-33	73	-142	0	0	0	0	0	166	-156	45
1993	-95	198	0	0	0	0	0	0	0	5	35	-83
1994	156	124	-113	0	0	0	0	0	0	-9	22	188
1995	205	285	-48	0	0	0	-1	0	0	0	0	0
1996	0	-2	0	0	0	2387	0	0	60	-1202	-1261	0
1997	-3	0	0	0	271	1596	0	0	0	-285	-290	3
1998	41	-2	0	0	0	593	398	0	0	0	0	0
1999	0	0	0	-6161	1832	208	0	0	0	1464	1534	0
2000	4	-139	-173	0	-1	-1	0	0	0	7	-48	16
2001	91	-29	-11	0	0	0	0	0	0	6	-14	389
2002	-10	-142	0	0	-411	0	0	0	-1	0	-32	298
2003	204	-15	0	0	-68	0	0	0	0	155	0	-4
Average	**44**	**29**	**82**	**22**	**132**	**152**	**36**	**-9**	**2**	**-44**	**-44**	**80**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-14:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	0	-4	0
1923	-14	0	0	0	0	0	0	0	0	-1	-4	0
1924	0	0	-3	0	0	0	0	0	0	2	5	159
1925	242	-315	212	-2945	0	0	0	0	179	684	357	592
1926	-1	-2	13	0	0	0	0	0	0	-229	-149	-64
1927	-87	0	0	0	0	0	0	0	0	0	0	8
1928	3	0	0	0	0	0	0	0	0	-153	20	16
1929	13	-4	2	0	0	0	0	0	0	-54	-45	-25
1930	-104	165	0	0	0	0	0	0	0	-18	-30	-12
1931	-16	41	80	0	0	0	0	0	0	20	-144	0
1932	-83	158	0	0	0	0	0	0	0	46	-10	0
1933	-12	-11	-7	-37	0	0	0	0	0	24	4	2
1934	3	0	9	-13	0	0	0	0	0	20	3	-7
1935	5	3	-5	0	0	0	0	0	0	18	15	-55
1936	-130	0	2	0	0	0	0	0	0	74	-67	-52
1937	39	42	-319	0	135	2	1	1	0	59	-12	2
1938	-52	0	0	71	1	0	0	0	0	-181	-177	0
1939	0	1	0	0	0	0	0	0	0	-1	-1	-18
1940	-15	-12	67	0	0	0	0	0	0	-8	0	0
1941	9	0	0	0	0	42	0	0	0	5	5	0
1942	-243	2	0	0	0	0	0	0	0	-2	-2	0
1943	2	0	0	0	0	-96	0	0	50	-25	-28	-17
1944	15	-25	8	0	0	0	0	0	0	3	-3	5
1945	-10	0	0	0	10	-3	0	0	0	0	0	0
1946	-3	0	0	0	4	0	0	0	0	0	0	1
1947	0	-15	0	12	0	0	0	0	0	1	-12	0
1948	-9	136	95	0	0	0	0	0	0	0	0	12
1949	7	86	47	0	0	0	0	0	0	0	0	43
1950	-34	40	0	0	0	0	0	0	0	0	-42	0
1951	-5	0	0	0	3	0	0	0	0	-170	169	5
1952	-5	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	-5	0	0	0	0	0	0	0	0	-75	-14	23
1955	0	0	0	0	0	0	0	0	0	-2	-1	-2
1956	5	0	0	0	0	0	0	0	0	2	2	0
1957	0	-1	40	0	0	0	0	0	0	7	-17	4
1958	0	0	0	0	0	0	19	0	0	-4	0	0
1959	0	-1	0	0	0	0	0	0	0	-15	-1	-1
1960	0	-2	-1	0	0	0	0	0	0	0	0	-7
1961	6	3	430	0	0	0	0	0	0	0	0	-63
1962	38	80	-24	22	0	0	0	0	0	0	0	-21
1963	0	0	0	0	0	0	0	0	0	-114	1	-1
1964	0	0	1	0	0	0	0	-6	0	8	10	0
1965	-15	0	0	0	0	0	0	0	0	1	1	6
1966	59	0	0	0	0	0	0	0	0	-14	-8	3
1967	-3	1	0	0	0	0	0	0	0	0	0	-9
1968	-7	-6	-2	0	0	0	0	0	0	-1	-1	0
1969	-6	0	0	0	0	6	0	0	0	0	-4	0
1970	0	0	0	0	0	0	0	0	0	-10	0	0
1971	-1	0	0	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0	0	-14	0	5
1973	-2	0	0	0	0	0	0	0	0	0	0	-17
1974	1	0	0	0	0	-6	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	-1	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	2
1977	-2	93	97	36	-4	0	0	0	0	0	0	0
1978	-1	2	0	0	0	-1	27	1	0	-20	-20	0
1979	-30	-15	9	0	0	0	0	0	0	-3	-159	-11
1980	276	0	0	151	0	0	0	0	0	0	-126	0
1981	125	-1	-181	0	0	0	0	0	0	23	-18	1
1982	-10	0	0	0	0	9	0	0	0	0	-4	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	0	0	0
1985	1	0	0	0	0	0	0	0	0	0	0	1
1986	-2	480	-48	0	2	-1	0	0	0	-10	-59	0
1987	-45	48	32	0	0	0	0	0	0	3	8	4
1988	8	9	0	0	0	0	0	0	0	-8	-6	-6
1989	219	49	10	65	-4	0	0	0	0	0	0	-14
1990	-3	0	4	0	0	0	0	0	0	162	130	6
1991	0	-43	2	60	0	0	0	0	0	-25	4	0
1992	0	2	-4	17	0	0	0	0	0	-8	-1	0
1993	1	-1	0	0	0	0	0	0	0	0	0	0
1994	-1	-1	0	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	0	0
1996	0	-197	0	0	0	0	0	0	-4	-2	-2	0
1997	-2	0	0	0	-91	0	0	0	0	-11	-2	15
1998	-13	0	0	-1214	0	619	0	0	0	0	0	0
1999	0	0	0	-6161	1832	208	0	0	0	1479	1549	0
2000	1	-139	-182	0	-1	-1	0	0	0	-45	-49	9
2001	-14	-3	-4	0	0	0	0	0	0	-12	-10	-18
2002	-9	-141	0	0	-411	0	0	0	-1	0	-9	-123
2003	203	-16	0	0	0	0	0	0	0	11	0	16
Average	**3**	**6**	**5**	**-121**	**18**	**10**	**1**	**0**	**3**	**17**	**13**	**5**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-15:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	270	275	370	0	670	393	208	369	423
1923	139	395	370	514	378	470	0	670	296	296	338	405
1924	119	174	259	247	271	301	0	214	56	124	168	150
1925	-64	-12	109	69	92	300	0	658	470	470	311	354
1926	141	165	185	107	195	300	-213	660	470	183	323	331
1927	-45	179	470	470	76	470	0	670	470	470	523	431
1928	235	333	577	266	253	470	0	670	100	320	287	361
1929	129	177	266	189	187	473	0	379	521	190	269	187
1930	-84	-18	81	-45	470	370	0	470	470	350	330	353
1931	139	128	138	108	48	334	-233	50	163	218	230	247
1932	109	144	145	470	-83	470	0	670	470	470	62	262
1933	117	153	135	38	8	354	-233	237	470	19	201	212
1934	-129	99	118	123	-81	470	184	194	470	468	253	273
1935	-81	-34	15	-44	129	470	0	470	204	470	270	473
1936	159	132	244	170	228	570	-62	654	470	470	441	420
1937	191	250	311	258	243	570	-56	653	470	243	308	387
1938	212	462	470	387	348	469	0	670	310	482	481	478
1939	474	405	470	472	182	472	0	275	300	263	365	405
1940	148	229	213	107	192	270	-167	470	286	470	511	412
1941	235	319	481	186	470	616	0	670	334	453	463	458
1942	376	393	436	409	349	472	0	670	318	440	451	478
1943	342	377	423	466	470	471	0	670	310	469	479	409
1944	246	351	395	264	288	470	0	670	470	112	307	341
1945	136	285	273	474	404	470	-184	479	280	228	294	387
1946	176	378	646	388	322	473	0	670	68	268	281	318
1947	106	163	400	365	277	467	0	670	470	218	366	388
1948	136	72	181	116	68	385	-184	470	470	470	350	370
1949	136	108	200	109	79	470	0	366	470	372	382	404
1950	157	159	190	115	470	470	-184	470	470	470	229	403
1951	157	257	598	468	470	473	0	670	297	409	420	415
1952	192	356	430	394	470	433	0	670	297	387	481	478
1953	475	470	437	239	296	470	0	670	305	378	386	385
1954	245	345	297	387	350	370	0	670	128	277	343	356
1955	115	456	388	470	290	470	0	470	470	250	370	393
1956	143	219	360	301	470	570	0	670	297	272	449	477
1957	345	315	391	360	307	388	0	670	298	298	317	333
1958	316	438	430	243	374	469	0	670	371	482	470	489
1959	430	395	470	403	318	392	0	670	97	221	338	469
1960	115	174	216	126	134	472	0	470	470	221	361	395
1961	72	169	171	100	87	470	-215	389	470	298	410	433
1962	-8	98	216	63	64	438	0	207	73	470	365	501
1963	214	470	470	646	684	472	0	670	495	317	188	421
1964	316	269	436	397	423	470	0	470	470	293	369	395
1965	140	278	72	470	470	376	0	670	297	158	354	382
1966	109	139	628	469	441	470	0	373	142	624	335	381
1967	127	336	278	462	250	570	0	670	295	367	481	478
1968	475	471	470	283	418	472	0	670	297	347	380	401
1969	147	230	421	212	470	535	0	670	310	482	481	478
1970	434	471	327	463	168	473	0	670	307	463	470	463
1971	237	439	470	391	337	472	0	670	78	247	269	363
1972	210	172	220	410	396	474	0	670	112	319	357	385
1973	127	379	470	243	218	471	0	670	241	422	433	410
1974	326	197	735	469	176	471	0	670	310	481	470	489
1975	424	450	468	399	307	469	0	670	312	344	364	478
1976	472	410	471	475	154	476	0	297	304	379	158	206
1977	-55	55	160	21	-53	312	-233	-98	-101	142	156	169
1978	90	130	127	85	71	470	0	470	470	470	470	373
1979	307	403	446	268	470	570	0	670	367	103	276	324
1980	129	347	311	636	383	472	0	670	297	481	481	409
1981	275	334	381	419	178	470	0	670	470	190	279	316
1982	127	280	470	470	423	467	0	670	320	482	481	476
1983	436	456	468	464	434	465	0	670	327	482	480	477
1984	474	466	465	471	430	401	0	670	308	403	410	391
1985	179	339	709	389	343	470	0	670	207	253	345	390
1986	135	211	278	285	270	570	-124	653	470	292	358	443
1987	239	337	374	349	265	470	0	294	470	180	295	347
1988	147	196	442	94	148	300	-233	384	470	215	248	89
1989	-73	-4	41	-7	-31	427	-215	277	19	296	406	534
1990	170	235	304	214	163	470	0	176	78	261	253	270
1991	107	138	147	125	108	470	0	145	78	174	187	206
1992	104	149	139	98	63	427	0	193	470	169	221	-2
1993	104	164	163	139	297	470	0	470	470	470	470	415
1994	197	270	273	353	214	487	0	214	136	241	85	146
1995	-7	177	197	205	470	470	-152	634	470	470	533	658
1996	459	420	464	401	319	472	0	670	315	463	474	458
1997	250	440	436	406	472	474	0	670	307	448	456	415
1998	242	370	433	357	155	570	0	670	297	455	481	478
1999	452	470	464	469	473	473	0	670	310	434	445	384
2000	300	412	344	342	293	536	0	670	296	354	211	414
2001	157	234	303	331	251	470	0	670	470	258	359	400
2002	155	67	297	239	470	470	-27	461	271	350	359	215
2003	-67	40	222	470	470	470	-167	637	470	-11	191	304
Average	**193**	**267**	**340**	**299**	**277**	**456**	**-33**	**539**	**324**	**334**	**352**	**376**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-15:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	469	280	370	0	670	393	208	369	423
1923	139	442	471	514	378	470	0	670	296	296	338	405
1924	117	173	257	245	331	299	0	211	53	120	165	146
1925	-67	-15	106	418	167	300	0	658	470	470	310	353
1926	141	164	184	335	180	300	-213	660	470	183	322	325
1927	-49	386	470	470	198	470	0	670	470	470	587	431
1928	236	385	577	471	283	470	0	670	102	322	289	361
1929	127	180	264	189	244	472	0	378	519	188	267	183
1930	-86	-19	363	65	470	370	0	470	470	350	327	341
1931	133	122	133	307	16	332	-47	177	198	218	230	247
1932	109	144	467	470	-5	470	0	670	470	470	62	263
1933	118	154	135	240	-21	355	-233	237	470	19	201	212
1934	-105	141	121	352	-90	470	184	193	470	468	252	272
1935	-82	-35	15	298	126	470	0	470	204	470	270	474
1936	160	133	245	368	247	570	-62	654	470	470	441	420
1937	191	250	311	442	271	570	-56	653	470	467	307	387
1938	212	479	470	462	463	469	0	670	310	482	481	478
1939	474	402	470	472	292	472	0	278	300	265	367	408
1940	151	232	215	342	180	270	-167	470	286	470	511	412
1941	237	320	483	404	470	616	0	670	508	453	463	458
1942	465	469	478	483	470	472	0	670	318	440	451	478
1943	474	469	468	466	470	471	0	670	310	469	479	409
1944	249	353	397	474	293	470	0	670	470	119	307	343
1945	138	436	481	475	470	470	-184	479	470	228	294	387
1946	178	401	646	470	315	594	0	670	63	263	275	312
1947	105	162	468	363	369	466	0	670	470	220	367	388
1948	136	72	181	324	63	385	-184	470	470	470	350	370
1949	137	108	200	109	79	470	0	366	470	372	380	401
1950	155	157	189	328	470	470	-184	470	470	470	220	394
1951	155	336	598	678	672	473	0	670	297	409	420	415
1952	206	363	481	470	470	541	0	670	297	387	481	478
1953	475	470	464	469	308	470	0	670	305	378	386	385
1954	245	449	301	472	470	370	0	670	128	354	343	366
1955	124	467	476	470	420	470	0	470	470	250	379	404
1956	150	224	473	321	470	570	0	670	297	272	449	477
1957	474	316	391	470	428	388	0	670	298	298	317	339
1958	479	438	430	465	386	469	0	670	371	482	470	489
1959	475	394	470	471	439	392	0	670	97	221	338	475
1960	120	178	218	128	229	475	0	470	470	247	389	426
1961	93	317	189	332	95	470	-215	389	470	295	410	433
1962	-9	95	214	71	277	441	0	207	74	470	366	508
1963	298	470	470	646	684	472	0	670	495	317	187	421
1964	380	478	470	397	473	470	0	470	470	293	370	395
1965	140	482	438	470	470	376	0	670	297	158	354	382
1966	112	344	733	469	471	470	0	373	142	624	334	387
1967	132	340	402	470	270	570	0	670	470	367	481	478
1968	475	471	470	466	470	472	0	670	297	347	380	407
1969	154	235	478	270	470	664	0	670	310	482	481	478
1970	473	471	466	463	290	473	0	670	307	463	470	463
1971	241	475	470	459	337	472	0	670	310	247	270	411
1972	266	172	477	475	498	474	0	670	296	353	385	412
1973	155	480	470	271	376	471	0	670	226	407	417	410
1974	271	279	735	469	280	471	0	670	310	481	470	489
1975	474	472	468	474	429	469	0	670	312	346	367	478
1976	472	472	471	475	252	476	0	297	305	381	159	208
1977	-54	56	161	22	-52	313	-120	118	98	142	156	169
1978	90	130	469	155	66	470	0	470	470	470	470	373
1979	308	404	447	475	470	570	0	670	399	103	276	334
1980	129	473	311	636	466	472	0	670	297	481	481	409
1981	275	335	380	472	287	470	0	670	470	190	279	315
1982	126	481	470	470	423	467	0	670	320	482	481	476
1983	472	465	468	464	466	465	0	670	327	482	480	477
1984	474	466	465	471	471	429	0	670	308	403	410	391
1985	178	378	724	470	459	470	0	670	207	253	345	391
1986	136	212	279	480	270	570	-124	653	470	464	358	443
1987	239	337	375	477	347	470	0	295	470	183	298	352
1988	150	198	487	225	149	300	-233	470	470	214	246	88
1989	-74	-5	38	-8	81	470	0	277	19	296	418	534
1990	169	234	306	415	133	470	0	176	78	261	253	270
1991	107	138	147	125	224	470	0	145	78	174	187	206
1992	104	149	139	98	174	470	0	193	470	172	229	1
1993	92	163	348	346	294	470	0	470	470	470	470	415
1994	197	271	273	365	299	488	0	214	136	241	85	146
1995	73	177	197	452	470	470	-152	634	470	470	533	658
1996	475	420	464	465	435	472	0	670	315	462	473	458
1997	249	468	464	462	472	474	0	670	307	448	456	415
1998	243	370	482	480	276	570	0	670	297	455	481	478
1999	475	470	464	469	328	473	0	670	310	417	427	384
2000	285	469	328	477	394	580	0	670	296	356	210	416
2001	159	236	306	477	288	470	0	670	470	257	359	398
2002	153	65	378	451	470	470	-27	470	470	350	354	208
2003	-70	36	366	470	470	470	-167	637	470	378	193	324
Average	**206**	**297**	**380**	**394**	**324**	**463**	**-27**	**545**	**341**	**345**	**353**	**378**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-15:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	-1	0	141	0	197	-173	-131	11	8
1923	-1	0	0	-5	0	0	0	221	-174	-12	11	47
1924	1	1	1	0	0	0	0	0	-302	-164	-131	-162
1925	-167	-141	-109	-133	-112	-147	-215	-273	370	370	173	-6
1926	-5	-25	-69	-130	0	-147	-213	-271	-506	243	-2	-9
1927	-166	-81	370	370	305	0	0	570	370	370	281	1
1928	1	45	-38	0	1	0	0	-204	-496	549	179	8
1929	8	6	5	-47	-95	3	0	0	-405	213	3	-92
1930	-194	-162	-102	204	370	291	0	0	370	54	1	8
1931	6	-49	-107	-149	-152	-137	-233	-127	-326	-261	-252	-253
1932	-226	-187	-158	370	158	0	0	570	370	370	250	-10
1933	-5	-4	-2	-126	-148	-127	-233	0	370	250	-32	-33
1934	-235	-198	-132	-171	182	0	-48	0	-526	368	0	2
1935	-203	-198	-132	-172	0	0	-184	-425	-146	370	231	-6
1936	-62	-142	-86	-121	0	470	-62	554	370	370	341	2
1937	11	8	6	-32	2	470	-56	553	-124	-170	-112	8
1938	-3	-2	11	-8	-7	-1	0	180	-160	12	11	8
1939	4	2	0	-3	-5	-4	0	0	-306	213	59	-18
1940	-13	-10	-83	-137	0	370	-167	370	-146	93	-133	-2
1941	-23	-16	-11	0	127	-65	0	154	-136	12	11	8
1942	4	1	-5	-4	0	2	0	169	-152	12	11	8
1943	4	-1	-2	-4	0	1	0	180	-160	12	11	8
1944	-25	-17	-10	-9	-14	0	0	570	-37	-170	-4	-25
1945	-18	-16	-15	-17	0	370	-184	183	-173	-170	-112	-1
1946	-36	0	43	0	-137	128	0	214	-173	-8	11	-36
1947	-29	-24	-15	-63	-112	-20	0	570	-506	202	-6	-42
1948	-26	-164	-112	-157	-167	-98	-184	370	370	370	145	-19
1949	-17	-96	-79	-126	-136	0	0	0	370	272	-19	-18
1950	-11	-75	-105	-148	370	0	-184	370	-39	-170	-128	-9
1951	-24	70	-75	-2	0	3	0	196	-173	9	11	-3
1952	-28	-22	-13	0	296	-101	0	180	-173	-83	11	8
1953	5	0	-6	-1	3	0	0	186	-165	12	11	0
1954	13	-21	-17	-9	0	95	0	-204	-146	333	11	-34
1955	-23	-19	-17	347	-197	0	0	0	-506	319	-35	-36
1956	-24	-17	-13	0	370	116	0	177	-173	-157	11	7
1957	4	2	1	-10	0	9	0	189	-172	12	11	-33
1958	-32	118	-40	-5	-6	-1	0	117	-99	12	0	19
1959	5	2	0	-9	0	-127	0	428	-173	-87	11	-49
1960	-33	-24	-78	-124	-111	-22	0	0	-506	134	-4	-32
1961	-97	-182	-118	-156	-149	0	-215	0	-506	135	-3	-82
1962	-244	-199	-128	-45	0	0	0	-75	-146	370	186	1
1963	-196	370	370	546	584	2	0	570	357	12	11	1
1964	2	2	76	-73	3	0	0	0	86	-42	8	9
1965	7	6	4	370	-95	-94	0	-206	221	-171	5	0
1966	-21	33	-3	-1	1	0	0	125	-146	59	11	-18
1967	-11	-8	-77	0	168	111	0	161	-175	-103	11	8
1968	5	1	0	-4	0	2	0	215	-173	-8	9	-25
1969	-19	-14	-12	185	-116	-12	0	181	-160	12	11	8
1970	3	1	-4	-7	1	3	0	185	-163	12	11	-33
1971	-25	-15	85	-11	-130	122	0	180	-160	12	11	8
1972	5	-19	-11	-12	44	4	0	214	-174	-8	11	-33
1973	-18	-22	294	-227	-3	1	0	198	-173	8	11	-3
1974	-34	46	-3	-1	2	1	0	180	-160	11	0	19
1975	4	2	-2	-19	18	-1	0	179	-158	12	10	8
1976	2	2	1	-13	-12	-24	0	-284	-57	-46	-278	-255
1977	-236	-197	-144	-176	-206	-173	-233	-260	-202	0	0	0
1978	0	0	-23	-2	0	0	0	370	370	370	370	53
1979	0	0	0	-1	370	470	0	570	210	-171	-17	-1
1980	-5	-3	71	-60	-4	2	0	194	-173	11	11	8
1981	-2	10	0	-1	-2	0	0	244	-173	-38	1	5
1982	4	4	302	-264	-47	-3	0	169	-150	12	11	6
1983	2	-5	-2	-6	-4	-5	0	162	-143	12	10	7
1984	4	-4	-5	1	1	3	0	184	-162	12	11	0
1985	-7	14	-1	0	1	0	0	248	-174	-39	-1	-2
1986	-1	-1	0	-5	54	429	-124	164	-173	-170	-112	7
1987	5	2	0	-2	-3	0	0	0	-506	207	-1	-6
1988	-3	-2	-2	-118	-167	-181	-233	0	-526	139	-62	-237
1989	-224	-189	-127	-172	-180	-62	-178	0	370	195	0	-81
1990	-223	-182	-69	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	11	0	0
1992	0	0	-11	0	0	0	0	0	50	29	-77	0
1993	0	0	0	0	0	0	0	370	370	370	370	1
1994	14	9	-45	-107	-95	13	0	0	-326	-55	-228	-191
1995	-205	-178	-59	0	370	370	-152	534	370	370	433	558
1996	86	2	-6	-5	-4	2	0	173	-155	12	11	8
1997	4	-2	-6	-8	2	4	0	184	-163	12	10	3
1998	25	17	11	9	90	-101	0	164	-173	-15	11	8
1999	5	0	-6	-1	3	3	0	179	-160	12	11	17
2000	-4	1	1	4	0	-6	0	196	-174	10	10	14
2001	18	9	10	5	0	0	0	570	-506	222	59	13
2002	10	-140	-96	0	-373	0	-27	0	0	250	7	-160
2003	-205	-165	-103	313	370	0	-167	537	-28	-171	-111	-27
Average	**-38**	**-30**	**-13**	**-8**	**16**	**29**	**-40**	**155**	**-104**	**71**	**19**	**-14**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-15:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, SEVERE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	14	4	3
1923	1	1	1	-5	0	0	0	0	0	15	4	0
1924	4	3	3	1	1	2	0	3	-164	-161	-128	-159
1925	-165	-140	-58	0	0	0	0	0	0	0	0	2
1926	1	-3	0	0	0	0	0	0	0	0	0	2
1927	-2	0	0	0	0	0	0	0	0	0	117	2
1928	3	0	160	0	189	101	0	0	0	179	184	8
1929	8	6	5	-47	-94	4	0	0	0	0	3	-89
1930	-193	-161	-101	0	0	0	0	0	0	0	3	26
1931	16	-41	-102	-141	-3	0	0	0	0	0	0	0
1932	0	0	0	0	0	0	0	0	0	0	0	20
1933	12	11	7	-49	0	0	0	0	0	0	16	-2
1934	-10	0	-4	0	0	0	0	0	0	0	1	7
1935	-7	0	0	0	0	0	0	0	-146	0	0	4
1936	131	0	4	0	0	0	0	0	0	0	63	1
1937	2	1	1	-34	0	0	-35	0	0	0	62	2
1938	0	0	0	196	234	116	0	0	14	182	184	21
1939	1	1	0	3	4	3	0	0	0	0	2	18
1940	15	12	-67	-125	0	-100	-167	-200	0	0	41	1
1941	10	7	6	0	0	46	0	0	38	182	184	128
1942	1	0	-2	-2	0	1	0	0	8	4	4	3
1943	2	0	-1	-2	0	0	0	0	-110	120	4	3
1944	11	7	5	3	4	0	0	0	0	0	2	10
1945	10	8	7	3	0	-100	-184	-191	0	0	62	0
1946	4	0	176	197	1	1	0	0	0	14	4	3
1947	3	3	2	-49	-98	0	0	0	0	0	2	11
1948	9	-136	-95	-140	-134	0	0	-112	0	0	0	7
1949	7	-79	-66	-102	0	0	0	0	0	0	14	16
1950	12	-43	0	0	0	0	0	0	0	0	0	1
1951	5	0	128	208	202	98	0	0	0	180	184	3
1952	22	16	11	0	0	0	0	0	0	-34	4	3
1953	2	0	-2	0	1	0	0	0	10	5	4	0
1954	5	4	5	2	0	0	0	0	-146	133	14	16
1955	15	12	11	0	0	0	0	0	0	-33	10	19
1956	16	12	10	0	0	0	0	0	0	-47	4	3
1957	1	1	0	0	0	-1	0	0	2	11	4	2
1958	3	0	-1	-2	-2	0	0	0	8	4	0	7
1959	2	1	0	-1	0	0	0	0	0	15	4	-1
1960	0	0	-42	-112	-102	2	0	0	0	0	2	14
1961	-66	-157	-105	-140	-128	0	-143	0	0	0	3	-5
1962	0	0	0	0	0	0	0	-75	-146	0	0	166
1963	8	0	0	176	214	2	0	0	25	182	184	2
1964	16	11	0	136	110	0	0	0	0	15	17	19
1965	15	12	8	0	0	0	0	0	0	-42	-1	0
1966	-4	8	-1	0	0	0	0	0	-146	156	4	4
1967	3	3	-71	0	0	0	0	0	0	67	9	3
1968	2	0	0	-1	0	1	0	0	0	14	3	6
1969	6	5	4	0	-7	-14	0	0	10	4	4	3
1970	1	0	-1	-3	0	1	0	0	10	4	4	1
1971	1	0	0	-1	1	1	0	0	10	4	4	3
1972	2	1	1	0	-2	2	0	0	0	14	4	3
1973	2	2	0	-8	-1	0	0	0	0	14	4	-1
1974	-5	0	7	-1	1	0	0	0	9	4	0	7
1975	1	1	-1	-2	1	0	0	0	10	4	4	3
1976	1	1	0	-1	-1	-2	0	0	-4	-2	-236	-212
1977	-215	-181	-107	0	0	0	0	0	0	0	0	0
1978	0	0	0	0	0	0	0	0	0	0	0	0
1979	1	0	0	0	0	0	0	0	0	0	157	0
1980	2	1	0	166	244	108	0	0	0	182	142	3
1981	2	0	1	2	-4	0	0	0	0	14	2	13
1982	10	10	0	0	-34	-1	0	0	9	4	4	2
1983	1	-2	-1	-2	-2	-2	0	0	9	4	4	3
1984	2	-2	-2	0	0	1	0	0	10	4	4	0
1985	-3	6	0	0	0	0	0	0	0	15	0	1
1986	1	1	1	-2	0	0	-124	-17	0	0	62	48
1987	45	7	0	-2	-2	0	0	0	0	0	0	0
1988	0	0	0	-116	0	0	-233	0	0	0	-51	-228
1989	-219	-88	-12	0	0	0	0	0	-156	0	-2	154
1990	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	-5	5	0
1993	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	1	0	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0	0	0	63	188
1996	193	197	209	136	-1	1	0	0	9	4	4	3
1997	1	-1	-2	-3	1	1	0	0	10	4	4	1
1998	9	6	4	3	0	0	0	0	0	-13	4	3
1999	2	0	-2	0	1	1	0	0	9	4	4	0
2000	5	0	0	1	0	-2	0	0	0	14	4	4
2001	5	3	3	1	0	0	0	0	0	0	2	11
2002	9	-142	-97	0	0	0	-27	0	0	0	11	-156
2003	-203	-164	-102	0	0	0	-74	-24	0	0	67	16
Average	**-5**	**-12**	**-3**	**2**	**7**	**3**	**-12**	**-8**	**-10**	**18**	**19**	**2**

NOTE: Values with a grey background indicate months of Delta excess conditions.

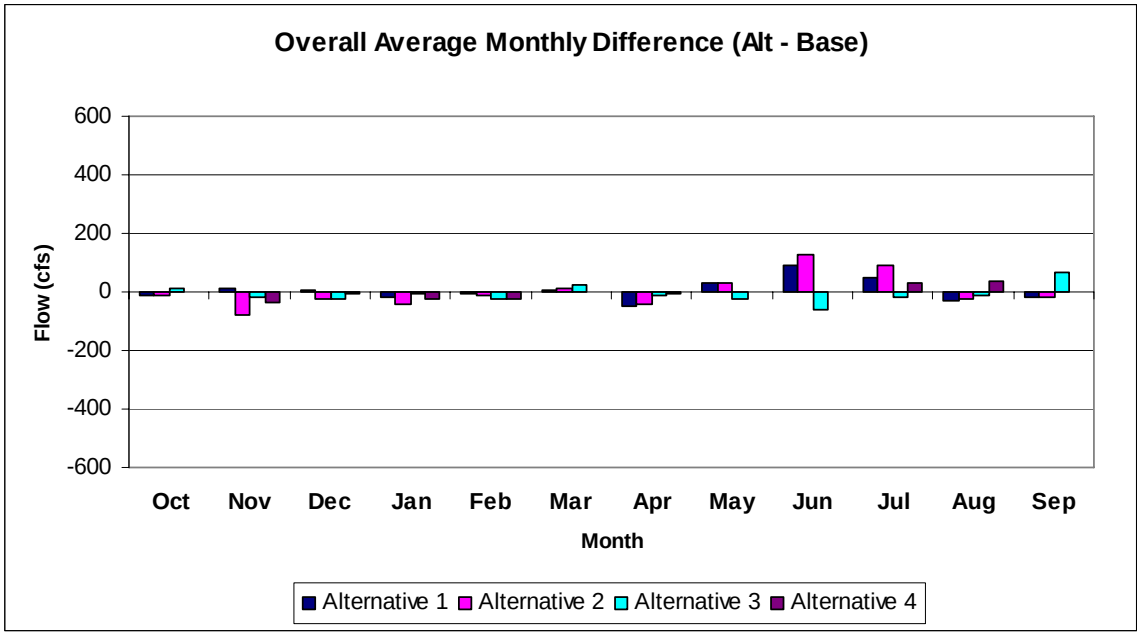


Figure C4-43: Changes in Average Monthly Sacramento River at Hood flow, 2030 LOD, Severe Fishery Restrictions

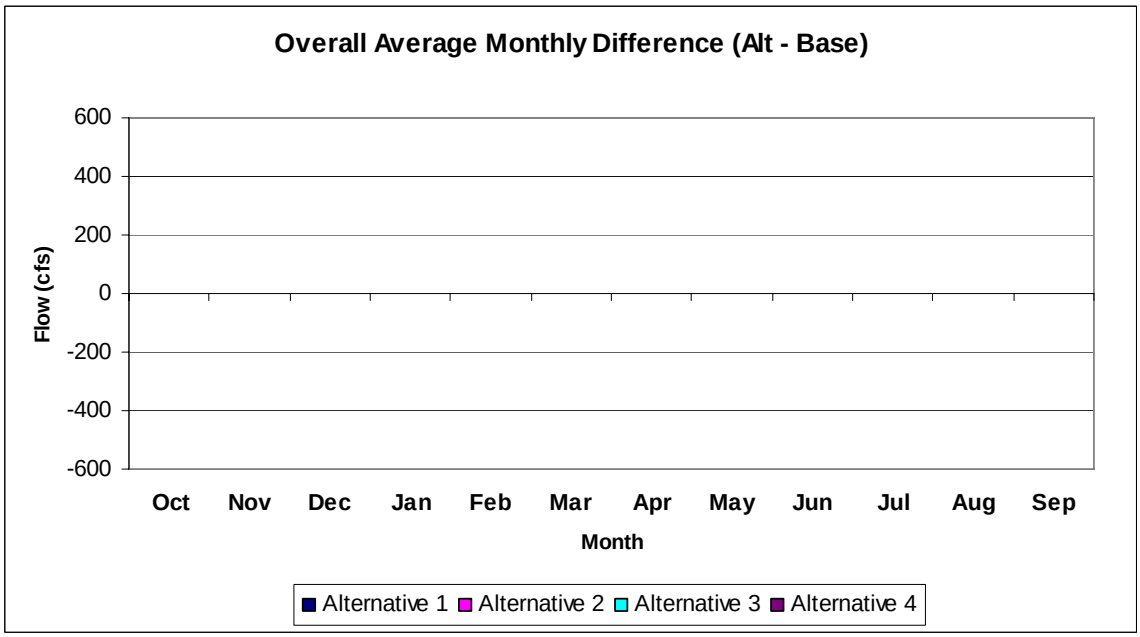


Figure C4-44: Changes in Average Monthly San Joaquin River at Vernalis Flow, 2030 LOD, Severe Fishery Restrictions

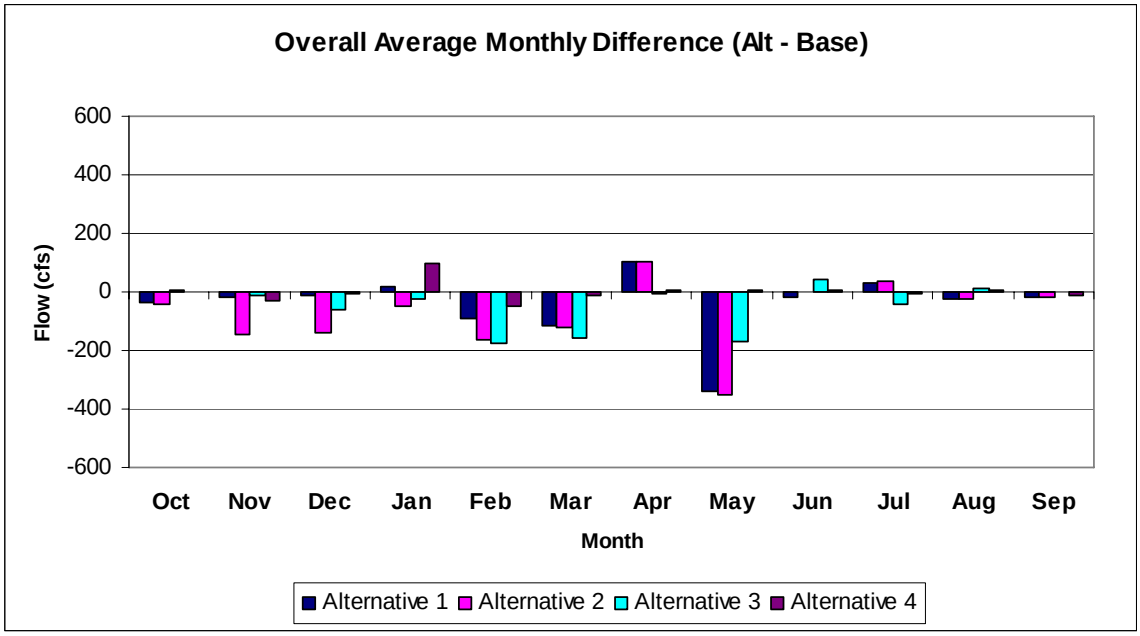


Figure C4-45: Changes in Average Monthly Delta Outflow, 2030 LOD, Severe Fishery Restrictions

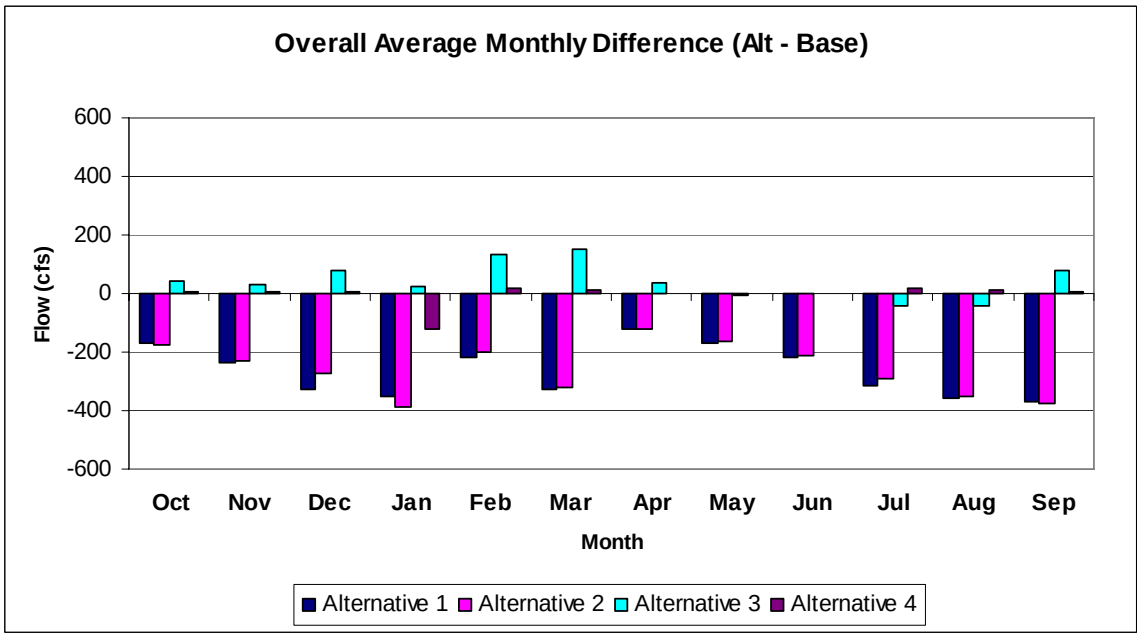


Figure C4-46: Changes in Average Monthly Banks + Jones Diversions, 2030 LOD, Severe Fishery Restrictions

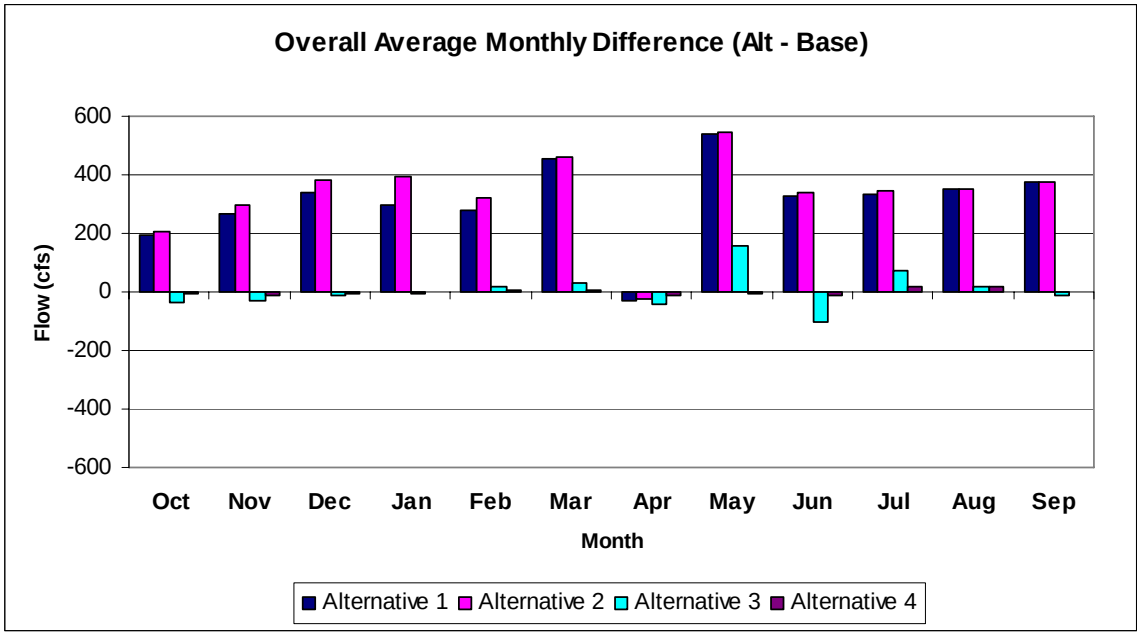


Figure C4-47: Changes in Average Monthly CCWD + LV Diversions, 2030 LOD, Severe Fishery Restrictions

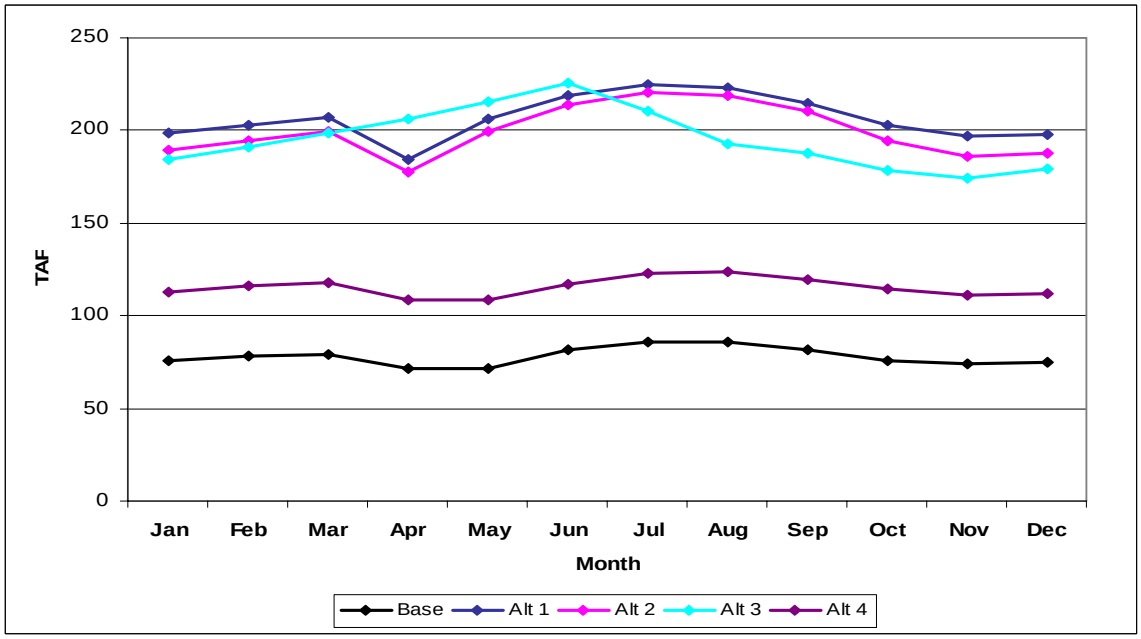


Figure C4-48: Monthly Average Los Vaqueros storage, 2030 LOD, Severe Fishery Restrictions

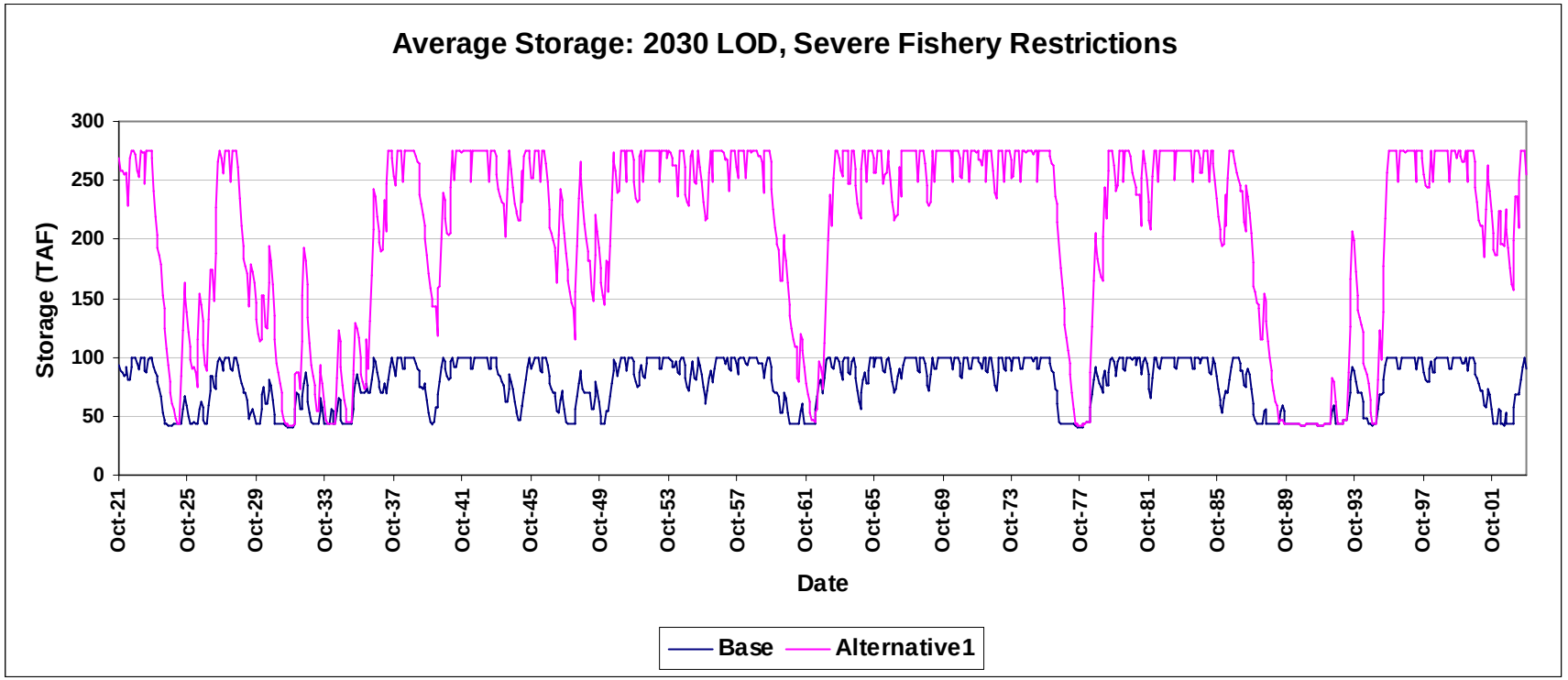


Figure C4-49: Timeseries of Alternative 1 and Base Los Vaqueros storage 2030 LOD, Severe Fishery Restrictions

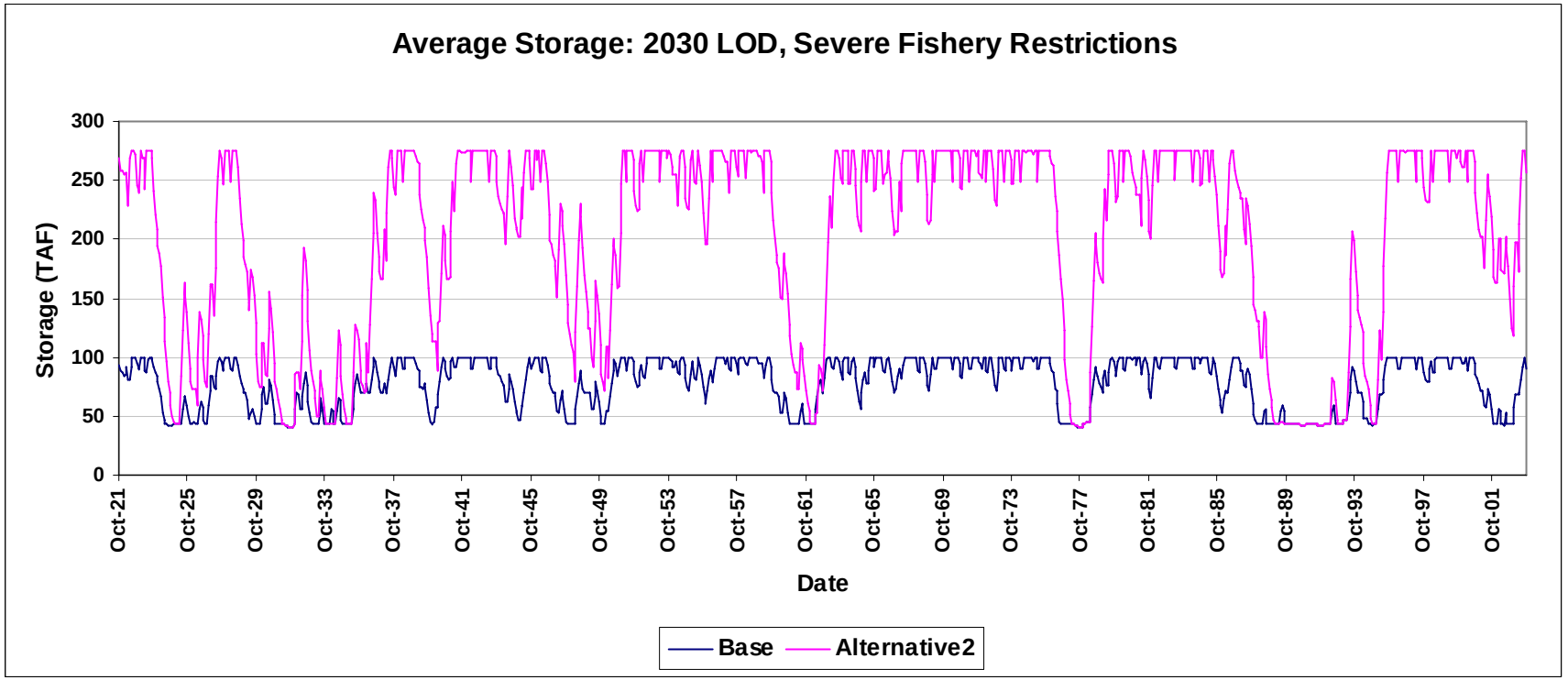


Figure C4-50: Timeseries of Alternative 2 and Base Los Vaqueros storage 2030 LOD, Severe Fishery Restrictions

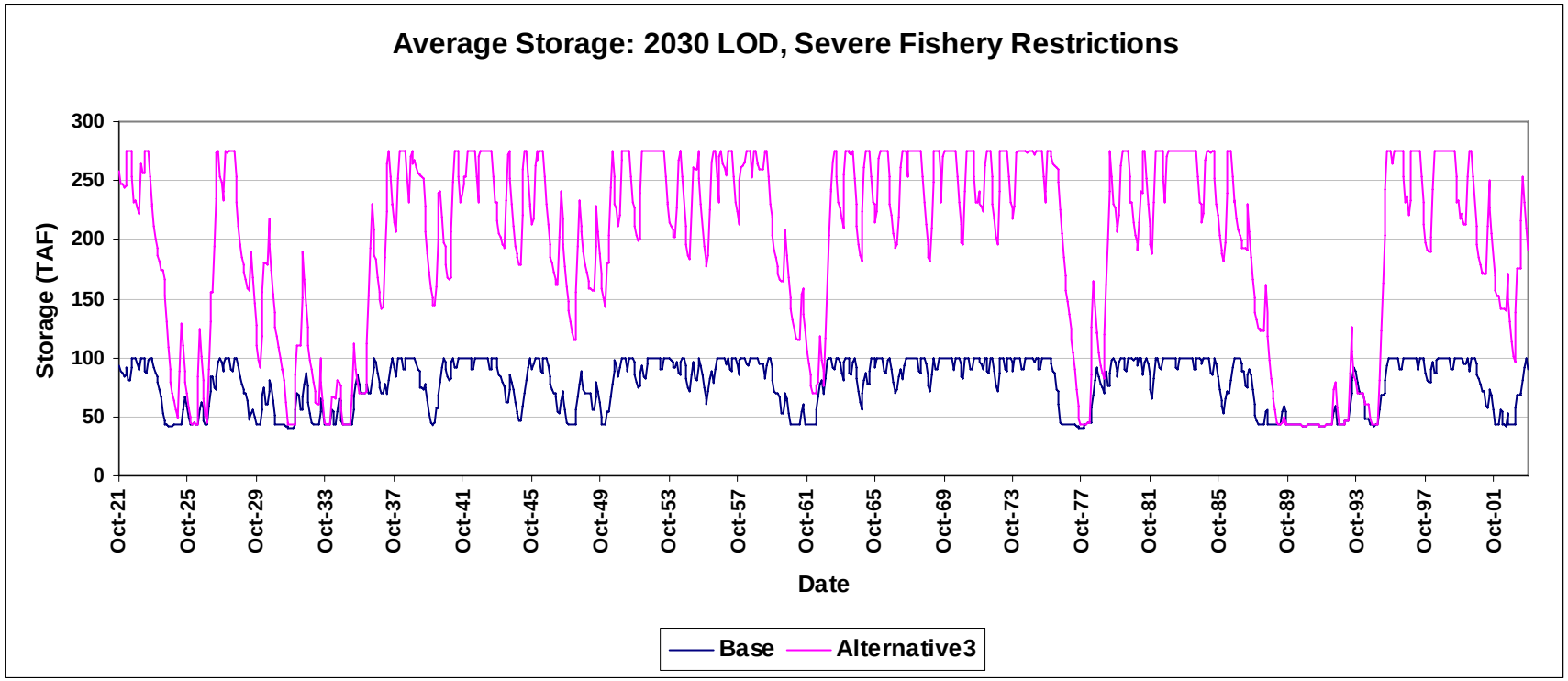


Figure C4-51: Timeseries of Alternative 3 and Base Los Vaqueros storage 2030 LOD, Severe Fishery Restrictions

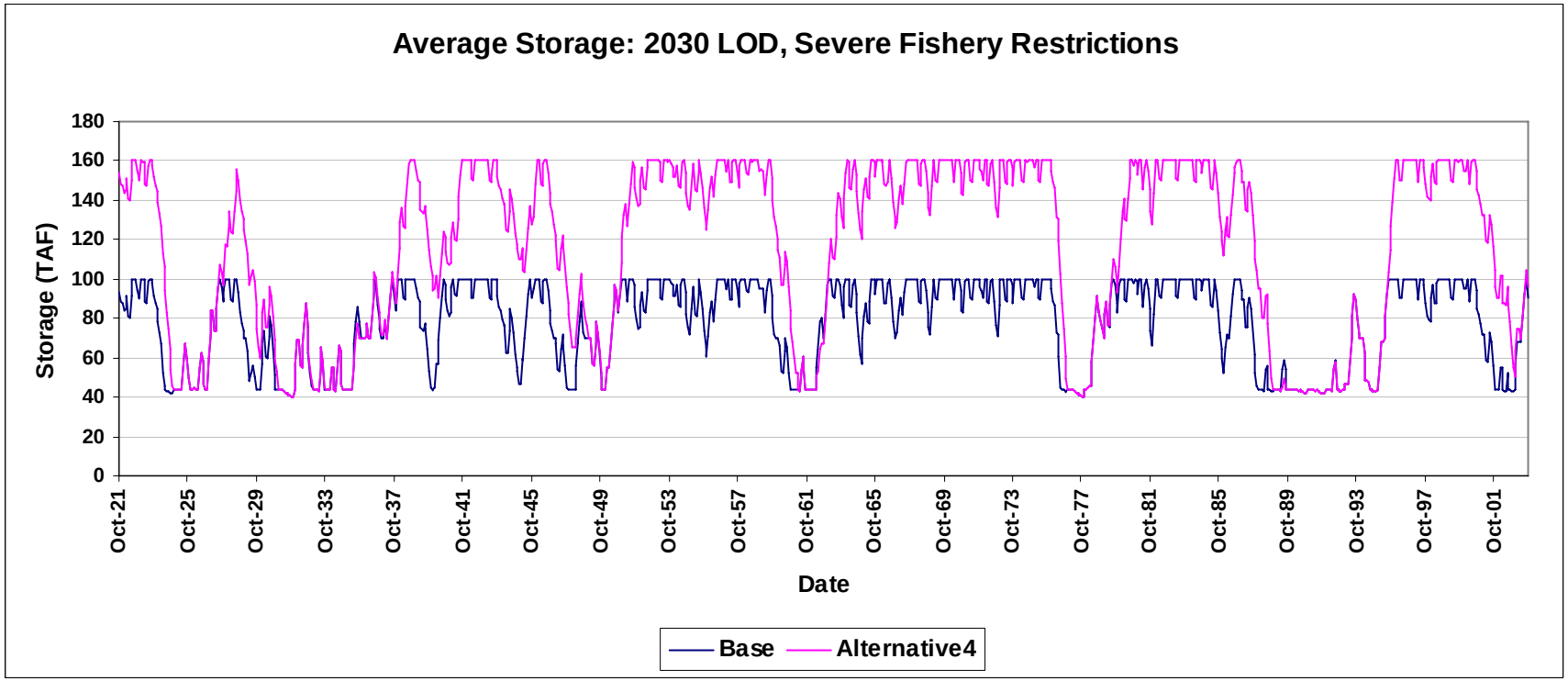


Figure C4-52: Timeseries of Alternative 4 and Base Los Vaqueros storage 2030 LOD, Severe Fishery Restrictions

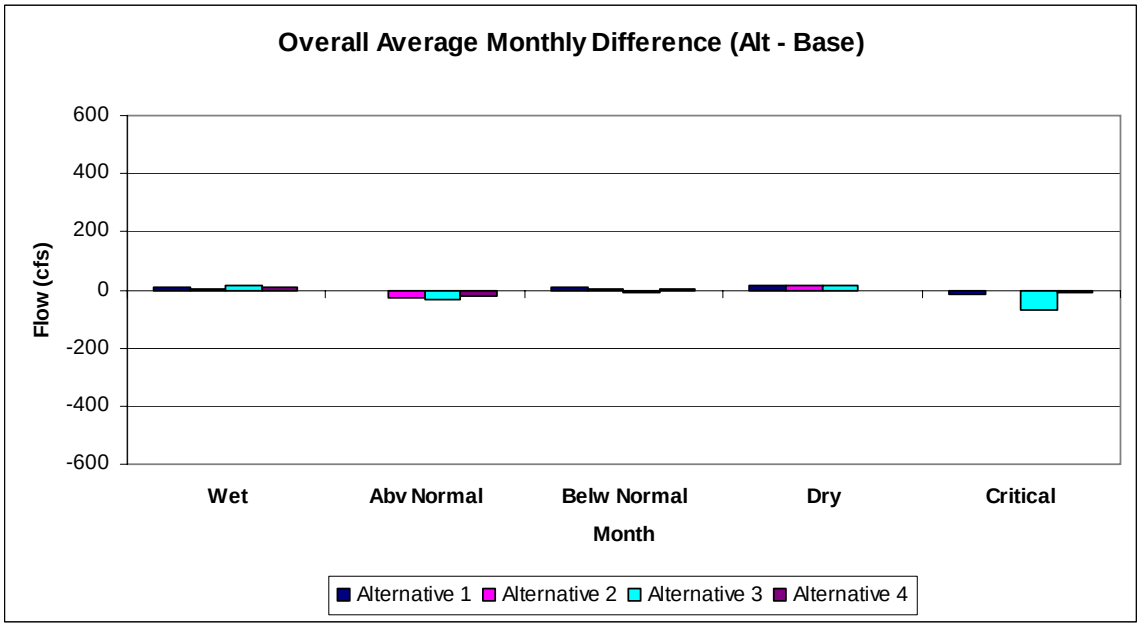


Figure C4-53: Changes in Sacramento River at Hood flow by water year type, 2030 LOD, Severe Fishery Restrictions

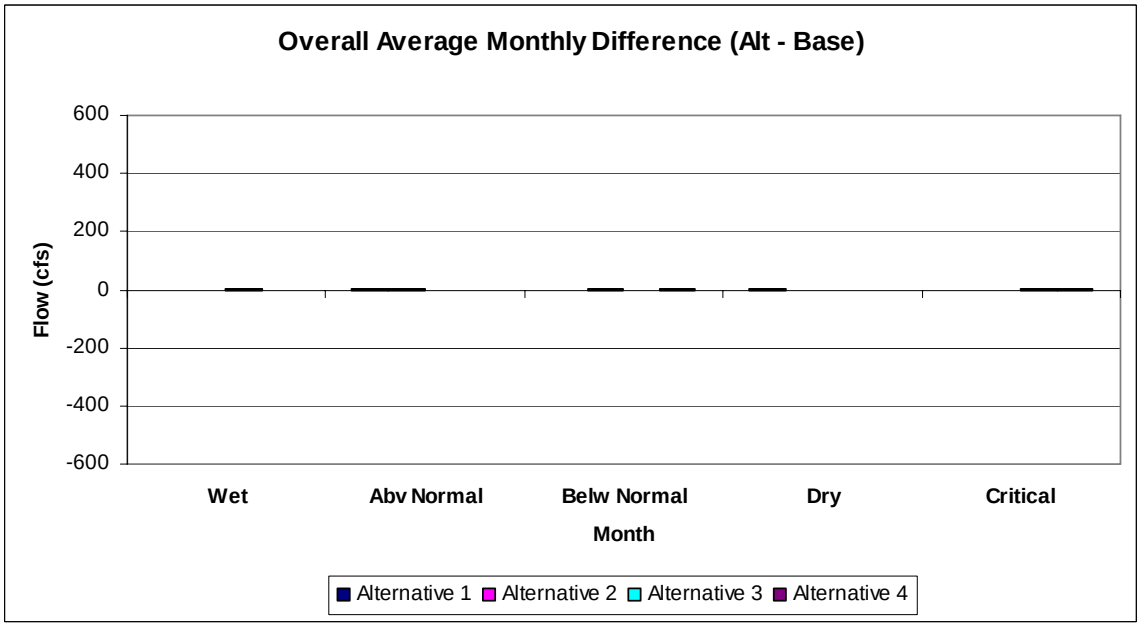


Figure C4-54: Changes in San Joaquin River at Vernalis flow by water year type, 2030 LOD, Severe Fishery Restrictions

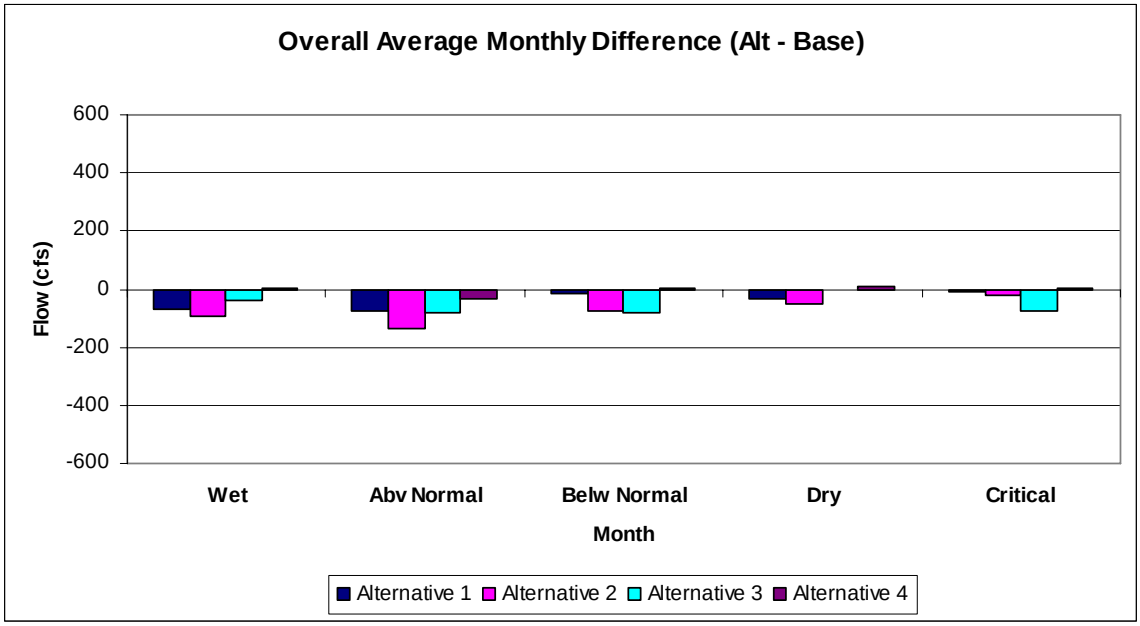


Figure C4-55: Changes in Delta Outflow by Year Type, 2030 LOD, Severe Fishery Restrictions

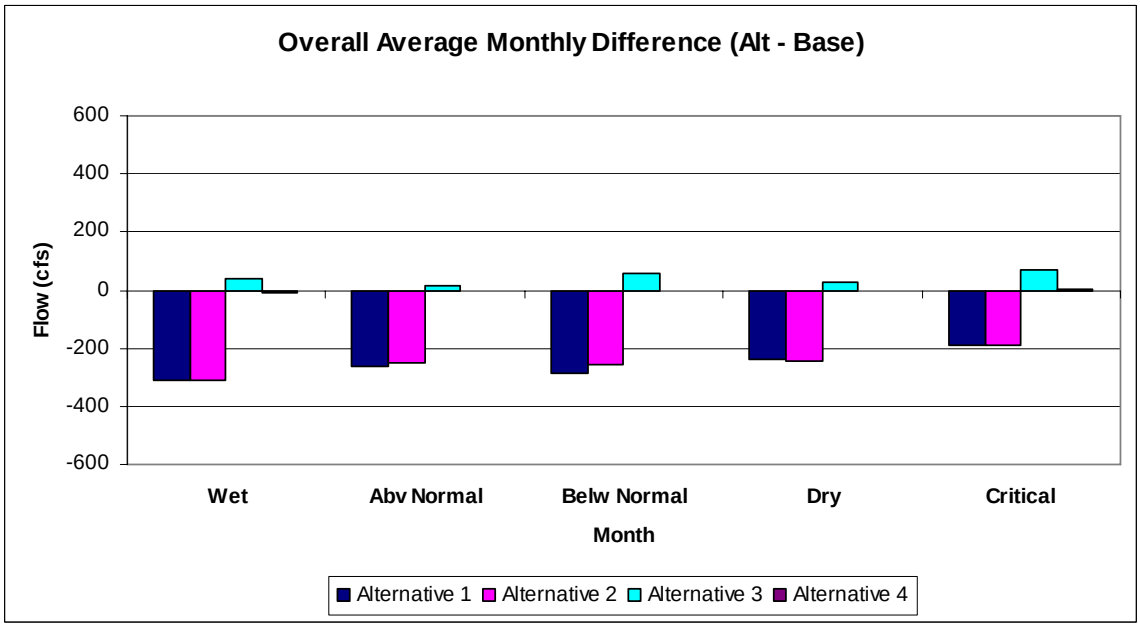


Figure C4-56: Changes in Banks + Jones Diversions by Year Type, 2030 LOD, Severe Fishery Restrictions

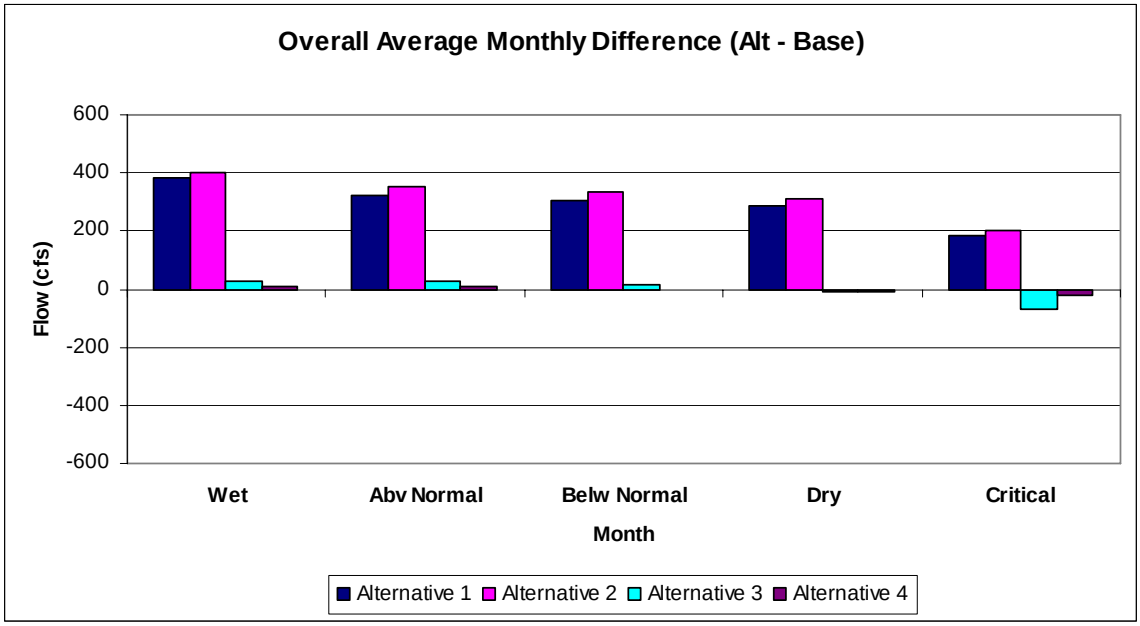


Figure C4-57: Changes in Project diversions by water year type, 2030 LOD, Severe Fishery Restrictions

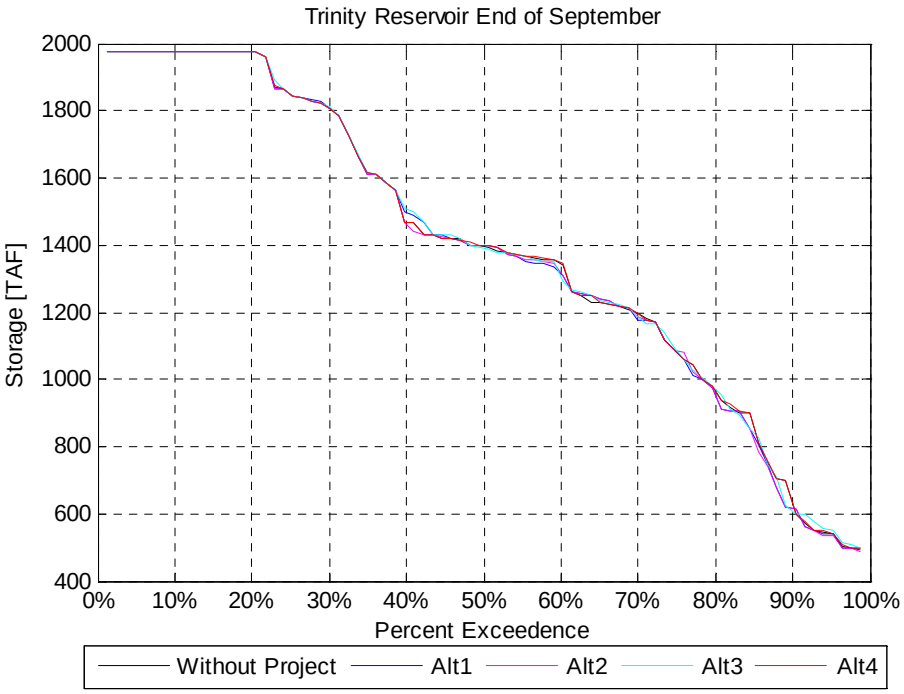


Figure C4-58: Trinity Reservoir end of September storage, 2030 LOD, Severe Fishery Restrictions

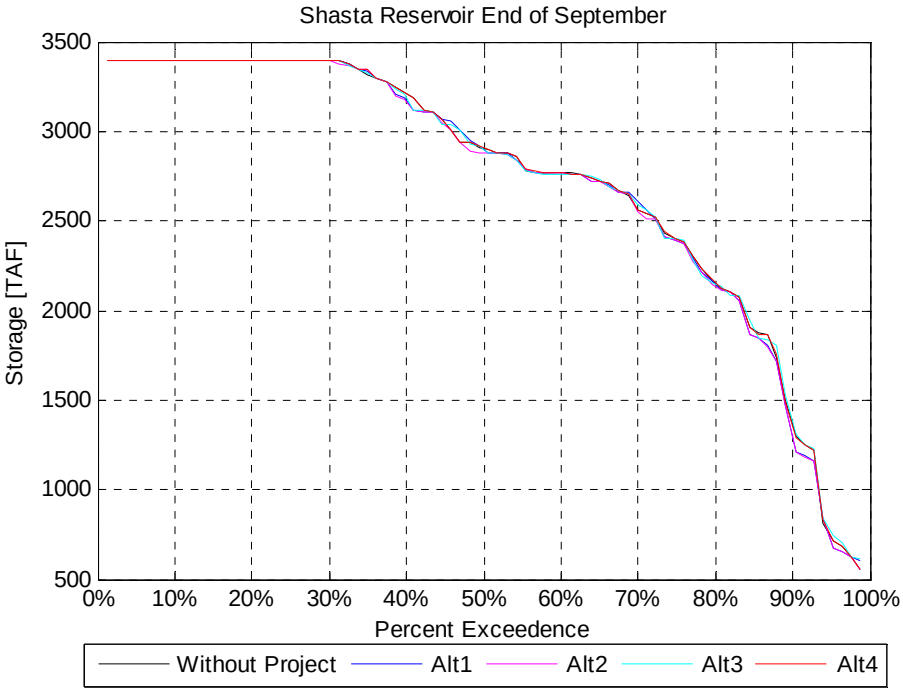


Figure C4-59: Shasta Reservoir end of September storage, 2030 LOD, Severe Fishery Restrictions

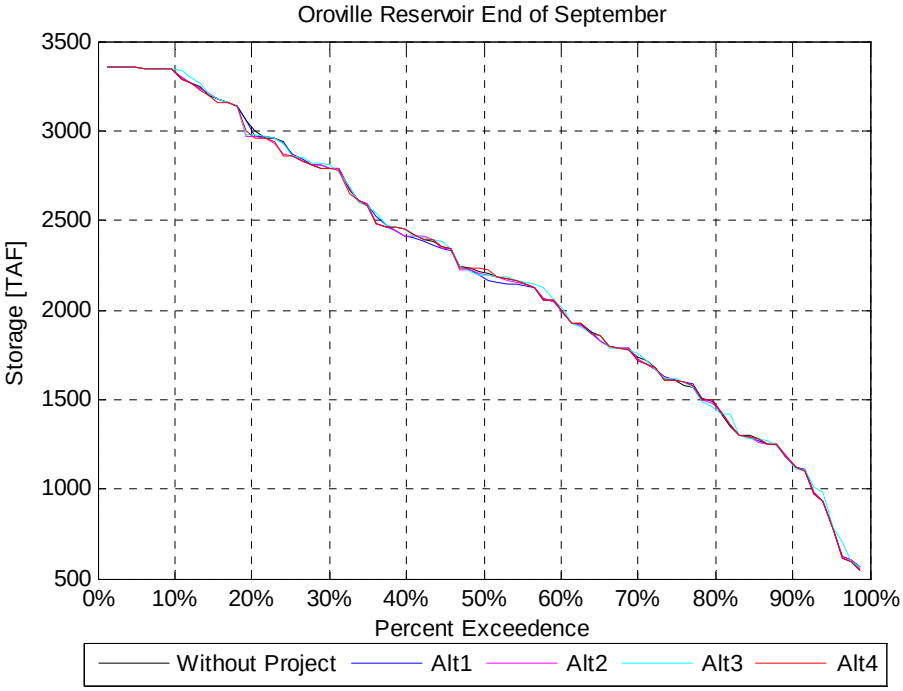


Figure C4-60: Oroville Reservoir end of September storage, 2030 LOD, Severe Fishery Restrictions

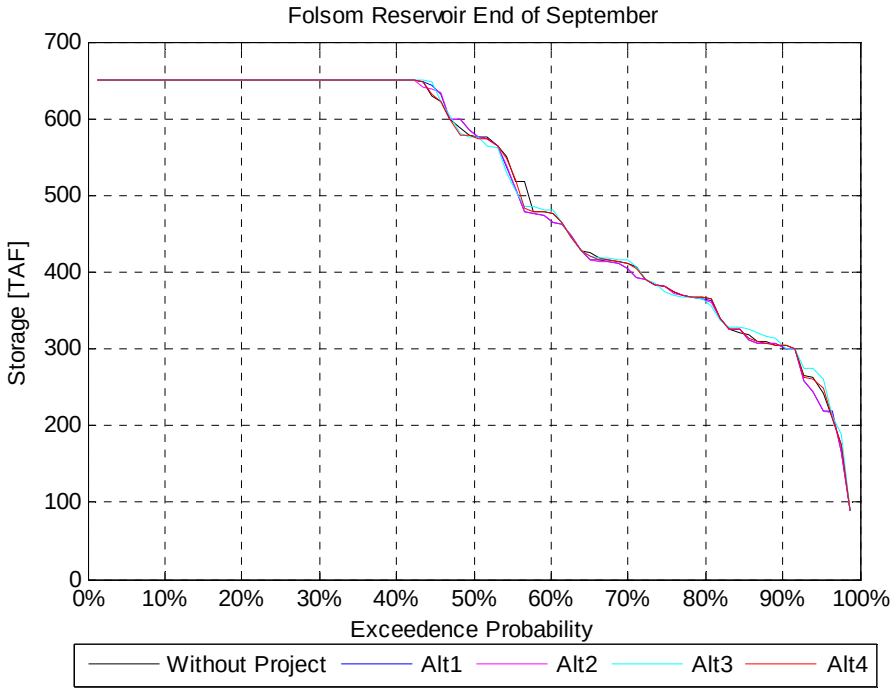


Figure C4-61: Folsom Reservoir end of September storage, 2030 LOD, Severe Fishery Restrictions

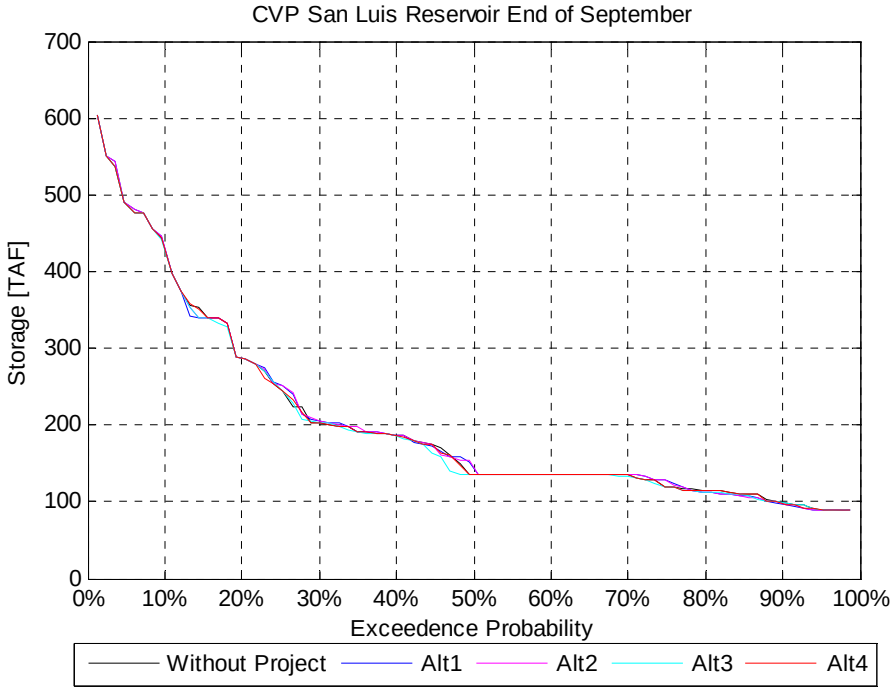


Figure C4-62: CVP San Luis Reservoir end of September storage, 2030 LOD, Severe Fishery Restrictions

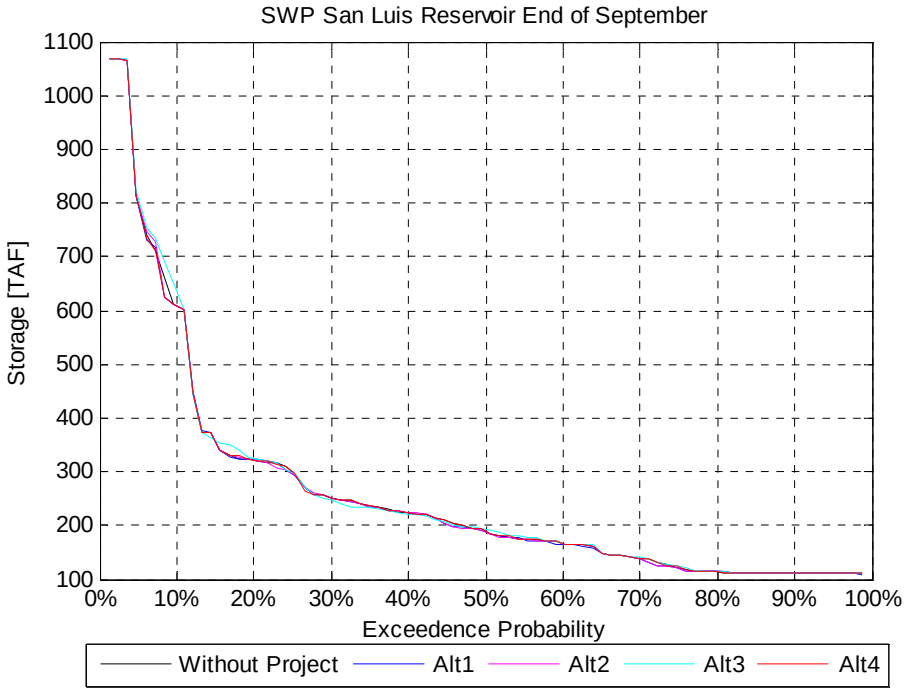


Figure C4-63: SWP San Luis Reservoir end of September storage, 2030 LOD, Severe Fishery Restrictions

2030 Level of Development, Moderate Fishery Restrictions

Model results for each project alternative are presented in **Table C4-16 (A-D)** as average values for full hydrologic study period (1921 to 2003) and a six-year dry period (1987 to 1992). These results include upstream and Delta flows and diversions (e.g. flow in Sacramento River and major tributaries, San Joaquin River flow, exports at Banks and Jones Pumping Plants, Net Delta Outflow, X2 position and QWEST), CVP and SWP south of Delta deliveries, CVP and SWP reservoir carry-over storages (at Folsom, Oroville, San Luis, Shasta and Trinity Reservoirs), and parameters specific to project alternative operations (CCWD and Los Vaqueros Reservoir (LV) diversions; additional south of Delta Environmental Water Supply deliveries; and Delta Supply Restoration deliveries to South Bay water agencies).

Table C4-17 and **Table C4-18** present the change in Delta channel flow and indices, upstream reservoir storages and local operation parameters for each project alternative as compared to the Future Without Project condition. Results are summarized by year type and monthly averages, respectively.

Table C4-19 (A-D) presents the changes from the Future Without Project condition in monthly Banks and Jones export diversions for each project alternative, and **Table C4-20 (A-D)** presents the changes from the Future Without Project condition in monthly CCWD and Los Vaqueros Reservoir (LV) diversions for each project alternative. These tables also indicate whether the Delta is in excess or balanced conditions.

Monthly and year type average changes in various Delta parameters (Sacramento River flow at Hood, San Joaquin River flow at Vernalis, Delta Outflow, combined Banks and Jones diversions, and combined CCWD and LV diversions) are presented in **Figure C4-64** through **Figure C4-68** and **Figure C4-74** through **Figure C4-78**, respectively. **Figure C4-69** shows the monthly average Los Vaqueros storage and **Figure C4-70** through **Figure C4-73** show time-series of storage for each alternative and the Future Without Project condition.

Figure C4-79 through **Figure C4-84** are exceedence plots of the end of September storage in upstream reservoirs (Trinity, Shasta, Oroville, and Folsom) and San Luis Reservoir (CVP and SWP).

TABLE C4-16:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2030 LOD, MODERATE FISHERY RESTRICTIONS

(A) ALTERNATIVE 1 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 1		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	170	392	322	229	152	141%	90%
Banks Pumping Plant	2806	1654	2598	1527	-208	-127	-7%	-8%
Jones Pumping Plant	2295	1711	2296	1705	1	-6	0%	0%
Total	5264	3535	5286	3554	22	20	0%	1%
Delta (cfs)								
Sacramento River at Hood	22,370	12,935	22,372	12,951	2	16	0%	0%
San Joaquin River at Vernalis	4,243	1,540	4,243	1,540	0	0	0%	0%
Delta Outflow	21,838	8,420	21,811	8,410	-28	-10	0%	0%
QWEST	2,732	-37	2,703	-60	-29	-23	-1%	NA
X2 Position (km)	75.18	81.71	75.20	81.72	0.02	0.01	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,569	6,329	8,570	6,334	1	4	0%	0%
American River below Nimbus Dam	3,289	1,512	3,290	1,524	0	13	0%	1%
Feather River below Thermalito	4,388	2,327	4,387	2,326	-1	-1	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,366	750	1,364	741	-3	-8	0%	-1%
Shasta	2,674	1,508	2,667	1,469	-7	-39	0%	-3%
Oroville	2,088	1,182	2,092	1,188	4	7	0%	1%
Folsom	508	319	506	312	-2	-8	0%	-2%
CVP San Luis (August)	181	97	182	101	0	4	0%	4%
SWP San Luis (August)	209	116	206	118	-2	2	-1%	1%
Deliveries (TAF/yr)								
CVP SOD Ag	1,014	415	1,012	411	-1	-3	0%	-1%
CVP SOD M&I	120	99	120	98	0	0	0%	0%
SWP Table A + Article 56	2,692	1,612	2,689	1,624	-3	11	0%	1%
SWP Article 21	57	0	57	0	0	0	0%	NA
Delta Supply Restoration + Dry Year	0	0	22	28	22	28	NA	NA

(B) ALTERNATIVE 2 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 2		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	170	412	345	249	176	152%	103%
Banks Pumping Plant	2806	1654	2604	1528	-202	-126	-7%	-8%
Jones Pumping Plant	2295	1711	2295	1705	-1	-6	0%	0%
Total	5264	3534	5508	3578	46	44	1%	1%
Delta (cfs)								
Sacramento River at Hood	22,370	12,935	22,373	12,965	3	30	0%	0%
San Joaquin River at Vernalis	4,243	1,540	4,243	1,540	0	0	0%	0%
Delta Outflow	21,838	8,420	21,776	8,391	-63	-29	0%	0%
QWEST	2,732	-37	2,670	-90	-62	-53	-2%	NA
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,569	6,329	8,569	6,345	0	16	0%	0%
American River below Nimbus Dam	3,289	1,512	3,290	1,527	0	15	0%	1%
Feather River below Thermalito	4,388	2,327	4,387	2,322	-1	-4	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,366	750	1,361	729	-6	-20	0%	-3%
Shasta	2,674	1,508	2,664	1,456	-10	-53	0%	-3%
Oroville	2,088	1,182	2,091	1,188	3	6	0%	1%
Folsom	508	319	505	309	-3	-10	0%	-3%
CVP San Luis (August)	181	97	181	102	0	5	0%	5%
SWP San Luis (August)	209	116	206	118	-3	1	-1%	1%
Deliveries (TAF/yr)								
CVP SOD Ag	1,014	415	1,012	410	-2	-5	0%	-1%
CVP SOD M&I	120	99	120	98	0	0	0%	0%
SWP Table A + Article 56	2,692	1,612	2,689	1,624	-3	11	0%	1%
SWP Article 21	57	0	56	0	-1	0	-1%	NA
Additional SOD Env Water Supply	0	0	48	55	48	55	NA	NA

TABLE C4-16:
SUMMARY COMPARISON OF ANNUAL AVERAGE DIVERSIONS, DELIVERIES, RIVER FLOWS, AND CARRYOVER STORAGE, 2030 LOD, MODERATE FISHERY RESTRICTIONS

(C) ALTERNATIVE 3 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 3		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	170	166	155	3	-15	2%	-9%
Banks Pumping Plant	2806	1654	2835	1697	29	43	1%	3%
Jones Pumping Plant	2295	1711	2301	1729	5	18	0%	1%
Total	5264	3534	5302	3580	37	46	1%	1%
Delta (cfs)								
Sacramento River at Hood	22,370	12,935	22,366	12,965	-4	30	0%	0%
San Joaquin River at Vernalis	4,243	1,540	4,243	1,540	0	0	0%	0%
Delta Outflow	21,838	8,420	21,785	8,386	-53	-33	0%	0%
QWEST	2,732	-37	2,677	-90	-55	-53	-2%	NA
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,569	6,329	8,569	6,340	0	11	0%	0%
American River below Nimbus Dam	3,289	1,512	3,289	1,523	0	12	0%	1%
Feather River below Thermalito	4,388	2,327	4,388	2,328	0	1	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,366	750	1,366	749	-1	0	0%	0%
Shasta	2,674	1,508	2,666	1,479	-9	-29	0%	-2%
Oroville	2,088	1,182	2,095	1,166	7	-16	0%	-1%
Folsom	508	319	507	310	-1	-9	0%	-3%
CVP San Luis (August)	181	97	181	99	0	2	0%	2%
SWP San Luis (August)	209	116	211	115	2	-1	1%	-1%
Deliveries (TAF/yr)								
CVP SOD Ag	1,014	415	1,009	409	-5	-6	0%	-1%
CVP SOD M&I	120	99	120	98	0	-1	0%	-1%
SWP Table A + Article 56	2,692	1,612	2,707	1,646	15	34	1%	2%
SWP Article 21	57	0	66	0	9	0	16%	NA
Additional SOD Env Water Supply	0	0	15	41	15	41	NA	NA

(D) ALTERNATIVE 4 COMPARED TO FUTURE WITHOUT PROJECT (NO ACTION)

	Future Without Project		Alternative 4		Difference (Alt – Fut. W.P.)		Percent Difference	
	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92	Avg	87 - 92
Diversions (TAF/yr)								
CCWD and LV Diversions	163	170	164	161	1	-9	0%	-6%
Banks Pumping Plant	2806	1654	2804	1654	-2	0	0%	0%
Jones Pumping Plant	2295	1711	2293	1715	-2	4	0%	0%
Total	5264	3534	5261	3530	-3	-5	0%	0%
Delta (cfs)								
Sacramento River at Hood	22,370	12,935	22,372	12,930	2	-5	0%	0%
San Joaquin River at Vernalis	4,243	1,540	4,243	1,540	0	0	0%	0%
Delta Outflow	21,838	8,420	21,845	8,421	6	2	0%	0%
QWEST	2,732	-37	2,737	-32	5	5	0%	NA
X2 Position (km)	75	82	75	82	0	0	0%	0%
Upstream River Flows (cfs)								
Sacramento River at Keswick Dam	8,569	6,329	8,569	6,327	0	-2	0%	0%
American River below Nimbus Dam	3,289	1,512	3,290	1,509	0	-2	0%	0%
Feather River below Thermalito	4,388	2,327	4,388	2,327	0	0	0%	0%
Reservoir Carryover Storage (TAF)								
Trinity	1,366	750	1,367	750	0	1	0%	0%
Shasta	2,674	1,508	2,675	1,516	1	8	0%	1%
Oroville	2,088	1,182	2,088	1,182	0	0	0%	0%
Folsom	508	319	507	323	0	3	0%	1%
CVP San Luis (August)	181	97	181	99	-1	2	0%	2%
SWP San Luis (August)	209	116	208	116	-1	0	0%	0%
Deliveries (TAF/yr)								
CVP SOD Ag	1,014	415	1,012	419	-2	4	0%	1%
CVP SOD M&I	120	99	120	99	0	0	0%	0%
SWP Table A + Article 56	2,692	1,612	2,690	1,612	-2	0	0%	0%
SWP Article 21	57	0	56	0	0	0	-1%	NA

TABLE C4-17:
ANNUAL VALUES BY WATER YEAR TYPE, 2030 LOD, MODERATE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
CCWD and LV Diversions (TAF/yr)							
Average Total Diversions Future Without Project	**163**	**170**	**160**	**171**	**171**	**162**	**155**
Changes under Alternative 1	229	152	276	240	233	213	136
Changes under Alternative 2	249	176	296	259	254	231	154
Changes under Alternative 3	3	-15	16	13	14	-4	-37
Changes under Alternative 4	1	-9	10	10	-2	-8	-10
CVP and SWP Improved Fish Screening							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	190	125	231	191	189	167	138
Changes under Alternative 2	185	125	225	184	180	163	138
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta (cfs)							
Sacramento River at Hood							
Future Without Project	**22,370**	**12,935**	**33,039**	**25,285**	**18,484**	**15,503**	**11,173**
Changes under Alternative 1	2	16	-1	13	-23	9	17
Changes under Alternative 2	3	30	-17	13	-16	20	32
Changes under Alternative 3	-4	30	-7	5	-16	16	-22
Changes under Alternative 4	2	-5	10	5	-17	3	3
San Joaquin River at Vernalis							
Future Without Project	**4,243**	**1,540**	**7,508**	**3,964**	**3,305**	**2,186**	**1,625**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Delta Outflow Future Without Project	**21,838**	**8,420**	**39,748**	**23,730**	**14,426**	**10,469**	**6,845**
Changes under Alternative 1	-28	-10	-31	-20	-41	-38	3
Changes under Alternative 2	-63	-29	-89	-74	-72	-54	2
Changes under Alternative 3	-53	-33	-99	0	-41	-25	-65
Changes under Alternative 4	6	2	-3	3	20	3	20
Banks Pumping Plant Future Without Project	**3,868**	**2,284**	**5,054**	**4,041**	**3,744**	**3,210**	**2,255**
Changes under Alternative 1	-287	-175	-360	-287	-287	-250	-182
Changes under Alternative 2	-278	-173	-351	-272	-273	-242	-187
Changes under Alternative 3	41	60	53	30	17	25	76
Changes under Alternative 4	-3	1	-4	-7	-6	2	1
Jones Pumping Plant Future Without Project	**3,170**	**2,363**	**3,630**	**3,334**	**3,216**	**3,007**	**2,202**
Changes under Alternative 1	1	-8	4	0	-16	3	10
Changes under Alternative 2	-1	-8	7	3	-21	-3	4
Changes under Alternative 3	7	25	11	-7	-12	20	17
Changes under Alternative 4	-3	6	4	-8	-27	10	-3
Banks + Jones Exports Future Without Project	**7,038**	**4,647**	**8,684**	**7,375**	**6,960**	**6,218**	**4,457**
Changes under Alternative 1	-286	-183	-356	-287	-302	-247	-173
Changes under Alternative 2	-279	-182	-344	-269	-293	-244	-183
Changes under Alternative 3	49	85	65	24	6	46	93
Changes under Alternative 4	-6	7	0	-15	-34	12	-2
Banks + Jones + CCWD + LV Diversions							
Future Without Project	**7,263**	**4,882**	**8,904**	**7,611**	**7,196**	**6,441**	**4,671**
Changes under Alternative 1	29	26	24	42	18	46	14
Changes under Alternative 2	63	59	63	87	56	74	29
Changes under Alternative 3	52	63	86	40	24	40	42
Changes under Alternative 4	-4	-6	14	-2	-37	1	-16
QWEST Future Without Project	**2,732**	**-37**	**6,908**	**2,726**	**1,083**	**-158**	**-50**
Changes under Alternative 1	-29	-23	-25	-38	-24	-44	-12
Changes under Alternative 2	-62	-53	-67	-82	-60	-69	-23
Changes under Alternative 3	-55	-53	-88	-34	-27	-49	-48
Changes under Alternative 4	5	5	-12	4	33	1	15
X2 Position (km) Future Without Project	**75.18**	**81.71**	**68.88**	**73.43**	**76.70**	**79.28**	**82.66**
Changes under Alternative 1	0.02	0.01	0.02	0.00	0.03	0.02	0.03
Changes under Alternative 2	0.04	0.03	0.05	0.03	0.05	0.05	0.02
Changes under Alternative 3	0.02	0.02	0.03	-0.02	0.02	0.01	0.08
Changes under Alternative 4	-0.01	0.00	0.01	-0.01	-0.01	-0.01	-0.01
Upstream River Flows (cfs)							
Sacramento River at Keswick							
Future Without Project	**8,569**	**6,329**	**11,525**	**8,648**	**7,094**	**6,981**	**6,189**
Changes under Alternative 1	1	4	1	3	-17	21	-13
Changes under Alternative 2	0	16	-7	1	-17	26	-7
Changes under Alternative 3	0	11	4	-3	-10	17	-20
Changes under Alternative 4	0	-2	7	-1	-13	8	-11

TABLE C4-17:
ANNUAL VALUES BY WATER YEAR TYPE, 2030 LOD, MODERATE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
American River below Nimbus							
Future Without Project	**3,289**	**1,512**	**5,195**	**3,687**	**2,751**	**2,000**	**1,326**
Changes under Alternative 1	0	13	-1	-2	-7	1	13
Changes under Alternative 2	0	15	-2	-2	-8	4	13
Changes under Alternative 3	0	12	0	-2	0	4	-5
Changes under Alternative 4	0	-2	0	1	-1	-1	4
Feather River below Thermalito							
Future Without Project	**4,388**	**2,327**	**6,808**	**4,427**	**3,436**	**2,966**	**2,349**
Changes under Alternative 1	-1	-1	-6	20	-5	-14	15
Changes under Alternative 2	-1	-4	-9	12	2	-11	18
Changes under Alternative 3	0	1	-10	42	-10	-8	3
Changes under Alternative 4	0	0	3	2	-4	-2	2
Reservoir Carryover Storage (TAF)							
Trinity Future Without Project	**1,366**	**750**	**1,841**	**1,606**	**1,235**	**1,078**	**685**
Changes under Alternative 1	-3	-8	-2	-7	-3	-4	2
Changes under Alternative 2	-6	-20	-2	-12	-5	-9	-4
Changes under Alternative 3	-1	0	-3	-6	3	2	0
Changes under Alternative 4	0	1	0	0	-1	-1	5
Shasta Future Without Project	**2,674**	**1,508**	**3,319**	**3,173**	**2,771**	**2,286**	**1,251**
Changes under Alternative 1	-7	-39	0	-3	4	-18	-25
Changes under Alternative 2	-10	-53	0	-3	1	-21	-37
Changes under Alternative 3	-9	-29	1	-4	0	-19	-27
Changes under Alternative 4	1	8	0	-1	8	0	-3
Oroville Future Without Project	**2,088**	**1,182**	**2,934**	**2,297**	**2,002**	**1,504**	**1,024**
Changes under Alternative 1	4	7	6	-7	-7	15	7
Changes under Alternative 2	3	6	6	-9	-9	14	4
Changes under Alternative 3	7	-16	14	-5	5	7	5
Changes under Alternative 4	0	0	-2	-4	2	1	2
Folsom Future Without Project	**508**	**319**	**635**	**566**	**554**	**388**	**298**
Changes under Alternative 1	-2	-8	0	-3	-2	-1	-6
Changes under Alternative 2	-3	-10	0	-3	-2	-2	-8
Changes under Alternative 3	-1	-9	0	-2	-1	-4	2
Changes under Alternative 4	0	3	0	0	-1	1	-1
CVP San Luis (August) Future Without Project	**181**	**97**	**264**	**139**	**128**	**140**	**168**
Changes under Alternative 1	0	4	-2	3	-5	2	7
Changes under Alternative 2	0	5	-2	3	-5	3	7
Changes under Alternative 3	0	2	2	2	-6	-2	6
Changes under Alternative 4	-1	2	0	2	-8	2	1
SWP San Luis (August) Future Without Project	**209**	**116**	**368**	**136**	**141**	**134**	**125**
Changes under Alternative 1	-2	2	-9	0	-1	2	0
Changes under Alternative 2	-3	1	-9	0	-2	1	1
Changes under Alternative 3	2	-1	8	-2	-4	-2	5
Changes under Alternative 4	-1	0	-2	0	0	0	-1
CVP and SWP Deliveries (TAF/year)							
CVP SOD Ag Future Without Project	**1,014**	**415**	**1,423**	**1,144**	**992**	**806**	**334**
Changes under Alternative 1	-1	-3	3	-5	-7	1	-3
Changes under Alternative 2	-2	-5	4	-2	-9	-3	-5
Changes under Alternative 3	-5	-6	2	-11	-7	-6	-8
Changes under Alternative 4	-2	4	-1	-8	-6	4	-1
CVP SOD M&I Future Without Project	**120**	**99**	**136**	**123**	**120**	**112**	**96**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	-1	0	0
Changes under Alternative 3	0	-1	0	0	-1	0	0
Changes under Alternative 4	0	0	0	0	-1	0	0
SWP Table A + Article 56 Future Without Project	**2,692**	**1,612**	**3,391**	**2,839**	**2,716**	**2,309**	**1,575**
Changes under Alternative 1	-3	11	-19	-1	-3	6	15
Changes under Alternative 2	-3	11	-15	4	-3	4	9
Changes under Alternative 3	15	34	12	12	6	12	41
Changes under Alternative 4	-2	0	-2	-6	-6	2	3
SWP Article 21 Future Without Project	**57**	**0**	**120**	**52**	**56**	**0**	**9**
Changes under Alternative 1	0	0	1	-2	1	0	0
Changes under Alternative 2	-1	0	-1	-2	0	0	0
Changes under Alternative 3	9	0	20	9	0	2	7
Changes under Alternative 4	0	0	-1	1	0	0	0
Improved Fish Screening for CVP South Bay							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	74	70	75	72	76	75	71
Changes under Alternative 2	72	69	72	70	73	74	70
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	130	67	173	132	127	104	76
Changes under Alternative 2	126	67	169	127	120	101	75
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-17:
ANNUAL VALUES BY WATER YEAR TYPE, 2030 LOD, MODERATE FISHERY RESTRICTIONS

Parameter	Long Term Average	Dry Period (87-92)	Wet	Above Normal	Below Normal	Dry	Critical
CVP South Bay Delta Supply Restoration							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	4	6	3	3	3	5	8
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
SWP South Bay Delta Supply Restoration							
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	18	22	11	13	14	26	30
Changes under Alternative 2	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from							
Dedicated Storage Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	0	0	0	0	0	0	0
Changes under Alternative 2	48	55	37	43	42	61	62
Changes under Alternative 3	15	41	3	8	16	31	25
Changes under Alternative 4	0	0	0	0	0	0	0

TABLE C4-18:
AVERAGE MONTHLY VALUES, 2030 LOD, MODERATE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CCWD and LV Diversions (TAF)												
Average Total Diversions												
Future Without Project	**10**	**9**	**7**	**9**	**11**	**11**	**3**	**15**	**28**	**26**	**21**	**14**
Changes under Alternative 1	13	16	21	16	14	29	-2	36	18	22	23	23
Changes under Alternative 2	14	18	24	24	17	30	-1	36	19	22	23	23
Changes under Alternative 3	-2	-2	0	0	1	4	-2	9	-10	6	1	-1
Changes under Alternative 4	0	0	0	0	0	0	-1	0	0	1	1	0
CVP and SWP Improved Fish Screening												
Future Without Project	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Changes under Alternative 1	13	16	19	16	13	21	0	10	17	20	22	23
Changes under Alternative 2	13	16	18	15	12	20	0	10	16	19	22	23
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta (cfs)												
Sacramento River at Hood												
Future Without Project	**11,533**	**14,982**	**25,486**	**34,318**	**40,232**	**34,988**	**24,241**	**19,857**	**16,644**	**18,406**	**14,680**	**13,073**
Changes under Alternative 1	-2	20	6	4	20	21	-86	64	23	27	-51	-22
Changes under Alternative 2	-6	18	-26	0	5	28	-84	64	56	28	-37	-13
Changes under Alternative 3	48	23	14	11	-61	-5	-8	-44	-150	9	-32	146
Changes under Alternative 4	-3	10	9	-3	12	7	-16	-1	-14	24	15	-13
San Joaquin River at Vernalis												
Future Without Project	**2,534**	**2,704**	**3,447**	**4,824**	**6,503**	**6,340**	**5,991**	**6,041**	**4,621**	**3,239**	**2,099**	**2,570**
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Delta Outflow Future Without Project	**4,862**	**8,956**	**23,572**	**43,380**	**54,586**	**44,657**	**29,250**	**21,550**	**13,153**	**8,514**	**4,436**	**5,146**
Changes under Alternative 1	-14	-10	-26	137	-14	-125	82	-338	-6	3	-17	-9
Changes under Alternative 2	-28	-43	-150	2	-70	-148	62	-347	2	1	-23	-11
Changes under Alternative 3	16	-6	-49	-41	-155	-237	22	-199	4	-11	3	15
Changes under Alternative 4	-2	10	13	63	3	-13	0	8	-3	3	-1	-6
Banks Pumping Plant												
Future Without Project	**4,068**	**4,641**	**4,768**	**4,214**	**3,933**	**3,357**	**1,537**	**1,831**	**2,436**	**5,199**	**5,606**	**4,824**
Changes under Alternative 1	-193	-267	-318	-347	-244	-345	-207	-159	-282	-309	-370	-398
Changes under Alternative 2	-200	-264	-292	-350	-238	-329	-200	-149	-266	-303	-360	-387
Changes under Alternative 3	44	43	23	89	111	188	29	8	0	-62	-63	84
Changes under Alternative 4	1	-1	1	-42	-1	0	-7	-1	0	12	9	-3
Jones Pumping Plant												
Future Without Project	**4,058**	**4,248**	**3,813**	**3,560**	**2,983**	**2,471**	**1,698**	**1,672**	**2,008**	**3,495**	**3,921**	**4,118**
Changes under Alternative 1	-1	21	13	-55	8	22	74	-23	7	-19	-32	-6
Changes under Alternative 2	0	18	21	-47	-13	23	79	-23	-4	-34	-26	-5
Changes under Alternative 3	24	19	49	-48	-24	9	1	-4	5	-14	9	64
Changes under Alternative 4	-2	9	-1	-30	7	14	5	1	-8	-9	-14	-5
Banks + Jones Exports												
Future Without Project	**8,126**	**8,889**	**8,580**	**7,773**	**6,916**	**5,829**	**3,235**	**3,503**	**4,444**	**8,694**	**9,527**	**8,942**
Changes under Alternative 1	-194	-246	-306	-402	-236	-323	-133	-182	-276	-328	-403	-404
Changes under Alternative 2	-200	-246	-270	-396	-250	-307	-121	-172	-270	-337	-386	-393
Changes under Alternative 3	68	61	72	40	87	197	31	4	5	-76	-54	148
Changes under Alternative 4	0	8	0	-72	6	14	-2	0	-8	3	-6	-9

TABLE C4-18:
AVERAGE MONTHLY VALUES, 2030 LOD, MODERATE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Banks + Jones + CCWD + LV Diversions Future Without Project	**8,290**	**9,036**	**8,693**	**7,914**	**7,114**	**6,001**	**3,278**	**3,751**	**4,913**	**9,111**	**9,877**	**9,180**
Changes under Alternative 1	10	30	44	-141	20	147	-168	402	29	23	-34	-14
Changes under Alternative 2	21	62	118	-13	57	178	-146	412	54	27	-15	-2
Changes under Alternative 3	30	32	64	35	97	258	-4	154	-155	20	-35	130
Changes under Alternative 4	-2	0	-3	-73	9	20	-16	-9	-11	21	16	-6
QWEST Future Without Project	**-928**	**-1,218**	**1,357**	**5,978**	**8,785**	**7,813**	**7,506**	**5,742**	**3,480**	**-1,102**	**-3,005**	**-1,622**
Changes under Alternative 1	-11	-25	-42	141	-17	-144	157	-393	-23	-15	19	7
Changes under Alternative 2	-23	-58	-120	13	-56	-174	135	-403	-39	-19	4	-2
Changes under Alternative 3	-15	-69	-62	-33	-105	-259	3	-160	114	-17	25	-87
Changes under Alternative 4	1	1	4	72	-8	-19	14	9	7	-14	-12	3
X2 Position (km) Future Without Project	**85.54**	**85.78**	**83.26**	**77.10**	**69.72**	**64.32**	**63.93**	**66.55**	**69.69**	**74.59**	**78.01**	**83.66**
Changes under Alternative 1	0.01	0.02	0.02	0.02	-0.06	-0.03	0.02	-0.01	0.15	0.08	0.01	0.02
Changes under Alternative 2	0.02	0.04	0.06	0.06	0.02	0.01	0.04	0.00	0.16	0.06	0.00	0.03
Changes under Alternative 3	-0.04	-0.03	0.00	0.04	0.02	0.05	0.08	0.02	0.10	0.06	0.01	-0.01
Changes under Alternative 4	0.01	0.00	0.00	-0.01	-0.05	-0.02	0.00	0.00	-0.01	0.00	0.00	0.00
E/I Ratio Future Without Project	**0.57**	**0.54**	**0.41**	**0.27**	**0.16**	**0.15**	**0.11**	**0.14**	**0.21**	**0.39**	**0.54**	**0.58**
Changes under Alternative 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changes under Alternative 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream River Flows (cfs)												
Sacramento River at Keswick Dam Future Without Project	**6,081**	**5,475**	**7,043**	**8,597**	**10,801**	**8,783**	**6,956**	**7,878**	**10,636**	**13,236**	**10,775**	**6,567**
Changes under Alternative 1	-18	34	32	-14	12	32	-20	31	2	-13	-49	-23
Changes under Alternative 2	-21	36	11	-18	7	37	-21	29	13	-15	-36	-26
Changes under Alternative 3	11	4	10	-20	-14	6	6	-43	-127	10	43	112
Changes under Alternative 4	-6	15	9	-1	18	9	-6	-1	-14	-8	-6	-10
American River below Nimbus Dam Future Without Project	**1,689**	**2,583**	**3,302**	**4,288**	**5,098**	**3,808**	**3,337**	**3,667**	**3,495**	**3,666**	**2,335**	**2,205**
Changes under Alternative 1	-7	-17	1	-9	5	-4	-16	16	31	15	-6	-6
Changes under Alternative 2	1	-23	-2	-11	2	-2	-17	17	40	18	-9	-11
Changes under Alternative 3	-17	-13	2	-2	-11	-4	8	0	-19	53	11	-10
Changes under Alternative 4	-1	-3	-1	0	-3	0	-6	0	1	11	-3	6
Feather River below Thermalito Future Without Project	**3,051**	**2,340**	**4,036**	**5,518**	**6,483**	**6,566**	**3,128**	**3,723**	**3,868**	**6,766**	**4,873**	**2,305**
Changes under Alternative 1	20	3	-10	19	-12	-7	-46	13	-8	16	3	2
Changes under Alternative 2	11	7	-15	16	-22	-9	-42	13	3	17	-6	18
Changes under Alternative 3	57	32	21	18	-32	26	4	-4	-9	-73	-85	43
Changes under Alternative 4	2	-1	-3	-12	-2	1	-4	0	-1	20	12	-9
CVP and SWP Deliveries (TAF/year)												
CVP SOD Ag Future Without Project	32	24	34	59	69	46	67	106	170	209	150	49
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	-1	-1	-1	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	-1	0

TABLE C4-18:
AVERAGE MONTHLY VALUES, 2030 LOD, MODERATE FISHERY RESTRICTIONS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CVP SOD M&I Future Without Project	9	12	12	8	4	12	10	9	9	11	11	13
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP Table A + Article 56 Future Without Project	200	177	169	138	163	165	208	255	289	347	339	242
Changes under Alternative 1	0	0	0	0	-1	-2	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	-1	0	0	0	0	0	0
Changes under Alternative 3	1	1	1	1	0	1	1	1	3	2	2	1
Changes under Alternative 4	0	0	0	0	-1	0	0	0	0	0	0	0
SWP Article 21 Future Without Project	5	6	9	8	11	8	2	2	1	1	0	1
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	-1	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	1	7	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Improved Fish Screening for CVP South Bay Future Without Project	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 1	7	11	10	6	2	6	1	2	5	7	8	8
Changes under Alternative 2	7	11	9	6	2	6	1	2	5	6	8	8
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Improved Fish Screening for SWP South Bay Future Without Project	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 1	6	6	10	9	10	15	12	8	11	13	14	15
Changes under Alternative 2	6	6	9	9	10	14	12	8	11	13	14	15
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
CVP South Bay Delta Supply Restoration Future Without Project	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 1	1	1	1	1	0	0	0	0	0	0	0	0
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
SWP South Bay Delta Supply Restoration Future Without Project	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 1	4	3	3	0	0	0	0	0	1	1	2	3
Changes under Alternative 2	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 3	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0
Additional CVP SOD Environmental Water from Dedicated Storage Future Without Project	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 1	0	0	0	0	0	0	0	0	0	0	0	0
Changes under Alternative 2	12	8	5	6	6	1	0	1	1	1	3	3
Changes under Alternative 3	3	1	0	0	0	0	0	0	0	1	3	8
Changes under Alternative 4	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C4-19:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(A) Alternative

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-2979	-207	20	-140	-218	-389	28	-18	-438
1923	-573	-288	-346	-1162	-396	-437	-131	-225	-282	-499	-512	-301
1924	-131	-194	-276	-260	-214	-300	-199	-199	-342	-307	-239	-136
1925	89	-33	-129	-3106	818	-300	0	0	0	1197	-219	-779
1926	-440	-373	-242	-220	-195	0	-115	0	-1	-444	-234	-388
1927	-58	-167	0	-72	-262	-470	-148	-222	-470	-454	-470	-421
1928	-292	-380	-424	-150	-117	-399	-140	-209	-353	-327	-421	-445
1929	-173	-257	-334	-266	-222	-391	0	-42	0	-205	-248	-213
1930	-62	36	-119	-91	0	0	365	-1	26	-1445	-983	-276
1931	-127	-165	-220	-212	-184	-361	-197	-191	413	257	66	-35
1932	111	23	-129	0	-123	-178	217	0	140	156	130	-47
1933	-130	-171	217	-51	-16	-352	0	-183	0	-231	-17	-126
1934	-17	243	-355	-462	-124	-331	0	-204	0	-13	-266	-300
1935	-52	-41	230	-148	-134	0	-17	-1	-288	-396	-376	-494
1936	-272	-354	-347	-117	-89	49	-245	-451	-425	-111	-480	-499
1937	-222	-321	-358	-126	-387	-9	-284	-251	-961	-492	-1235	-396
1938	-150	-320	-290	209	-382	-453	-278	-221	-470	-482	-481	-470
1939	-311	-410	-424	-412	-344	-470	-221	-363	-388	-271	-446	-486
1940	-184	-279	-329	-123	-95	0	-140	0	-449	-391	-359	-398
1941	-212	-318	-367	-124	-189	-428	-278	-248	-468	-468	-468	-470
1942	-231	-362	-408	-409	-340	-470	-201	-232	-470	-469	-469	-470
1943	-256	-358	-404	-367	-345	-435	-278	-424	-442	-571	-504	-397
1944	-262	-75	-412	-168	-140	-408	-115	-72	-185	-366	-383	-601
1945	-149	-223	-289	-257	-469	-151	-131	-175	-470	-592	-559	-514
1946	-634	-362	-408	-320	158	-403	-131	-219	-276	-377	-388	-367
1947	-175	138	-270	-305	-275	-470	-115	-65	0	-557	-501	-516
1948	-291	-252	-260	-122	-88	-332	-118	0	0	-59	-381	-493
1949	-164	-166	-252	-239	-212	-433	-229	-295	0	394	130	-339
1950	-10	-142	-380	-255	0	-69	-131	-218	-310	-615	-591	-159
1951	-131	-215	-281	-464	-715	-470	-140	-220	-465	-439	-470	-419
1952	-241	-347	-392	-404	-22	-469	0	-222	-431	-438	-450	-470
1953	-470	-470	-259	-282	-340	-470	-3	-223	-410	-638	-650	-382
1954	-282	-284	-334	-320	-285	-441	-140	-197	-324	-323	-221	-399
1955	-179	-228	-291	-82	-117	-442	0	-224	-300	-358	-762	-393
1956	-108	-231	-290	-451	-74	-470	-149	-225	-470	-469	-469	-470
1957	-269	-370	-433	-302	-273	-430	-285	-227	-219	-444	-358	-427
1958	-142	-231	-470	779	-138	-471	-734	-284	-470	-488	-470	-470
1959	-307	-411	-435	-251	-327	-473	-131	-217	-388	2	-362	-423
1960	-174	-269	-312	-58	-79	-383	-229	0	0	-373	-378	-437
1961	-78	-218	-58	-245	-217	-435	-17	-282	-36	-315	-315	-383
1962	-332	-230	-256	-264	-194	-458	-131	-405	0	-722	-448	40
1963	-237	0	0	0	-286	-403	-149	-236	-303	-329	-366	-241
1964	-137	-214	-439	-443	-409	-470	-115	-286	-271	-285	-393	-1133
1965	465	-226	-288	0	-399	-470	-149	-195	-410	-561	-559	-418
1966	-358	-287	-339	-396	-335	-453	-131	-255	-336	-394	-383	-430
1967	-60	-239	-301	-358	0	-470	-279	-240	-417	-427	-442	-470
1968	-450	-448	-407	-220	-268	-470	0	-218	-417	-381	-517	-430
1969	-289	-287	-354	-192	-49	-464	-278	-220	-470	-470	-480	-470
1970	-331	-426	-429	-466	-467	-374	-102	-216	-470	-380	-470	-516
1971	-259	-377	-394	-390	-340	-378	0	-205	-173	-432	-437	-325
1972	-140	-165	-211	-455	-248	-470	-220	-219	-390	-476	-460	-467
1973	-185	-281	-212	-297	-351	-462	-140	-218	-469	-479	-474	-435
1974	-201	-339	-385	-391	-333	-417	-149	-222	-470	-470	-470	-470
1975	-305	-355	-442	-373	-287	-408	-149	-222	-366	-380	-415	-446
1976	-177	-274	-420	-470	-126	-411	0	-373	-397	-486	-476	-431
1977	-184	-113	-337	36	-66	-295	-151	-113	421	260	-1033	-172
1978	-180	-31	-123	-85	-41	-470	0	0	-118	79	79	-469
1979	-387	-439	-470	-170	0	0	-131	0	-360	-411	-393	-412
1980	-194	-263	-326	-336	-477	-437	-263	-222	-470	-470	-469	-426
1981	-295	-326	-436	-345	-80	-387	0	-218	-186	-305	-482	-402
1982	-118	-171	0	-458	-406	-457	-278	-233	-470	-470	-482	-470
1983	-292	-392	-429	-443	-430	-455	-278	-239	-470	-470	-470	-470
1984	-470	-456	-438	-469	-424	-453	0	-217	-448	-497	-415	-234
1985	-249	-326	-374	-395	-326	-439	-115	-250	-329	-368	-371	-879
1986	356	-231	-332	-214	-641	-16	-292	0	-456	-341	-355	-458
1987	-254	-355	-402	-608	-253	-383	-232	0	-191	-354	-342	-592
1988	-136	-170	-253	-233	-193	7	-105	-332	0	25	-299	-278
1989	-120	2	-23	-132	53	-344	-214	0	0	-427	-386	-918
1990	-27	-146	-375	-143	-471	0	-197	-167	-133	-98	284	-92
1991	279	-310	577	87	-163	-335	0	-154	-169	-186	-984	-213
1992	-108	-54	-133	-241	-49	-279	0	0	0	-248	-252	-263
1993	14	130	-161	-128	-299	-470	0	0	0	7	-23	-495
1994	-141	-381	-395	-160	-137	-441	-105	-283	-325	-370	-391	-230
1995	-188	-178	-1535	-5982	-446	0	-85	372	0	0	0	-52
1996	-314	-413	-429	-357	-271	-56	-149	-228	-591	-549	-548	-470
1997	-364	-334	-383	-408	-1849	-470	-149	-218	-443	-567	-637	-395
1998	-235	-325	-373	-1563	-340	316	-278	-237	-470	-470	-470	-470
1999	-314	-411	-429	-261	-318	-470	-149	-223	-470	-470	-470	-394
2000	-317	-358	-426	-161	-273	-148	-140	-421	-392	-310	-299	-318
2001	-175	-275	-289	-243	-199	0	-115	-65	-296	-424	-438	-477
2002	-140	-184	-271	-229	0	-183	-115	-222	-208	-374	-386	-403
2003	-84	-260	-284	-214	-4	-263	-140	-232	-306	-48	-365	-349
Average	**-194**	**-246**	**-306**	**-402**	**-236**	**-323**	**-133**	**-182**	**-276**	**-328**	**-403**	**-404**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-19:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	-470	-395	-449	-2979	-207	20	-140	-218	-389	28	-18	-438
1923	-573	-288	-346	-987	-396	-437	-131	-225	-282	-508	-519	-296
1924	-131	-194	-274	-260	-214	-300	-201	-197	-342	-309	-242	-132
1925	93	-39	-131	-161	-237	-300	0	0	0	285	-195	-624
1926	-350	-228	-252	-226	-200	0	-115	0	-1	-535	-223	-426
1927	-116	-163	0	0	0	-469	-148	-222	-470	-454	-470	-422
1928	-293	-380	-424	-150	-117	-399	-140	-209	-353	-327	-421	-448
1929	-164	-254	-327	-266	-222	-391	0	-42	0	-205	-251	-202
1930	-55	42	-119	-91	0	0	365	-1	308	-1412	-920	-289
1931	-131	-169	-220	-213	-184	-365	-197	-192	406	249	61	-40
1932	59	-147	-129	0	-123	-214	217	0	149	146	169	-36
1933	-127	-167	-186	-93	-69	-353	0	-183	0	-231	-179	-122
1934	15	166	-401	-1620	-123	-373	0	-196	0	487	-493	-279
1935	0	-40	226	-134	-129	0	0	1	-312	-633	-593	-451
1936	-277	-356	-332	-117	-90	73	-245	-453	-424	-171	-443	-500
1937	-220	-318	-365	-125	-424	-11	-291	-154	-1071	-462	-1199	-397
1938	-201	-319	-149	262	-395	-453	-278	-221	-470	-482	-481	-470
1939	-310	-410	-424	-412	-344	-470	-221	-364	-388	-271	-446	-478
1940	-186	-281	-331	-123	-95	0	-140	0	-449	-391	0	-397
1941	-206	-318	-367	-124	0	-297	-278	-248	-463	-463	-463	-470
1942	-232	-363	-408	-409	-340	-470	-201	-232	-470	-468	-468	-470
1943	-257	-357	-403	-367	-345	-435	-278	-425	-442	-572	-504	-397
1944	-259	-73	-411	-168	-140	-409	-115	-72	-42	-366	-383	-584
1945	-147	-223	-289	-256	-469	-177	-131	0	-470	-605	-565	-512
1946	-635	-361	-407	-215	138	-403	-131	-219	-276	-373	-384	-366
1947	-176	138	-270	-304	-275	-470	-115	-63	0	-568	-510	-516
1948	-289	-254	-260	-122	-88	-332	-131	0	0	0	-381	-491
1949	-164	-168	-251	-239	-212	-433	-229	-295	0	373	112	-344
1950	-20	-146	-379	-255	0	0	-131	0	0	-264	-593	-119
1951	-137	-215	-201	-460	-904	-470	-140	-220	-465	-439	-470	-413
1952	-245	-348	-392	-404	0	-470	0	-222	-431	-438	-450	-470
1953	-470	-469	-259	-282	-340	-470	-3	-223	-410	-638	-650	-382
1954	-293	-284	-334	-320	-285	-400	-140	-197	-324	-323	-221	-396
1955	-180	-228	-291	-2786	-174	-438	0	-224	-301	16	-629	-530
1956	-287	-215	-282	-446	-297	-78	-149	-225	-470	-482	-483	-470
1957	-272	-299	-352	-301	-273	-430	-264	-227	-219	-451	-346	-416
1958	-142	-231	-470	-261	-378	-470	-203	-284	-470	-482	-470	-470
1959	-291	-394	-435	-232	-298	-480	-131	-217	-389	2	-349	-420
1960	-175	-257	-624	63	-79	-383	-229	0	0	-372	-378	-410
1961	-33	-228	-51	-244	-216	-435	-23	-282	-37	-237	-317	-381
1962	-328	-230	-258	-247	-194	-457	0	-425	0	-724	-448	44
1963	-237	0	2841	0	-256	-414	-148	-236	-311	-337	-378	-491
1964	-144	-228	-469	-455	-415	-470	-115	-284	-271	-288	-331	-377
1965	-220	-224	-287	0	-283	-470	-149	-195	-410	-588	-581	-418
1966	-339	-287	-267	-393	-333	-452	-131	-255	-335	-394	-383	-423
1967	-44	-240	-301	-358	0	-470	-279	-240	-417	-427	-442	-470
1968	-448	-445	-401	-221	-268	-470	0	-218	-417	-379	-515	-429
1969	-288	-288	-354	-192	0	-470	-278	-220	-470	-470	-480	-470
1970	-331	-426	-414	-437	-467	-371	-103	-216	-470	-380	-470	-486
1971	-256	-377	-270	-390	-340	-378	0	-205	-173	-433	-435	-325
1972	-173	-166	-211	-358	-248	-470	-235	-219	-389	-458	-441	-467
1973	-185	-281	-55	-297	-352	-462	-140	-218	-469	-481	-474	-435
1974	-202	-339	-270	-391	-333	-416	-149	-222	-470	-470	-470	-470
1975	-305	-354	-442	-373	-287	-408	-149	-222	-366	-381	-415	-446
1976	-177	-274	-420	-470	-126	-411	0	-373	-397	-474	-463	-434
1977	-182	-115	-335	34	-66	-296	0	-113	-131	-302	-108	-170
1978	-130	-122	-123	-85	-41	-470	0	0	-118	67	68	-466
1979	-365	-435	-470	-170	0	0	-131	0	-361	-413	-395	-411
1980	-193	-263	-326	-151	-428	-447	-263	-222	-470	-470	-469	-426
1981	-295	-327	-436	-345	-43	-387	0	-218	-186	-298	-476	-396
1982	-117	-171	0	-294	-406	-454	-278	-233	-470	-470	-481	-470
1983	-292	-392	-396	-421	-425	-409	-278	-239	-470	-470	-470	-470
1984	-470	-456	-400	-469	-424	-453	0	-217	-448	-497	-415	-235
1985	-249	-326	-319	-395	-326	-439	-115	-250	-329	-368	-371	-879
1986	355	-231	-332	-214	-640	-16	-292	0	1	-553	-356	-458
1987	-254	-355	-402	-399	-252	-383	-230	0	-191	-343	-334	-627
1988	-139	-171	-255	-233	-193	6	-105	-333	0	18	-314	-281
1989	-127	4	-21	-131	54	-344	-214	0	0	-427	-385	-933
1990	-31	-148	-363	-143	-471	0	-197	-166	-147	-108	219	-97
1991	248	-243	412	-78	-234	-335	0	-154	-170	-187	-595	-220
1992	-108	-112	-146	-151	-49	-280	0	0	0	-216	-261	-267
1993	11	134	-163	1086	-303	-470	0	0	0	16	-22	-491
1994	25	-396	-397	-157	-134	-439	-105	-283	-326	-371	-391	-92
1995	-185	-70	-1534	-5981	-444	0	126	372	0	0	0	-1
1996	-314	-413	-402	-357	-271	-178	-149	-228	-592	-545	-544	-470
1997	-364	-334	-384	-408	-1845	-470	-149	-218	-443	-567	-637	-395
1998	-236	-326	-373	-1563	-340	500	-278	-237	-470	-470	-470	-470
1999	-314	-411	-400	-232	-306	-470	-149	-223	-470	-470	-470	-394
2000	-303	-359	-421	-161	-273	73	-140	-422	-392	-310	-299	-316
2001	-175	-278	-287	-244	-199	0	-115	0	-296	-426	-441	-476
2002	-139	-186	-271	-229	0	0	-115	-54	-208	-376	-388	-405
2003	-26	-296	-284	-207	-29	0	-140	-172	-305	-51	-365	-322
Average	**-200**	**-246**	**-270**	**-396**	**-250**	**-307**	**-121**	**-172**	**-270**	**-337**	**-386**	**-393**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-19:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	9	0	-2786	0	375	1	2	0	445	414	-3
1923	-292	0	0	0	0	0	0	0	0	21	6	-27
1924	83	62	1	0	0	0	0	0	4	-40	-21	151
1925	175	139	107	0	962	0	0	0	0	-199	384	538
1926	61	260	12	0	0	0	0	0	-1	-445	67	573
1927	516	0	0	0	0	0	0	0	0	67	0	-8
1928	0	0	0	0	0	0	0	0	0	-305	0	564
1929	131	127	-142	0	0	5	0	274	0	0	-170	18
1930	90	29	0	0	0	0	0	0	308	-60	-113	23
1931	39	23	46	0	0	12	0	176	-269	22	32	226
1932	370	179	0	0	0	-200	217	0	253	0	37	368
1933	11	9	1123	3160	1526	0	0	0	0	0	-1362	168
1934	469	-256	956	1524	1680	6	0	0	0	-952	76	-6
1935	145	122	326	0	0	0	0	-29	-59	65	74	-237
1936	45	7	11	0	0	490	0	0	-1	-226	-170	394
1937	27	14	112	1	-883	833	482	261	-989	-490	-1214	25
1938	18	0	0	2289	-9	0	366	0	0	-12	-11	0
1939	0	-5	-1	0	0	0	0	-75	0	-1190	-1097	216
1940	32	25	18	0	0	0	0	0	0	-71	0	0
1941	-37	17	0	0	0	126	216	50	-137	-134	-135	0
1942	24	-2	0	0	612	545	0	0	0	-259	-263	0
1943	394	0	0	0	0	0	0	-180	28	29	102	44
1944	-15	103	1	0	0	0	0	-27	0	0	0	28
1945	58	0	0	0	0	-195	0	0	0	138	125	-8
1946	-94	0	0	0	-24	0	0	0	0	-29	16	-24
1947	45	387	0	0	0	0	0	22	0	-151	-115	617
1948	-55	91	128	0	0	0	0	0	0	0	0	-280
1949	-13	72	39	0	0	0	0	0	0	577	769	782
1950	268	150	-64	0	0	0	0	0	0	-405	-350	279
1951	28	0	0	-119	344	1254	0	0	0	14	0	-11
1952	11	75	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	3	3	0
1954	6	0	20	0	0	0	0	0	0	-294	0	308
1955	-6	0	0	-2786	87	0	0	0	0	428	-297	439
1956	-126	65	1	0	137	2558	0	0	0	-1276	-1284	0
1957	822	55	-469	230	480	0	-7	0	0	53	334	-63
1958	0	0	0	0	0	0	112	0	0	-12	0	0
1959	0	-3	0	0	0	0	0	21	0	-67	15	478
1960	-6	-262	476	-174	0	0	0	0	0	0	0	650
1961	-11	31	343	0	-582	0	0	0	105	-219	10	546
1962	342	106	169	120	0	1	33	-5	0	-557	0	600
1963	0	0	2841	0	0	0	0	0	1	14	0	-46
1964	1	0	-84	0	0	0	0	73	0	-18	-38	280
1965	-100	0	0	0	1	0	0	0	-7	-66	-51	0
1966	167	0	0	0	0	0	0	-20	0	21	0	-67
1967	121	-2	0	0	0	0	0	0	0	0	0	0
1968	4	4	1	144	566	0	0	0	0	-131	155	164
1969	108	31	0	0	0	0	0	0	0	164	-11	0
1970	0	-1	0	0	1464	1967	-84	0	0	-4	0	-97
1971	-36	0	0	0	0	0	0	0	0	22	-16	0
1972	-70	64	0	0	141	0	36	0	0	-286	112	-67
1973	180	0	0	0	0	0	0	0	0	-270	142	-9
1974	143	0	0	0	0	1719	0	0	0	0	0	0
1975	-162	255	0	0	0	764	0	0	0	-702	0	0
1976	0	0	0	0	0	0	0	0	0	-2	-2	670
1977	-21	192	-31	181	0	10	0	7	1233	403	-943	-3
1978	-83	66	0	0	0	0	0	79	-17	128	90	-65
1979	107	23	5	0	0	0	0	0	0	138	-78	1
1980	71	0	0	0	313	32	0	0	0	-10	8	0
1981	-27	-8	24	0	0	0	0	0	0	19	18	428
1982	11	0	0	0	0	27	0	0	0	1	-12	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	370	1758	0	0	0	-58	167	125
1985	78	0	0	0	0	0	0	-34	0	-24	-7	-38
1986	138	48	-39	0	-81	-16	420	46	5	461	-380	0
1987	-5	-2	-1	1528	181	799	0	0	0	107	59	498
1988	11	158	158	0	-2	8	0	-201	0	-179	45	288
1989	229	332	135	0	200	0	0	0	0	0	0	560
1990	440	322	16	0	-367	0	0	0	92	13	171	468
1991	184	268	-79	-8	0	0	0	0	0	0	0	0
1992	0	0	-2	-4	0	0	0	0	0	-700	392	-9
1993	319	-8	418	0	0	0	0	0	0	7	-81	-62
1994	201	105	-35	0	0	0	0	0	0	0	0	974
1995	-82	1687	-302	0	1	0	-162	0	0	0	0	0
1996	0	-2	0	0	0	275	0	0	-149	-49	-50	0
1997	195	0	0	0	0	2363	0	0	0	-103	-130	-36
1998	-3	-1	0	0	0	32	872	0	0	0	0	0
1999	0	0	-159	0	0	214	0	0	0	0	0	0
2000	-257	33	-42	0	0	398	0	-89	0	128	0	-128
2001	-53	20	-128	0	0	0	0	1	0	131	120	412
2002	31	-14	0	0	0	0	0	0	0	-6	0	257
2003	154	-165	0	0	-14	0	0	0	0	163	0	266
Average	**68**	**61**	**72**	**40**	**87**	**197**	**31**	**4**	**5**	**-76**	**-54**	**148**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-19:
CHANGES IN BANKS + JONES EXPORTS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	-2786	0	375	1	2	0	447	417	-3
1923	-374	0	0	-671	0	0	0	0	0	-108	-111	8
1924	0	0	-1	0	0	0	0	-3	-179	-23	45	148
1925	158	158	-19	0	-13	0	0	0	0	238	94	-228
1926	-42	-56	25	0	0	0	0	0	0	457	-167	-15
1927	-35	0	0	0	0	0	0	0	0	0	0	-124
1928	1	0	0	0	0	0	0	0	0	-175	0	1
1929	-4	-1	-8	0	0	1	0	-2	0	0	-3	-14
1930	15	135	0	0	0	0	0	0	-28	-103	-98	-13
1931	-3	-7	27	0	0	11	0	-4	7	12	-11	0
1932	75	0	0	0	0	-1	217	0	75	13	625	243
1933	-5	-5	-456	32	39	0	0	0	0	0	59	8
1934	-11	18	-38	50	0	2	0	0	0	44	-4	-4
1935	2	-5	-6	0	0	0	0	0	0	-277	-301	-3
1936	-5	-3	74	0	0	29	0	0	0	-60	-51	41
1937	-98	-2	10	0	-6	-2	-12	-26	-533	40	-1034	-2
1938	-72	0	0	1483	-12	0	0	0	0	-182	-184	0
1939	0	0	0	0	0	0	0	0	0	-3	-2	-55
1940	-13	-11	-8	0	0	0	0	0	0	50	0	0
1941	-10	0	0	0	0	-15	0	0	0	0	0	0
1942	-258	2	0	0	0	0	0	0	0	-3	-2	0
1943	-1	0	0	0	0	0	0	0	-2	-14	-7	1
1944	36	20	19	0	0	0	0	0	0	0	0	26
1945	5	0	0	0	0	-32	0	0	0	25	24	0
1946	-1	0	0	0	-1	0	0	0	0	-1	-1	0
1947	-1	-2	0	0	0	0	0	-3	0	-7	-17	-1
1948	-3	53	89	0	0	0	0	0	0	0	0	-2
1949	0	69	49	0	0	0	0	0	0	219	355	62
1950	101	70	-49	0	0	0	0	0	0	-130	-120	-52
1951	-1	0	0	0	-38	0	0	0	0	-151	0	3
1952	-3	-2	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	-5	0	0	0	0	0	0	0	0	-80	0	-3
1955	-7	0	0	0	12	0	0	0	0	31	10	7
1956	3	0	0	0	5	0	0	0	0	0	0	0
1957	0	-1	-3	0	0	0	-1	0	0	-12	0	1
1958	0	0	0	0	0	0	10	0	0	-4	0	0
1959	0	-1	0	0	0	0	0	0	0	-14	0	0
1960	0	-2	1	66	0	0	0	0	0	0	0	-49
1961	20	21	220	0	0	0	0	0	-6	-30	28	20
1962	38	32	41	-87	0	-4	0	0	0	0	0	32
1963	0	0	0	0	0	0	0	0	0	-185	0	11
1964	0	0	-1	0	0	0	0	0	0	23	21	-671
1965	637	0	0	0	0	0	0	0	-5	-1	0	0
1966	24	0	0	0	0	0	0	0	0	-14	0	-1
1967	3	0	0	0	0	0	0	0	0	0	0	0
1968	0	-1	-1	-1	0	0	0	0	0	-15	-1	0
1969	0	0	0	0	0	0	0	0	0	0	-4	0
1970	0	0	0	0	0	0	0	0	0	-8	0	1
1971	-4	0	0	0	0	0	0	0	0	-2	-1	0
1972	0	0	0	-2933	141	0	-365	0	-1	527	600	-6
1973	-158	0	0	0	0	0	0	0	0	-137	-173	48
1974	-2	0	0	0	0	118	0	0	0	0	0	0
1975	0	-6	0	0	0	0	0	0	0	-25	0	0
1976	0	0	0	0	0	0	0	0	0	0	0	0
1977	0	160	-19	149	0	12	0	3	0	-175	-247	9
1978	-92	37	0	0	0	0	0	0	0	46	46	1
1979	0	0	0	0	0	0	0	0	0	19	-170	1
1980	0	0	0	0	202	0	0	0	0	1	-27	0
1981	28	-1	-8	0	0	0	0	0	0	1	1	1
1982	-4	0	0	0	0	4	0	0	0	0	-4	0
1983	0	0	0	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0	-6	6	-30
1985	7	0	0	0	0	0	0	0	0	4	2	-4
1986	4	0	1	0	-4	0	0	0	0	1	-62	0
1987	-2	-1	0	-1	0	0	0	0	0	1	2	3
1988	-1	0	0	0	0	0	0	0	0	2	-1	0
1989	-1	173	123	0	184	0	0	0	0	0	0	-132
1990	90	-1	6	0	-1	0	0	0	8	25	1	23
1991	-8	14	-16	-1	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	-8	0	-1
1993	4	6	-9	0	0	0	0	0	0	0	1	-2
1994	4	0	-1	0	0	0	0	0	0	0	0	9
1995	1	6	-27	0	0	0	5	0	0	0	0	0
1996	0	-197	0	0	0	0	0	0	0	-4	-3	0
1997	-54	0	0	0	0	0	0	0	0	-13	-4	0
1998	5	-1	0	-1214	0	624	0	0	0	0	0	0
1999	0	0	0	0	0	0	0	0	0	0	0	0
2000	4	-1	-8	0	0	-4	0	0	0	-16	0	3
2001	-2	-6	0	0	0	0	0	0	0	0	0	0
2002	-2	-3	0	0	0	0	0	0	0	0	0	0
2003	1	-1	0	0	-1	0	0	0	0	-4	0	1
Average	**0**	**8**	**0**	**-72**	**6**	**14**	**-2**	**0**	**-8**	**3**	**-6**	**-9**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-20:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(A) Alternative 1

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	215	217	570	0	670	297	288	445	423
1923	197	409	405	522	396	486	0	670	296	320	357	402
1924	127	192	276	258	258	297	0	199	182	184	155	136
1925	-55	-1	69	39	52	300	-215	658	470	470	220	369
1926	143	186	272	165	6	570	0	670	470	350	327	336
1927	116	232	470	470	54	376	0	670	296	330	481	413
1928	318	423	366	151	368	470	0	670	180	411	431	429
1929	173	246	312	260	229	392	0	670	470	105	195	213
1930	56	-37	46	-107	470	570	0	670	220	153	335	335
1931	123	169	218	108	59	371	-233	10	-37	141	63	35
1932	-102	-23	104	470	-73	284	0	670	470	470	102	290
1933	130	172	151	184	74	470	-233	233	470	142	239	126
1934	-101	-41	7	27	-69	377	184	204	470	470	268	300
1935	-49	-19	31	-4	-64	470	-184	615	470	470	403	496
1936	273	354	337	25	-100	570	0	670	278	470	424	419
1937	235	321	368	131	113	570	-55	653	272	271	331	386
1938	238	439	470	360	328	469	0	670	310	482	481	478
1939	447	410	470	419	356	470	0	363	388	256	350	447
1940	184	279	329	47	102	470	-167	470	304	470	511	397
1941	230	317	462	130	470	469	0	670	334	482	481	478
1942	346	405	446	409	348	472	0	670	318	482	481	478
1943	256	426	443	367	353	471	0	670	310	482	481	386
1944	260	365	410	186	151	370	0	670	470	200	385	409
1945	162	299	331	263	470	533	-184	651	297	300	358	408
1946	260	464	311	652	314	473	0	670	103	308	322	361
1947	119	182	404	302	228	470	0	670	470	315	393	470
1948	221	253	264	3	-34	470	-184	470	470	470	239	434
1949	158	155	233	128	102	470	0	384	470	470	385	438
1950	182	252	315	161	470	470	-184	608	136	184	259	416
1951	127	141	686	468	470	473	0	670	297	474	481	416
1952	238	342	468	427	470	369	0	670	297	420	481	478
1953	475	470	310	285	350	473	0	670	310	423	426	381
1954	282	351	330	321	151	651	0	670	179	371	232	418
1955	134	403	373	470	46	474	0	670	127	334	349	381
1956	137	209	333	307	470	558	0	670	297	480	481	477
1957	360	371	456	346	295	475	0	670	277	366	389	396
1958	212	96	524	451	187	649	0	670	371	482	470	489
1959	399	406	470	253	334	471	0	670	215	379	269	460
1960	163	259	313	48	2	470	0	670	470	258	377	401
1961	155	137	196	129	110	370	-114	356	470	217	353	424
1962	129	92	211	101	101	452	-184	349	470	470	370	486
1963	237	470	470	646	344	471	0	670	155	357	376	405
1964	260	278	441	439	412	473	0	376	470	321	366	390
1965	140	292	322	470	349	376	0	670	270	369	421	407
1966	169	257	622	399	344	474	0	670	162	356	394	397
1967	141	348	341	364	470	393	0	670	295	367	452	478
1968	475	471	470	240	284	472	0	670	243	409	437	431
1969	183	292	435	-2	539	473	0	670	310	482	481	478
1970	422	471	466	463	471	467	0	670	307	482	481	428
1971	274	444	512	395	343	472	0	670	124	291	311	381
1972	182	162	249	506	398	474	0	670	216	388	419	432
1973	170	388	470	187	358	471	0	670	296	474	481	402
1974	228	302	735	396	346	471	0	670	310	481	481	478
1975	396	410	483	377	317	469	0	670	312	408	425	478
1976	432	409	471	470	149	470	0	373	398	399	367	233
1977	-11	122	203	-35	-111	161	-233	-87	-110	31	45	170
1978	90	130	110	84	43	470	0	470	470	470	470	387
1979	394	476	475	195	470	570	0	670	258	262	436	413
1980	188	376	221	657	466	472	0	670	297	481	481	414
1981	293	327	399	382	544	470	0	670	13	233	321	345
1982	118	242	470	391	413	467	0	670	320	482	481	476
1983	382	431	468	464	432	465	0	670	327	482	480	477
1984	474	466	465	471	428	473	0	670	286	461	468	394
1985	227	347	691	402	338	471	0	670	155	290	374	404
1986	150	234	294	229	270	570	-24	653	470	300	358	447
1987	254	355	391	342	258	370	0	670	254	185	329	370
1988	136	184	263	276	-8	570	0	670	470	132	258	288
1989	119	-1	37	-10	-45	470	-215	654	470	363	388	454
1990	46	150	257	53	470	570	0	167	189	52	-7	26
1991	-106	-43	-23	-77	-106	329	-233	149	151	13	117	219
1992	108	152	120	100	62	427	0	654	470	350	258	296
1993	-82	-25	31	-11	301	470	-167	470	470	470	470	411
1994	244	332	386	144	85	441	0	283	325	375	284	223
1995	-31	82	234	157	249	470	-152	634	470	470	533	658
1996	407	415	464	356	275	472	0	670	288	458	469	458
1997	246	402	419	404	472	474	0	670	307	456	464	397
1998	244	410	424	362	154	570	0	670	322	482	481	478
1999	407	455	464	264	329	473	0	670	310	482	481	396
2000	264	369	411	179	281	570	0	670	218	326	310	417
2001	213	304	362	281	215	570	0	670	123	223	354	377
2002	140	199	357	35	470	570	0	670	211	233	377	396
2003	145	219	300	18	470	570	-89	661	132	50	254	447
Average	**204**	**276**	**349**	**261**	**256**	**470**	**-35**	**584**	**304**	**351**	**368**	**390**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-20:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(B) Alternative 2

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	470	395	470	448	207	570	0	670	297	288	445	423
1923	197	469	469	522	396	543	0	670	296	320	357	402
1924	125	190	275	257	338	295	0	196	179	183	151	132
1925	-59	-3	66	283	80	300	0	658	470	470	230	379
1926	145	200	278	397	13	570	0	670	470	350	324	328
1927	111	462	470	470	470	570	0	670	296	330	481	413
1928	309	468	372	400	471	470	0	670	180	411	431	429
1929	164	240	307	256	308	390	0	670	470	105	182	201
1930	48	-42	359	-41	470	570	0	670	470	350	335	341
1931	127	172	221	327	39	371	-233	15	-31	143	70	40
1932	-3	147	412	470	8	278	0	670	470	470	97	286
1933	128	167	147	399	52	470	-233	233	470	142	235	122
1934	-103	-3	121	393	-77	374	184	196	470	470	256	279
1935	-58	-28	16	288	-71	470	-184	615	470	470	403	497
1936	275	356	338	260	-111	570	0	670	277	470	540	419
1937	233	318	366	364	102	570	-55	653	399	269	330	386
1938	239	475	470	463	448	469	0	670	310	482	481	478
1939	474	409	470	471	472	470	0	364	388	257	350	449
1940	186	281	330	291	95	470	-167	470	304	470	511	397
1941	233	319	471	379	470	625	0	670	334	482	481	478
1942	474	469	467	466	470	472	0	670	318	482	481	478
1943	256	469	468	466	470	471	0	670	310	482	481	386
1944	261	366	410	424	140	370	0	670	470	200	385	410
1945	164	468	476	473	470	533	-184	651	366	300	358	408
1946	261	466	311	652	311	594	0	670	103	308	322	362
1947	120	183	469	302	344	470	0	670	470	315	393	471
1948	222	254	264	246	-33	470	-184	470	470	470	239	434
1949	162	158	236	130	104	470	0	384	470	470	385	440
1950	184	254	316	365	470	470	-184	608	470	470	328	416
1951	142	282	736	468	470	473	0	670	297	474	481	416
1952	249	351	473	470	470	492	0	670	297	420	481	478
1953	475	470	464	469	365	473	0	670	310	423	426	381
1954	292	470	333	469	260	668	0	670	179	371	232	418
1955	141	467	467	470	172	474	0	670	127	321	350	375
1956	131	205	461	321	470	570	0	670	297	480	481	477
1957	474	374	457	468	419	485	0	670	284	366	389	402
1958	464	270	524	481	467	635	0	670	371	482	470	489
1959	475	393	470	469	318	469	0	670	215	379	269	465
1960	169	263	316	50	108	470	0	670	470	257	377	404
1961	157	139	197	337	135	370	-114	357	470	217	353	430
1962	134	96	214	105	226	452	0	349	470	470	370	491
1963	332	470	470	646	684	471	0	670	165	368	388	405
1964	426	466	470	460	462	473	0	373	470	319	364	388
1965	138	465	466	470	470	376	0	670	271	369	421	407
1966	170	370	733	469	465	474	0	670	162	356	394	401
1967	144	466	453	470	470	543	0	670	295	367	452	478
1968	475	471	470	465	296	472	0	670	243	409	437	431
1969	184	293	462	248	539	676	0	670	310	482	481	478
1970	473	471	466	463	471	473	0	670	307	482	481	428
1971	276	468	512	470	343	472	0	670	310	291	311	424
1972	215	161	467	616	471	474	0	670	215	388	419	432
1973	170	462	470	355	440	471	0	670	296	474	481	402
1974	229	311	735	469	466	471	0	670	310	481	481	478
1975	474	410	484	470	465	469	0	670	312	408	425	478
1976	472	472	471	471	254	470	0	373	399	401	370	235
1977	-10	124	204	-34	-110	162	-233	-46	131	143	45	170
1978	90	130	456	156	41	470	0	470	470	470	470	387
1979	375	476	476	428	470	570	0	670	277	262	436	413
1980	189	469	306	657	466	472	0	670	297	481	481	414
1981	292	327	399	471	544	470	0	670	13	233	321	344
1982	117	470	470	477	470	467	0	670	320	482	481	476
1983	472	465	468	464	466	465	0	670	327	482	480	477
1984	474	466	465	471	471	473	0	670	286	461	468	394
1985	227	386	724	470	458	471	0	670	155	290	374	405
1986	150	234	294	472	270	570	-24	653	470	364	358	447
1987	254	355	392	476	362	370	0	670	399	186	329	373
1988	139	186	265	476	-8	570	0	670	470	366	257	287
1989	119	-2	36	-11	-45	470	-215	654	470	363	388	460
1990	51	153	259	274	470	570	0	166	189	50	-10	24
1991	-108	-44	47	90	79	470	0	163	161	187	200	220
1992	108	152	140	100	176	470	0	654	470	350	257	295
1993	-83	-26	30	238	303	470	0	470	470	470	470	411
1994	254	347	393	328	51	439	0	283	326	376	287	225
1995	-30	83	374	438	270	470	-152	634	470	470	533	658
1996	475	414	464	465	395	472	0	670	288	458	469	458
1997	247	468	464	462	472	474	0	670	307	456	464	397
1998	245	486	480	479	277	570	0	670	322	482	481	478
1999	475	470	464	469	328	473	0	670	310	482	481	396
2000	265	369	412	423	273	570	0	670	218	326	309	417
2001	213	303	362	473	231	570	0	670	226	223	354	376
2002	139	198	472	249	470	570	0	670	296	233	376	389
2003	141	216	447	241	470	570	-89	661	132	49	254	443
Average	**221**	**308**	**388**	**383**	**308**	**484**	**-25**	**584**	**324**	**364**	**371**	**390**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-20:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(C) Alternative 3

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	-1	0	142	0	197	-173	-131	11	8
1923	-1	-1	-1	-4	0	6	0	207	-174	-4	11	44
1924	-2	-1	-1	-2	-1	-2	0	-2	-211	-75	-116	-151
1925	-162	-137	-107	-132	-95	-147	-215	-273	370	370	267	-6
1926	-5	-4	-3	-80	126	-247	0	-261	-506	250	65	-24
1927	-17	-14	370	370	370	470	0	430	-174	-140	11	-3
1928	-28	-3	42	-9	10	0	0	-204	-496	549	179	-15
1929	-19	-14	-11	-8	-45	0	0	-284	-526	256	-19	-18
1930	-44	-171	-104	195	370	470	0	89	370	-56	58	-22
1931	-14	-11	-41	-144	-147	0	-233	-179	-326	-90	-181	-226
1932	-214	-180	-153	370	265	247	0	570	370	361	-136	-19
1933	-10	-9	-6	-8	-91	0	-233	554	370	43	-19	-146
1934	-218	-188	-122	-169	135	0	-48	0	-526	370	0	5
1935	-178	-187	-126	-164	174	320	-184	-281	370	370	289	-8
1936	-5	-3	-64	-121	174	226	0	211	-175	-170	-3	-11
1937	-20	-14	-11	-32	-8	458	-55	196	-173	-170	-112	2
1938	-36	-23	70	-7	-7	-1	0	180	-160	12	11	8
1939	4	2	0	-11	-17	0	0	0	-306	206	10	-50
1940	-34	-28	-20	-109	0	370	-167	370	-146	140	-133	-4
1941	-41	-29	-22	0	105	-1	0	154	-136	12	11	8
1942	4	1	-5	-4	0	2	0	169	-152	12	11	8
1943	4	-1	-2	-4	0	1	0	180	-160	12	11	0
1944	-37	-25	-15	-13	-19	317	0	290	-174	-166	-10	-41
1945	-41	-35	-31	-30	0	433	-184	342	-173	-170	-112	-4
1946	-51	-39	63	36	-137	128	0	214	-173	-8	11	-52
1947	-44	-37	-27	-22	-81	0	0	89	-506	131	-9	-64
1948	-45	-93	-115	-154	-167	0	-184	370	370	370	239	-18
1949	-20	-86	-69	-120	-136	0	0	89	-506	370	55	-33
1950	-26	-21	-15	-122	370	370	-184	508	94	-170	-112	-5
1951	-32	46	-5	-2	0	3	0	196	-173	9	11	-6
1952	-29	-21	-13	0	264	-101	0	180	-173	-50	11	8
1953	5	0	-6	-1	3	3	0	179	-160	12	11	19
1954	-6	-15	-17	-10	46	1	0	-204	-146	380	11	-13
1955	-28	-21	-18	245	-175	4	0	239	-506	286	34	-43
1956	-34	-26	-21	37	184	-91	0	177	-173	10	11	7
1957	4	2	1	-12	0	12	0	189	-172	12	11	-37
1958	-41	94	-4	-5	-6	-1	0	117	-99	12	0	19
1959	5	2	0	-10	0	-203	0	125	-496	531	81	-40
1960	-32	-22	-18	-79	-106	0	0	89	-506	194	-6	-48
1961	-36	-116	-111	-151	-138	383	-114	74	-506	250	-3	-80
1962	-88	-186	-117	-176	-130	-127	-184	-75	370	370	211	-24
1963	-169	370	370	546	252	1	0	165	-148	12	11	-2
1964	-27	-17	74	-10	-8	3	0	89	-14	-37	-35	-33
1965	-27	-21	-16	370	-77	-94	0	-206	-123	303	10	8
1966	-28	31	-3	-1	1	4	0	215	-173	-9	11	-36
1967	-25	-19	-26	0	338	-52	0	161	-175	-103	11	8
1968	5	1	0	-16	13	2	0	215	-496	303	9	-31
1969	-32	-24	-21	195	-101	3	0	181	-160	12	11	8
1970	3	1	-4	-7	1	3	0	185	-163	12	11	-30
1971	-35	-19	86	0	-130	122	0	180	-160	12	11	8
1972	5	-23	-17	38	1	4	0	214	-496	303	11	-42
1973	-29	-28	208	-115	-3	1	0	198	-496	319	11	-3
1974	-30	42	-3	-1	2	1	0	180	-160	11	11	8
1975	4	2	-2	-13	12	-1	0	179	-158	12	10	8
1976	2	2	1	-11	-11	0	0	-284	-249	-36	-74	-238
1977	-217	-171	-152	-163	-206	-181	-233	-284	-275	-7	0	0
1978	0	0	-34	-2	0	0	0	370	370	370	370	28
1979	-2	-1	-1	-2	370	470	0	570	-496	394	127	-1
1980	-4	-3	50	-39	-4	2	0	194	-173	11	11	8
1981	-3	10	0	-1	-2	0	0	244	-506	220	65	-15
1982	-11	-10	298	-257	0	-3	0	169	-150	12	11	6
1983	2	-5	-2	-6	-4	-5	0	162	-143	12	10	7
1984	4	-4	-5	1	1	3	0	184	-162	12	11	34
1985	-14	-13	-1	0	1	1	0	245	-174	-38	-4	-21
1986	-16	-13	-10	-13	58	395	-24	164	-173	-170	-112	7
1987	5	2	0	-4	-7	72	0	-261	-506	214	-4	-24
1988	-16	-13	-9	-8	-367	-281	0	570	-526	266	-2	-14
1989	-21	-182	-122	-153	-184	0	-215	-277	370	194	-1	-40
1990	-191	-162	-105	-138	370	470	0	0	-326	-187	-253	-236
1991	-223	-188	-35	0	0	0	0	8	-8	0	0	0
1992	0	0	0	0	0	0	0	554	370	250	1	11
1993	-210	-192	-118	-147	0	0	-124	370	370	370	370	1
1994	7	5	4	-87	-85	-181	0	0	-326	4	-110	-196
1995	-192	-160	-98	-98	265	370	-152	534	370	370	433	431
1996	5	2	-6	-5	-4	2	0	173	-155	12	11	8
1997	4	-2	-6	-8	2	4	0	184	-163	12	10	38
1998	12	8	5	4	33	-101	0	164	-148	12	11	8
1999	5	0	-6	-1	3	3	0	179	-160	12	11	37
2000	1	3	2	1	0	81	0	196	-174	-99	10	-1
2001	-3	-2	-58	-2	0	384	0	243	-506	237	60	-19
2002	-14	-12	-7	120	-373	-247	0	570	93	-99	-4	-20
2003	-13	-10	-27	253	-373	295	-89	176	-174	-171	-111	-54
Average	**-38**	**-30**	**-8**	**-5**	**11**	**61**	**-34**	**150**	**-160**	**95**	**19**	**-18**

NOTE: Values with a grey background indicate months of Delta excess conditions.

TABLE C4-20:
CHANGES IN CCWD + LV DIVERSIONS (CFS), 2030 LOD, MODERATE FISHERY RESTRICTIONS

(D) Alternative 4

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1922	0	0	0	0	0	0	0	0	0	14	4	3
1923	1	0	0	-4	0	2	0	0	0	13	4	0
1924	2	1	1	0	0	1	0	1	-45	-74	-112	-148
1925	-159	-135	-105	-129	-59	0	0	0	0	0	0	3
1926	3	2	2	-10	0	0	0	0	0	0	0	2
1927	2	-1	0	0	0	0	0	0	0	31	184	0
1928	3	0	102	0	179	101	0	0	0	179	184	3
1929	4	3	2	1	-36	0	0	0	0	0	12	14
1930	-22	-154	-89	0	0	0	0	0	0	0	2	13
1931	10	8	-27	-130	-134	0	-233	-144	0	0	0	0
1932	0	0	-22	0	0	0	0	0	0	0	0	8
1933	6	5	3	2	-27	0	0	0	0	0	8	-8
1934	0	0	0	0	0	0	0	0	0	0	0	4
1935	-4	0	0	0	0	0	0	0	0	0	53	4
1936	3	2	-60	-2	0	0	0	0	-146	0	170	0
1937	3	2	2	-23	1	0	-16	0	0	0	62	2
1938	1	1	0	197	234	116	0	0	14	182	184	20
1939	1	1	0	3	4	0	0	0	0	0	0	17
1940	14	12	9	-88	0	-100	-167	-200	-146	0	41	0
1941	-4	-3	-2	0	0	110	0	0	38	182	184	134
1942	1	0	-2	-2	0	1	0	0	8	4	4	3
1943	2	0	-1	-2	0	0	0	0	10	4	4	0
1944	1	0	0	0	0	0	0	0	0	0	0	0
1945	1	1	1	-1	0	-37	-184	-19	0	0	62	0
1946	-1	0	0	182	36	1	0	0	0	14	4	1
1947	1	1	1	-1	-60	0	0	0	0	0	0	3
1948	3	-53	-93	-129	-120	0	-92	-187	0	0	0	1
1949	2	-69	-56	-109	0	0	0	0	0	0	1	5
1950	5	4	3	-17	0	0	0	0	0	0	62	0
1951	2	12	266	208	202	98	0	0	0	158	4	2
1952	11	8	5	0	0	0	0	0	0	-12	4	3
1953	2	0	-2	0	1	1	0	0	9	4	4	0
1954	5	1	2	1	-5	1	0	0	-146	154	4	1
1955	5	4	3	0	-12	1	0	0	0	13	0	5
1956	5	4	3	0	0	0	0	0	-2	2	4	3
1957	1	1	0	1	0	-1	0	0	2	11	4	1
1958	1	0	2	-2	-2	0	0	0	8	4	0	7
1959	2	1	0	0	0	0	0	0	0	14	4	0
1960	0	0	0	-68	-97	0	0	0	0	0	0	1
1961	1	-85	-93	-131	-112	0	-114	-15	0	0	0	7
1962	-38	-144	-81	0	0	0	0	-75	0	0	0	49
1963	27	0	0	176	214	102	0	0	25	182	184	1
1964	9	6	0	0	117	1	0	0	0	14	7	7
1965	7	6	5	0	0	0	0	0	0	-11	4	3
1966	-2	3	-1	0	0	2	0	0	0	14	4	-1
1967	0	0	-15	0	0	0	0	0	0	29	4	3
1968	2	0	0	0	-1	1	0	0	0	14	3	0
1969	0	0	0	0	0	1	0	0	10	4	4	3
1970	1	0	-1	-3	0	1	0	0	10	4	4	-1
1971	-2	-1	4	0	1	1	0	0	10	4	4	3
1972	2	-1	-1	1	1	2	0	0	0	14	4	-4
1973	-3	-2	0	7	-1	0	0	0	0	14	4	-1
1974	-5	1	7	-1	1	0	0	0	9	4	4	3
1975	1	1	-1	0	-1	0	0	0	10	4	4	3
1976	1	1	0	0	0	0	0	0	0	1	-35	-205
1977	-195	-149	-118	-148	-121	0	0	0	0	0	0	0
1978	0	0	0	-1	0	0	0	0	0	0	0	0
1979	3	2	2	1	0	0	0	0	0	24	184	0
1980	2	1	0	187	244	108	0	0	0	182	64	3
1981	1	1	0	1	-3	0	0	0	0	5	1	5
1982	4	4	0	-1	0	-1	0	0	9	4	4	2
1983	1	-2	-1	-2	-2	-2	0	0	9	4	4	3
1984	2	-2	-2	0	0	1	0	0	10	4	4	0
1985	-3	5	0	0	0	0	0	0	0	14	-1	-2
1986	-2	-1	-1	-3	0	0	-24	-17	0	0	62	12
1987	2	1	0	-1	-1	0	0	0	0	0	0	1
1988	1	1	1	-1	0	0	0	0	0	0	1	6
1989	-9	-172	-115	-141	-176	0	-215	-16	0	0	1	-27
1990	-86	0	-3	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	1	7
1993	-7	0	0	0	0	0	0	0	0	0	0	0
1994	2	1	1	-4	0	0	0	0	0	2	-2	0
1995	0	0	0	0	0	0	0	0	0	0	63	188
1996	193	197	219	126	-1	1	0	0	9	4	4	3
1997	1	-1	-2	-3	1	1	0	0	10	4	4	0
1998	4	3	2	1	0	-12	0	0	7	4	4	3
1999	2	0	-2	0	1	1	0	0	9	4	4	0
2000	1	1	1	0	0	0	0	0	0	16	4	0
2001	-1	-1	-1	-1	0	0	0	0	0	0	0	2
2002	2	2	1	0	0	0	0	0	0	0	1	7
2003	6	5	-19	0	0	0	-89	-9	0	0	67	-2
Average	**-2**	**-8**	**-3**	**-1**	**3**	**6**	**-14**	**-8**	**-3**	**18**	**22**	**2**

NOTE: Values with a grey background indicate months of Delta excess conditions.

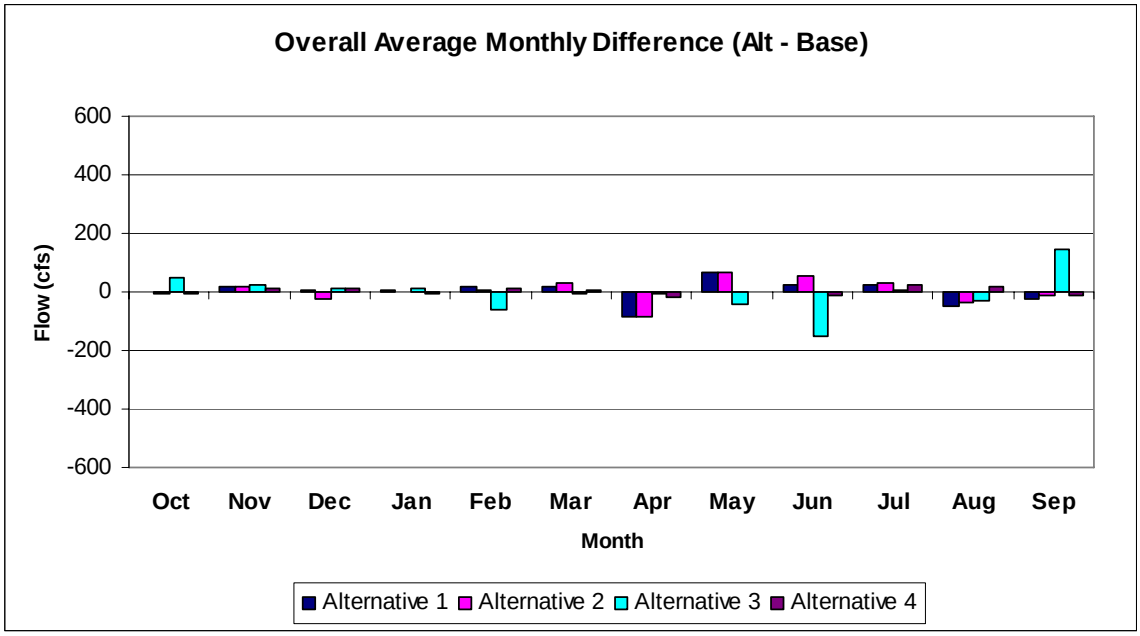


Figure C4-64: Changes in Average Monthly Sacramento River at Hood flow, 2030 LOD, Moderate Fishery Restrictions

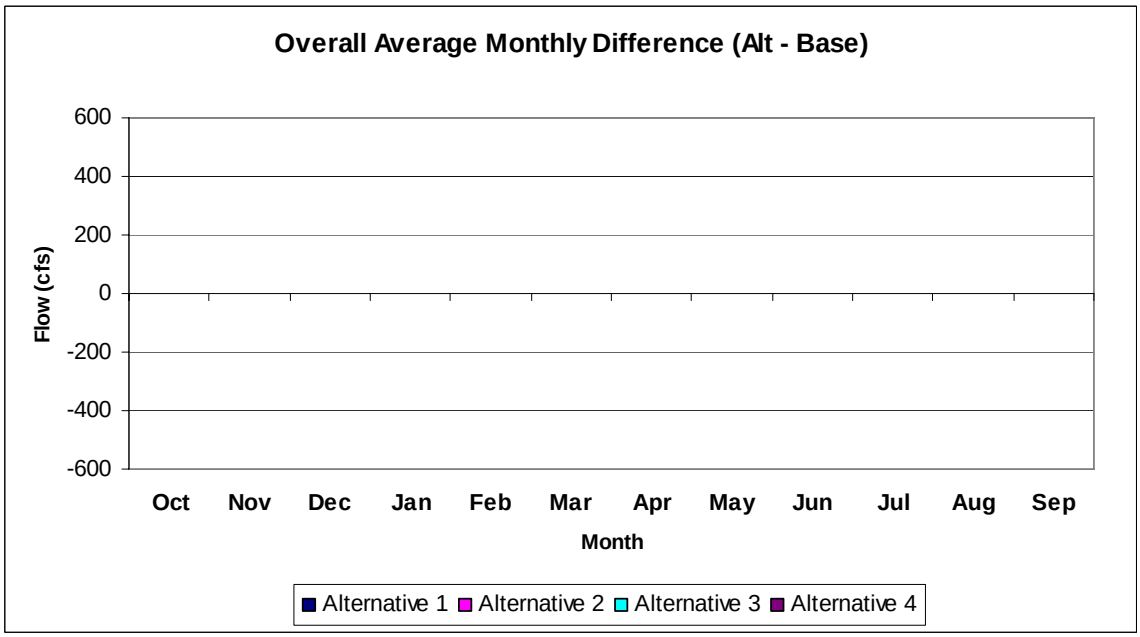


Figure C4-65: Changes in Average Monthly San Joaquin River at Vernalis Flow, 2030 LOD, Moderate Fishery Restrictions

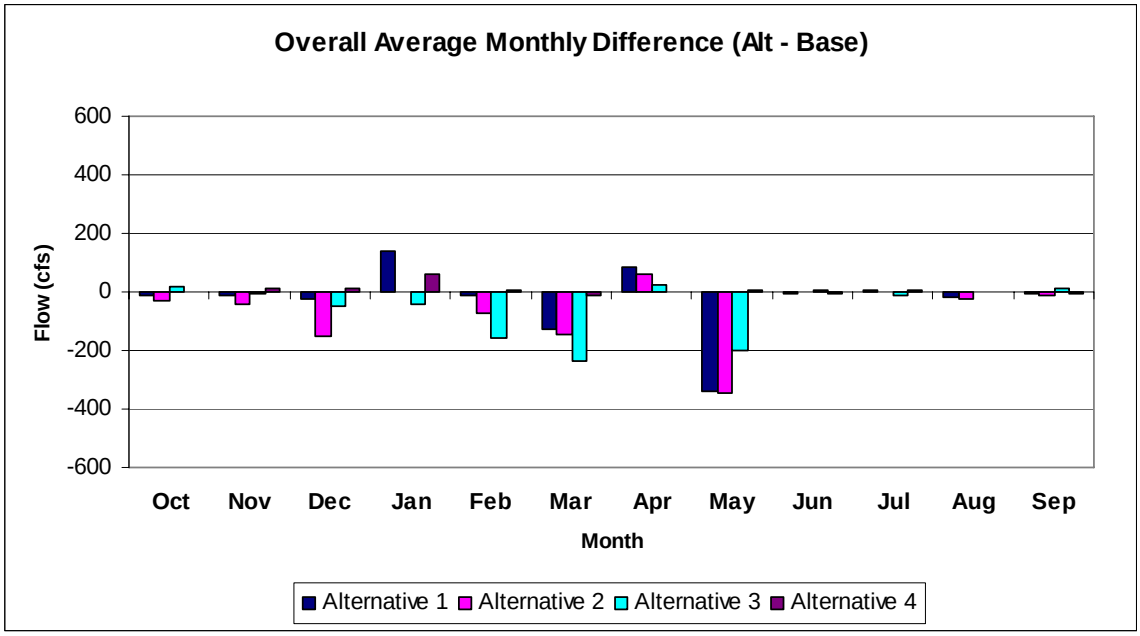


Figure C4-66: Changes in Average Monthly Delta Outflow, 2030 LOD, Moderate Fishery Restrictions

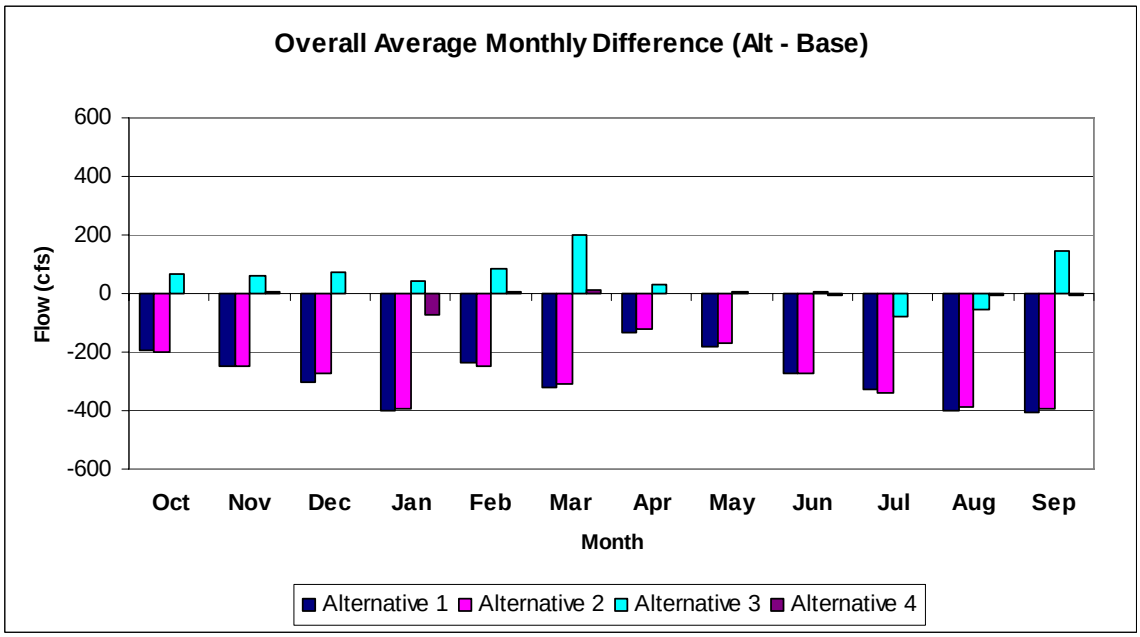


Figure C4-67: Changes in Average Monthly Banks + Jones Diversions, 2030 LOD, Moderate Fishery Restrictions

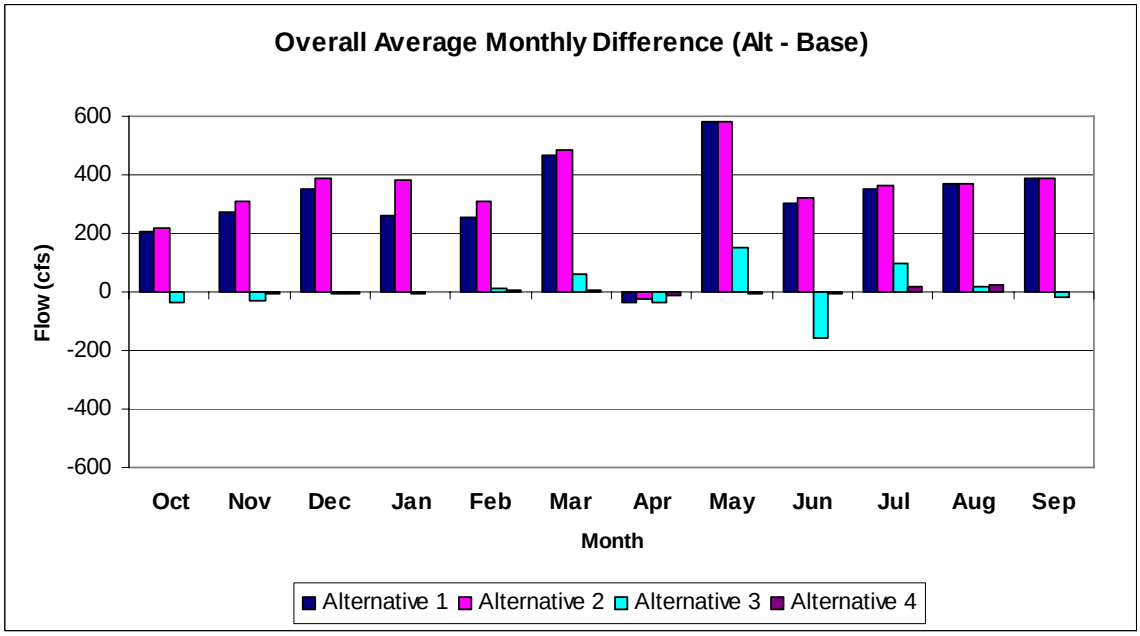


Figure C4-68: Changes in Average Monthly CCWD + LV Diversions, 2030 LOD, Moderate Fishery Restrictions

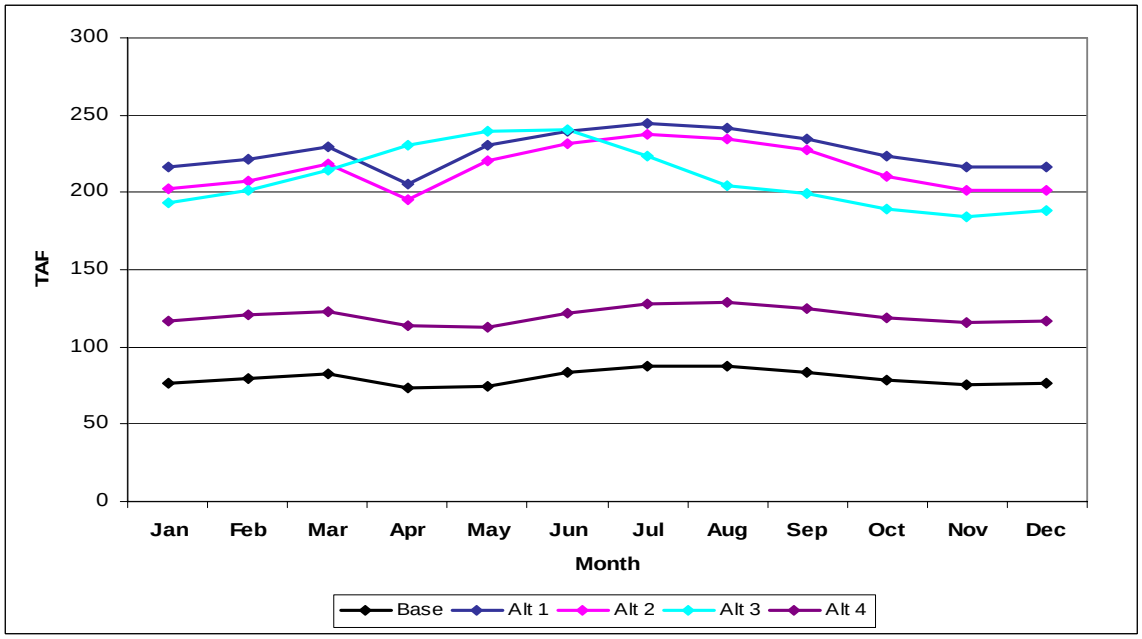


Figure C4-69: Monthly Average Los Vaqueros storage, 2030 LOD, Moderate Fishery Restrictions

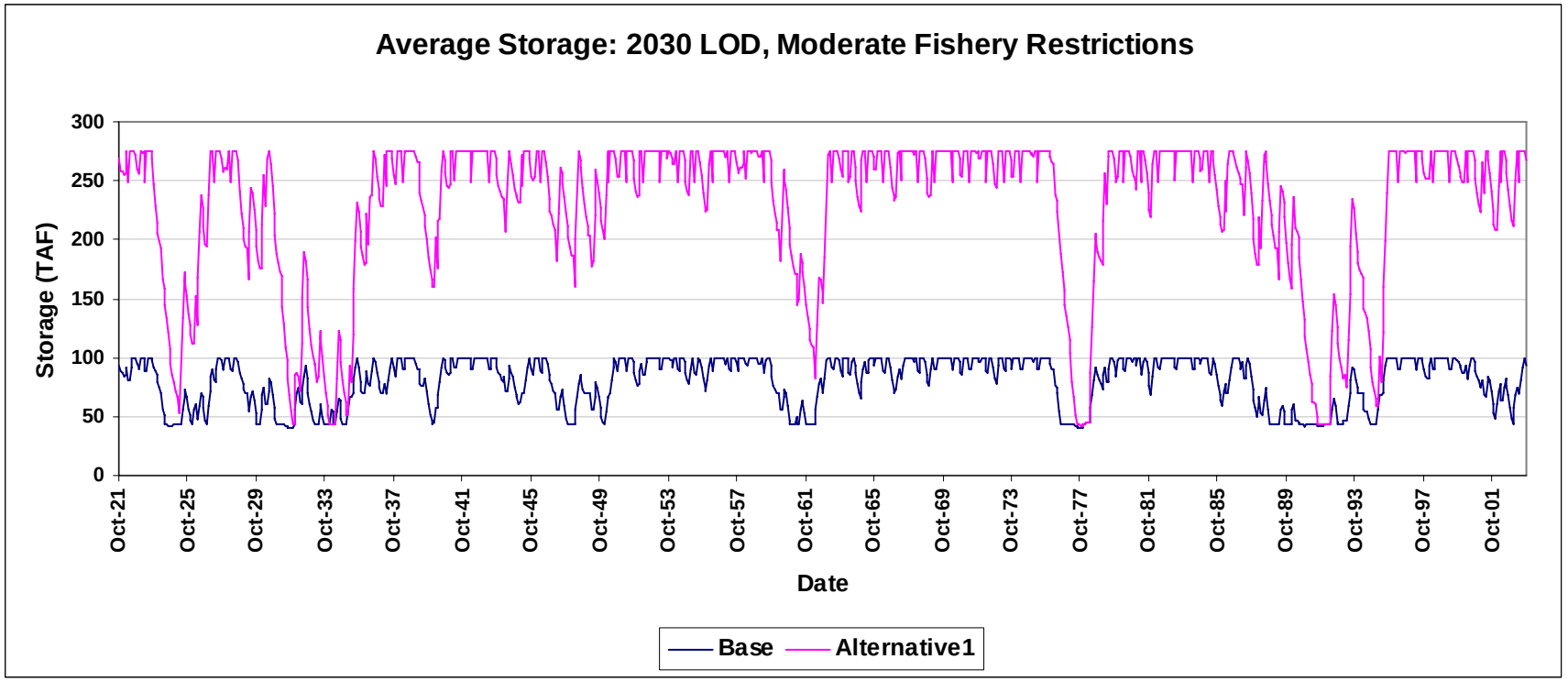


Figure C4-70: Timeseries of Alternative 1 and Base Los Vaqueros storage, 2030 LOD, Moderate Fisheries Restrictions

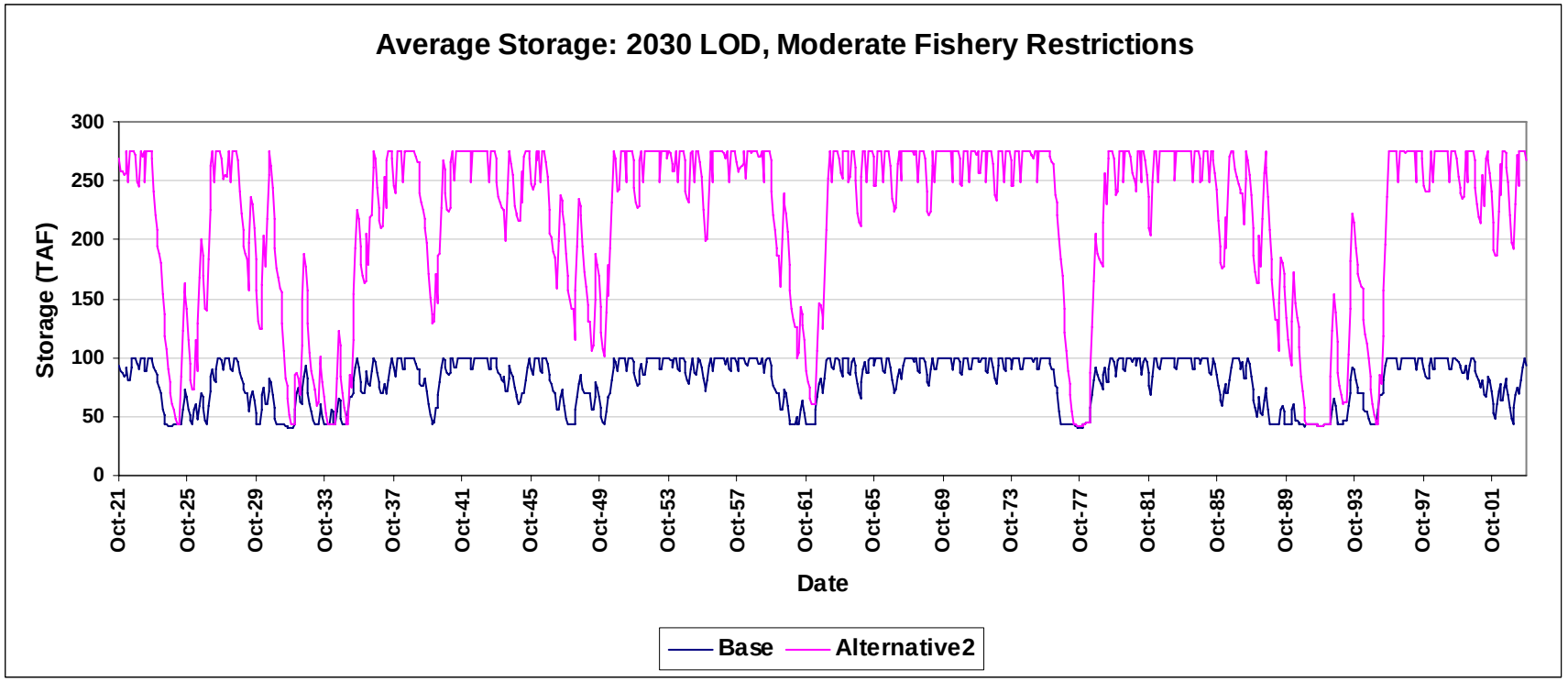


Figure C4-71: Timeseries of Alternative 2 and Base Los Vaqueros storage, 2030 LOD, Moderate Fisheries Restrictions

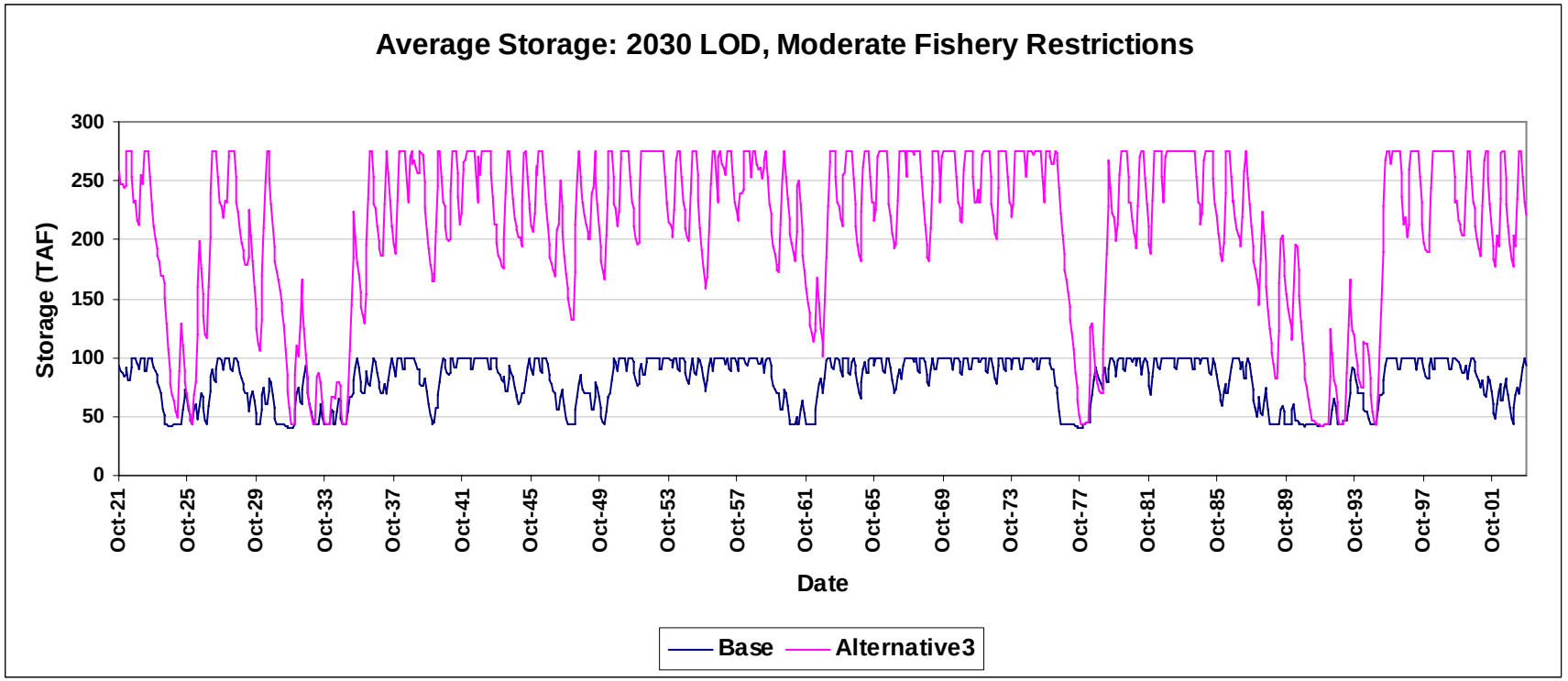


Figure C4-72: Timeseries of Alternative 3 and Base Los Vaqueros storage, 2030 LOD, Moderate Fisheries Restrictions

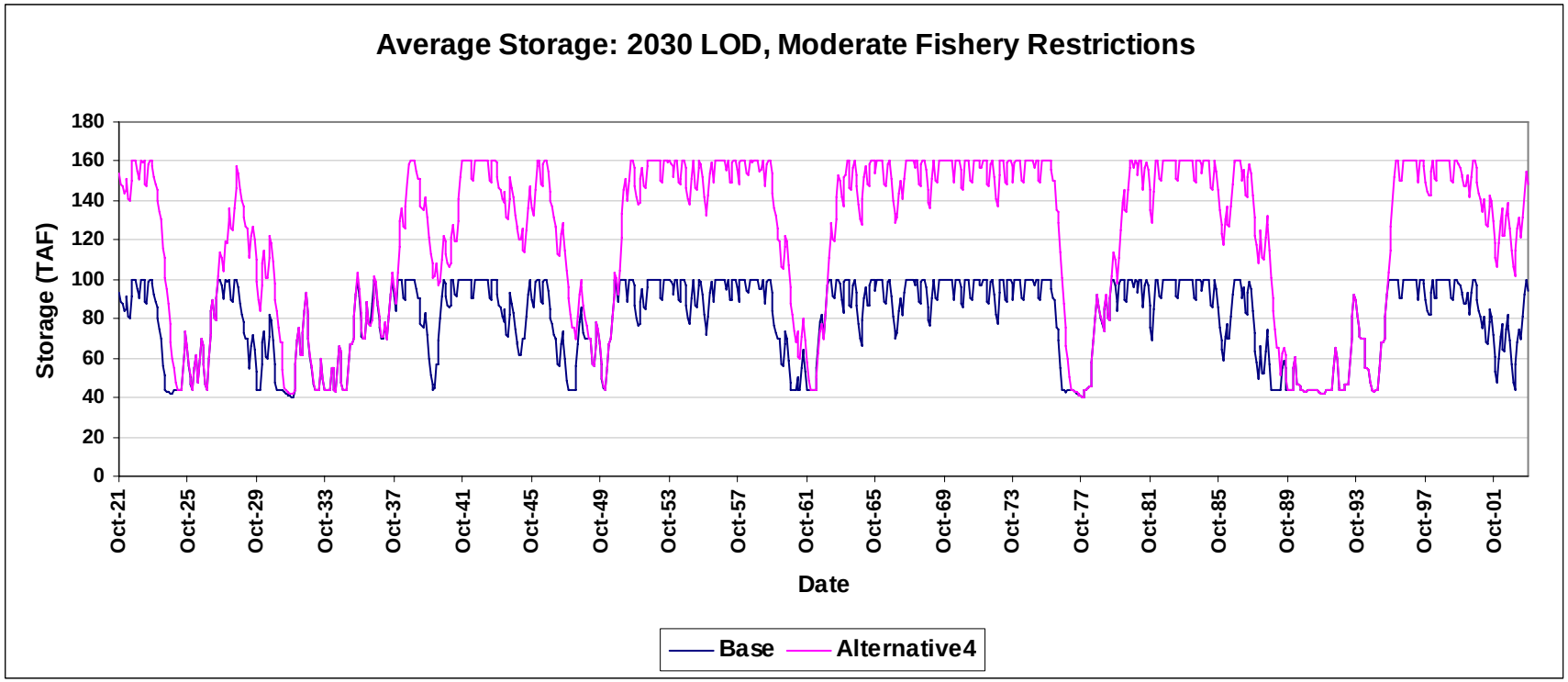


Figure C4-73: Timeseries of Alternative 4 and Base Los Vaqueros storage, 2030 LOD, Moderate Fisheries Restrictions

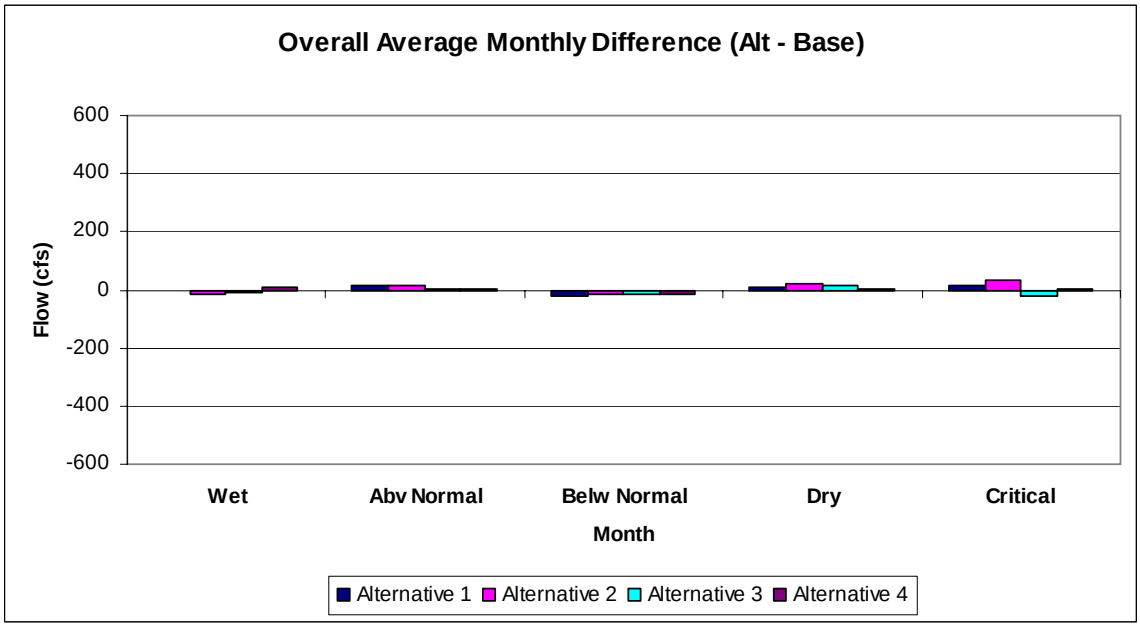


Figure C4-74: Changes in Sacramento River at Hood flow by water year type, 2030 LOD, Moderate Fishery Restrictions

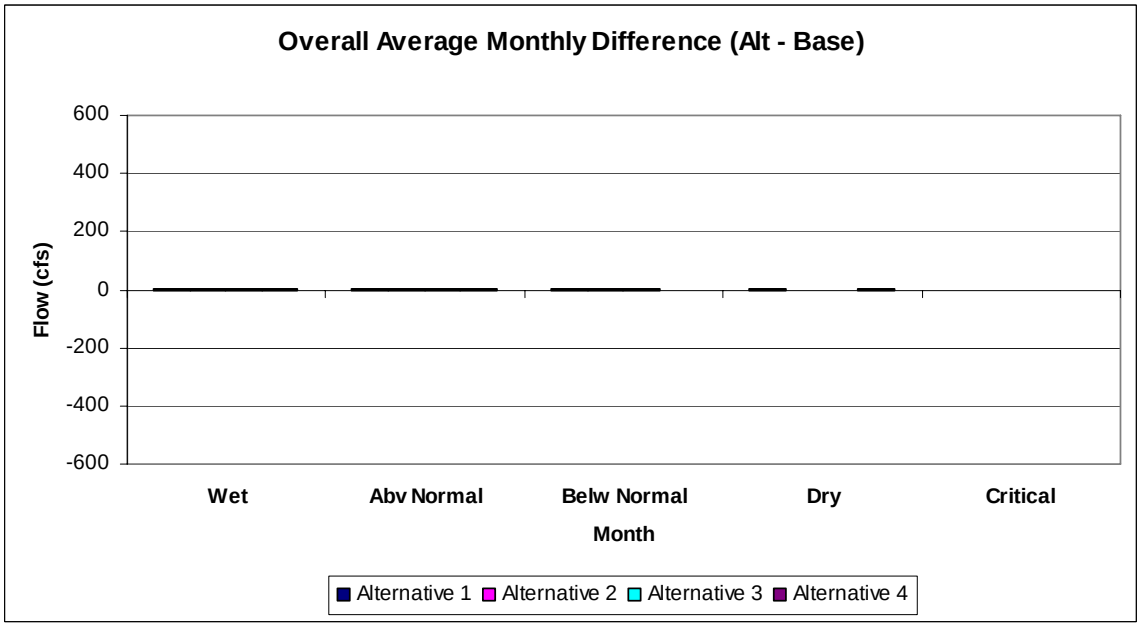


Figure C4-75: Changes in San Joaquin River at Vernalis flow by water year type, 2030 LOD, Moderate Fishery Restrictions

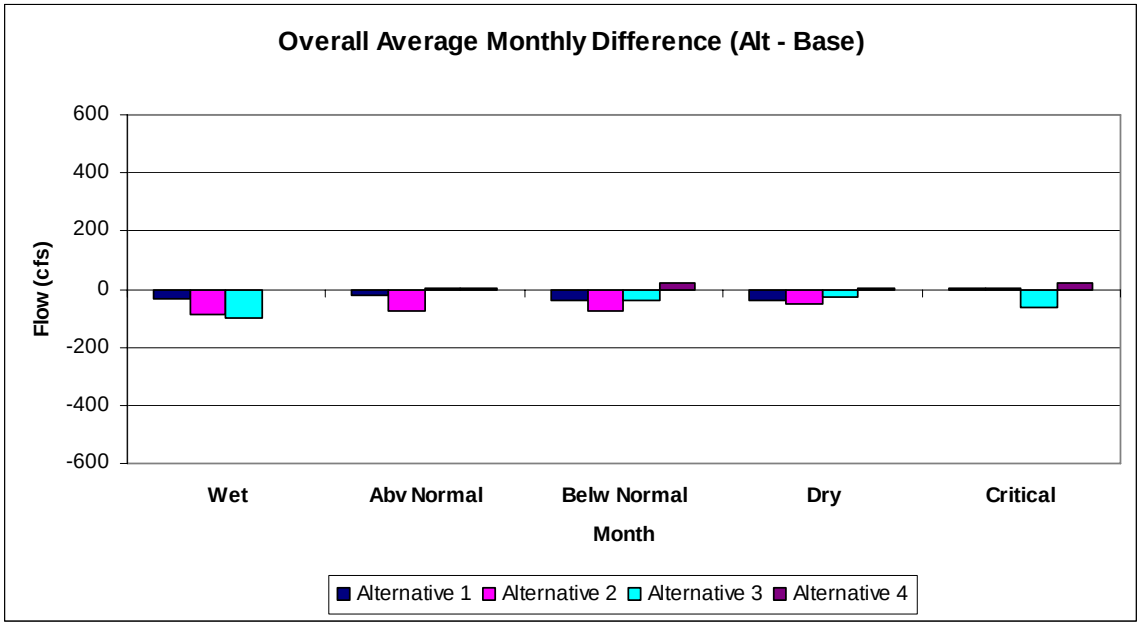


Figure C4-76: Changes in Delta Outflow by Year Type, 2030 LOD, Moderate Fishery Restrictions

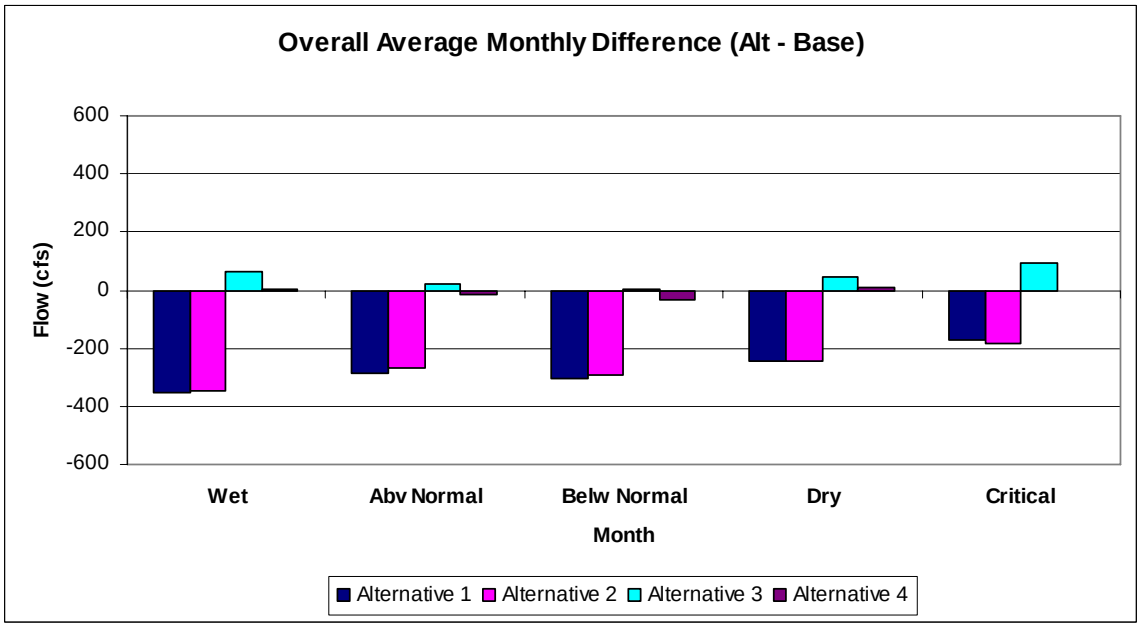


Figure C4-77: Changes in Banks + Jones Diversions by Year Type, 2030 LOD, Moderate Fishery Restrictions

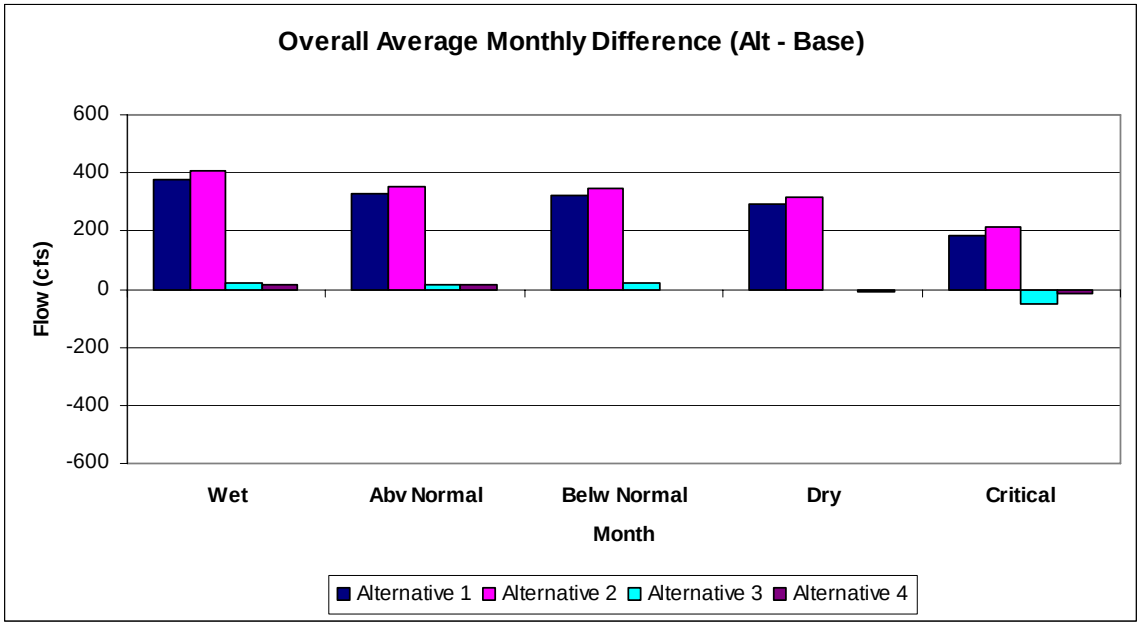


Figure C4-78: Changes in Project diversions by water year type, 2030 LOD, Moderate Fishery Restrictions

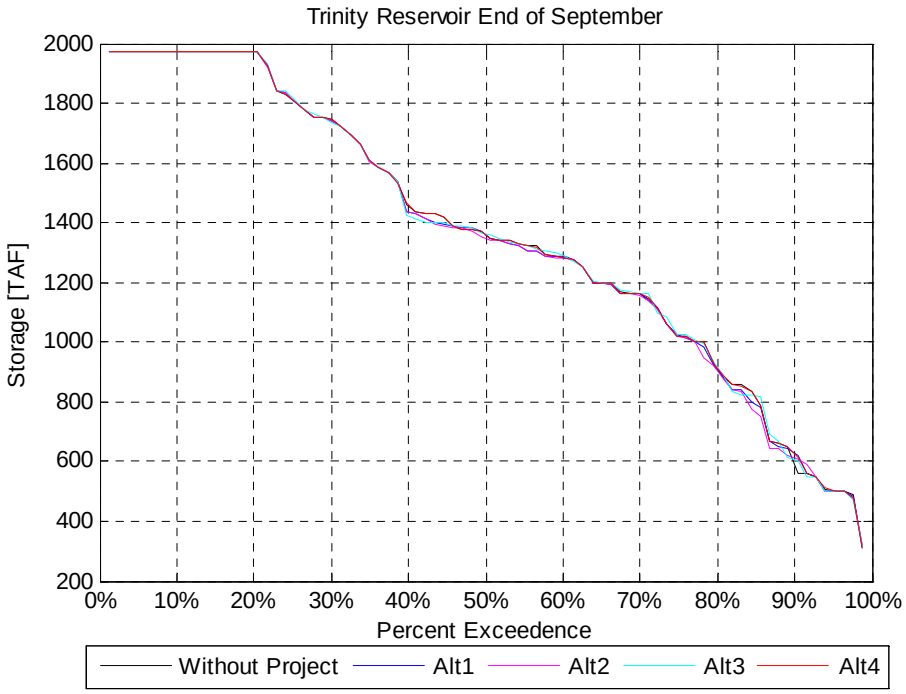


Figure C4-79: Trinity Reservoir end of September storage, 2030 LOD, Moderate Fishery Restrictions

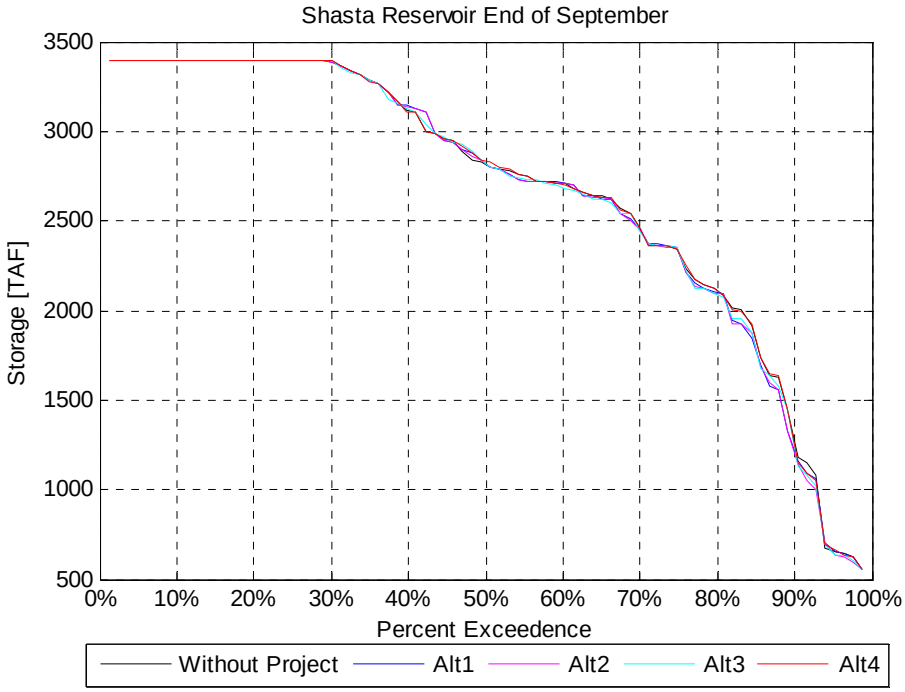


Figure C4-80: Shasta Reservoir end of September storage, 2030 LOD, Moderate Fishery Restrictions

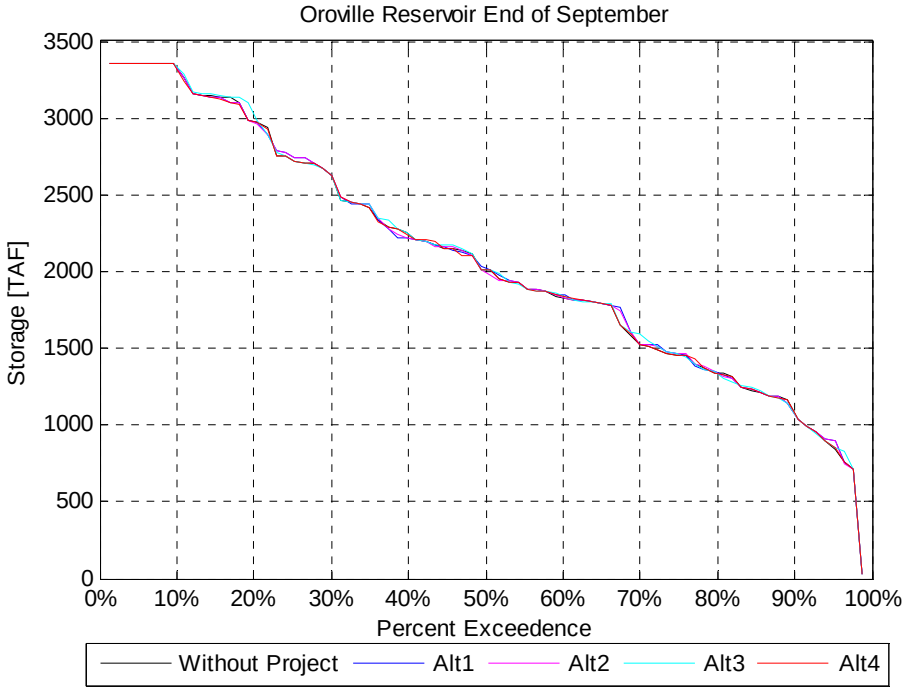


Figure C4-81: Oroville Reservoir end of September storage, 2030 LOD, Moderate Fishery Restrictions

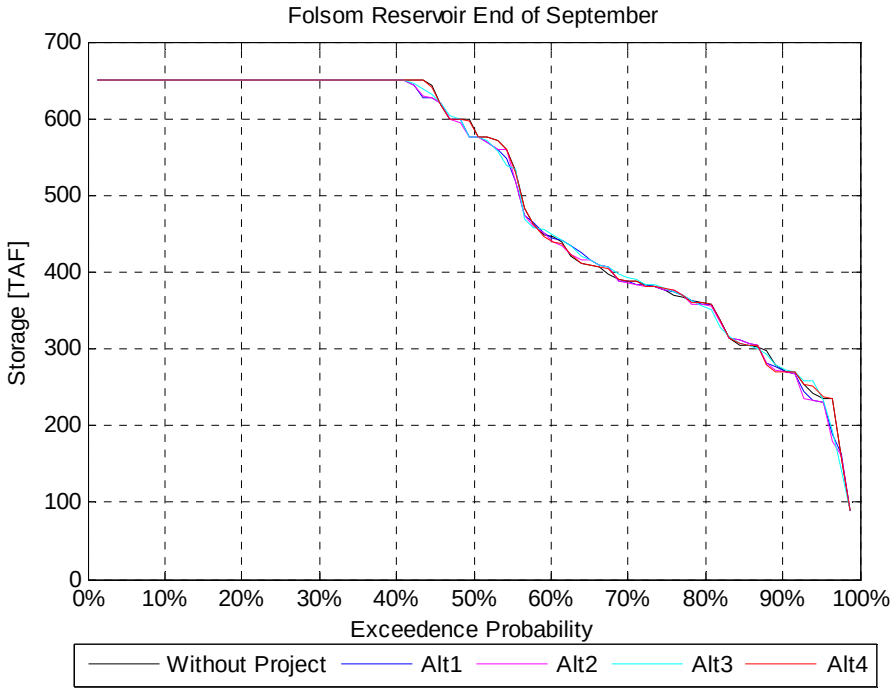


Figure C4-82: Folsom Reservoir end of September storage, 2030 LOD, Moderate Fishery Restrictions

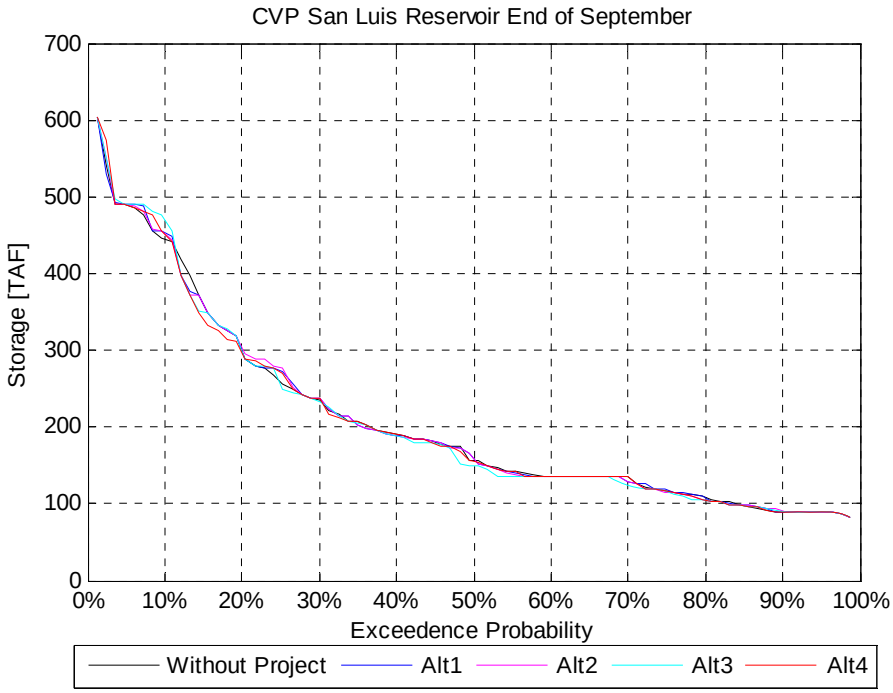


Figure C4-83: CVP San Luis Reservoir end of September storage, 2030 LOD, Moderate Fishery Restrictions

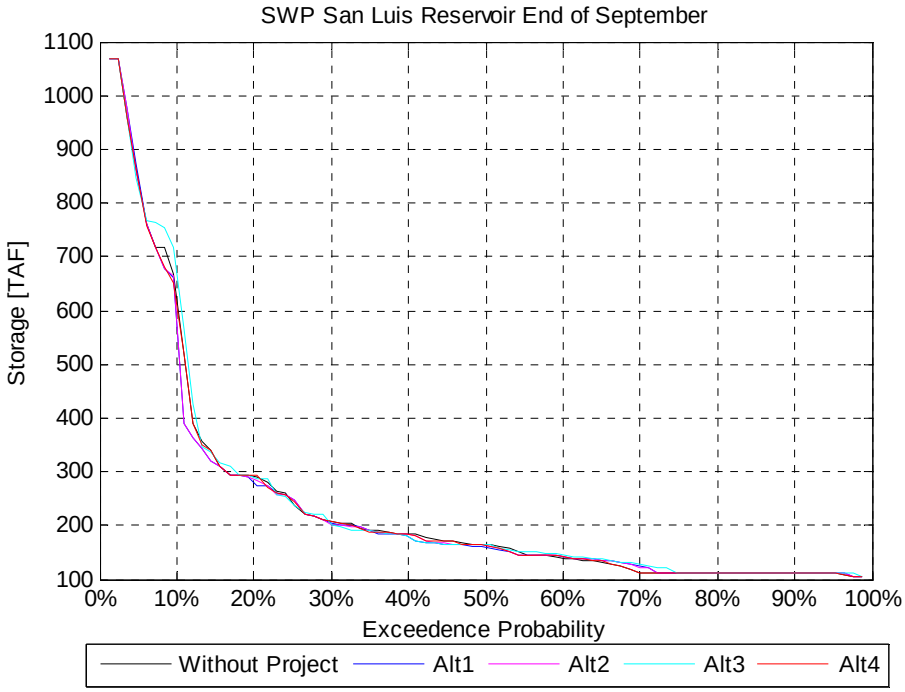


Figure C4-84: SWP San Luis Reservoir end of September storage, 2030 LOD, Moderate Fishery Restrictions

C-5 MODEL RESULTS - WATER QUALITY AND WATER LEVEL

Table of Contents

Introduction

This section contains tables and graphics of water quality and water levels derived from the DSM2 modeling for the Los Vaqueros Reservoir Expansion Project. These results are summarized and discussed in Section 4.2 of Chapter 4. The modeling approach and methodology is documented in Section 4.2 and in Appendix C-2. Model assumptions are documented in Appendix C-3.

Model results for water quality and water levels are presented in this appendix for without project conditions and with the project alternatives for four sets of operational conditions: 2005 level of development under moderate fishery restrictions; 2005 level of development under severe fishery restrictions; 2030 level of development under moderate fishery restrictions; and 2030 level of development under severe fishery restrictions.

For each set of conditions, water quality and water level data are presented at a variety of locations within the Delta for the water years 1976 through 1991. The tables and figures provided are described below in the sequence in which they appear for each set of conditions.

Water quality

Water quality results are reported as simulated Electrical Conductivity (EC), a measure of salinity, at the following key locations throughout the Delta:

- water quality compliance locations at Chipps Island, Collinsville, Emmaton, Jersey Point, Rock Slough (reported as Old River at Rock Slough data), Old River at Tracy Road Bridge, Old River at Middle River, San Joaquin River at Brandt Bridge, and San Joaquin River at Vernalis; and

- locations near the intakes of Delta water users at Jones Pumping Plant, Clifton Court Forebay, City of Stockton Intake at Empire Tract, San Joaquin River at Antioch, Barker Slough at North Bay Aqueduct, and Cache Slough at City of Vallejo Intake.

Tables of Salinity. The monthly average of the simulated electrical conductivity (EC) is presented for each month of the 16 year simulation, covering water years 1976 through 1991. At the bottom of the table, the long-term monthly averages are provided for the entire 16 year period, along with average monthly values for wetter water year types[1] (wet, above normal and below normal water years), and for dryer water year types (dry and critical water years). The 16-year study period does not include sufficient years in each water year type category to present average values for each water year type (e.g. there is only one below normal water year type from 1976 to 1991). Grouping the year types into wetter and dryer water year categories reduces the uneven weighting that would occur by taking long term averages over individual water year types.

[1] Water year types are defined using the Sacramento Valley Water Year Hydrologic Classification, as defined in D-1641 with a 40-30-30 index.

A table is presented for the without project condition (Existing Condition for the 2005 level of development and Future Without Project for the 2030 level of development) and for each alternative. Following the same format, another table presents differences in the monthly averages of simulated EC between the alternative and the without project conditions. In the table of differences, a positive value means that salinity increased in the alternative, relative to the without project condition.

Figures Comparing Salinity in each Alternative to the Without Project Condition. Four figures are provided for each project alternative to illustrate the change in simulated EC compared to the without project condition.

- The first figure illustrates the long-term (16-year) monthly average simulated EC for the without project condition and the project alternative.
- The second figure illustrates the long-term (16-year) monthly average difference in simulated EC between the project alternative and the without project condition
- The third figure presents time series of daily average simulated EC for the project alternative and without project condition; the changes between the alternative and without project condition are also shown.
- The fourth figure presents the probability of exceedence for the daily average of simulated EC for both the without project condition and the project alternative.

Water level

Water level (stage) data are reported at the following locations:

- locations within the southern Delta: Middle River near Howard Road Bridge, Old River near Tracy Road Bridge, Doughty Cut above Grant Line Canal Barrier, and East of Coney Island; and
- locations directly in front of CCWD's intakes on Old River and Victoria Canal. The largest change in water level would be expected to occur at these locations.

Figures Comparing Water Level in each Alternative to the Without Project Condition. Four figures are provided for each project alternative to illustrate the change in water level compared to the without project condition.

Water level data at each station the 16-year DSM2 modeling results include:

- The first figure presents the probability of exceedence for the tidal water level, simulated every 15-minutes, for both the without project condition and the project alternative.
- The second figure presents the probability of exceedence for the water level at lower-low tide for both the without project condition and the project alternative.

- The third figure illustrates the long-term (16-year) monthly average water level at lower-low tide for both the without project condition and the project alternative.
- The fourth figure shows the long-term (16-year) monthly average difference in water level at lower-low tide between the project alternative and the without project condition.

2005 Level of Development; Severe Fishery Restrictions

Water Quality

Chipps Island

Existing Condition

Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,567	6,549	8,181	8,994	5,816	2,159	3,777	8,189	11,183	11,706	11,525	13,167
1977	14,444	13,477	13,396	11,812	9,617	8,899	8,947	10,810	11,957	12,453	13,057	13,946
1978	14,522	14,389	10,314	493	214	215	245	552	1,442	4,179	8,401	9,844
1979	11,475	12,699	12,163	3,864	313	291	962	1,531	3,133	6,230	9,516	12,223
1980	12,954	10,191	5,850	298	216	221	600	1,326	2,047	4,438	8,336	11,288
1981	12,817	13,179	11,359	2,798	575	343	1,439	3,679	7,178	8,482	9,765	12,347
1982	13,781	2,345	184	202	194	207	192	216	583	3,333	7,628	2,998
1983	1,259	351	201	232	218	206	205	200	198	274	1,081	793
1984	1,881	266	193	206	235	229	933	2,204	4,423	5,793	8,753	11,513
1985	12,209	2,184	1,587	3,701	2,124	1,001	2,275	4,027	7,274	9,140	10,207	12,586
1986	13,136	12,231	8,981	3,341	208	208	412	1,383	3,190	5,308	8,605	10,592
1987	12,134	12,882	13,038	10,555	3,706	574	2,633	5,847	8,034	8,362	9,907	12,483
1988	13,908	13,714	11,545	2,640	2,603	5,224	5,566	6,937	8,284	10,395	12,036	13,656
1989	15,107	14,248	13,220	11,368	5,617	390	382	1,471	6,104	7,799	9,458	11,869
1990	13,099	13,482	12,900	6,116	3,946	3,904	4,717	7,553	10,436	12,199	12,694	13,797
1991	14,933	14,636	14,605	13,813	12,004	1,953	2,240	6,566	10,253	12,129	12,644	14,047
Avg	11,452	9,801	8,607	5,027	2,975	1,626	2,220	3,906	5,982	7,639	9,601	11,072
W/AN/BN	9,859	7,496	5,412	1,234	228	225	507	1,059	2,145	4,222	7,474	8,464
D/C	12,691	11,594	11,092	7,977	5,112	2,716	3,553	6,120	8,967	10,296	11,255	13,100

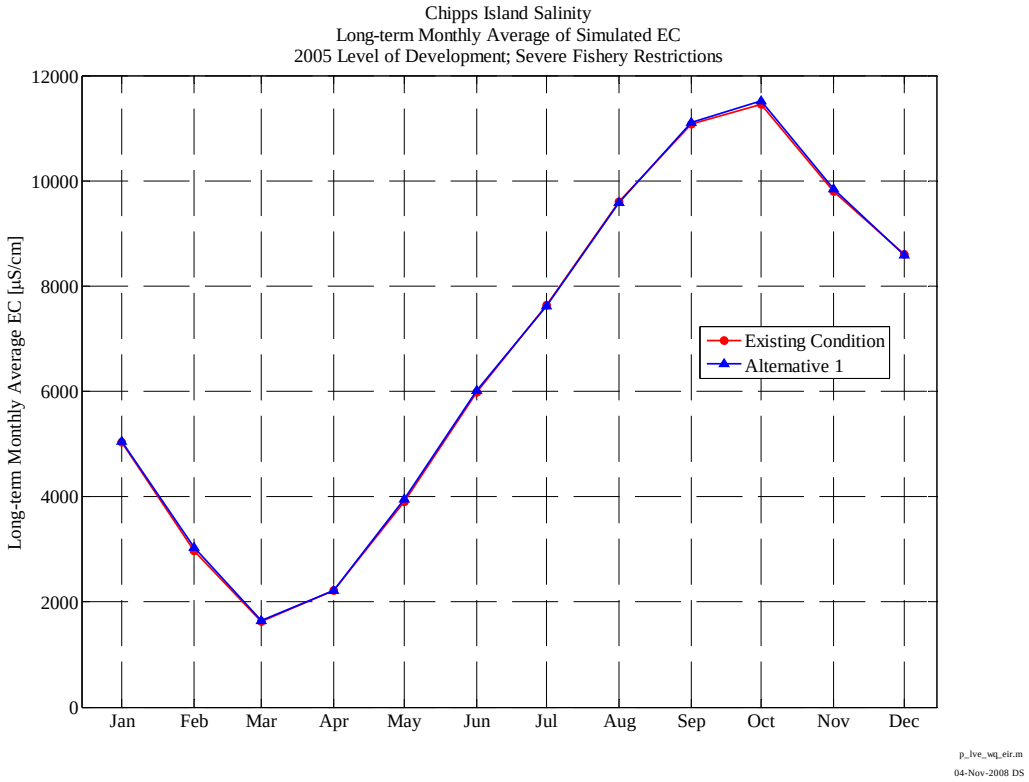
Alternative 1

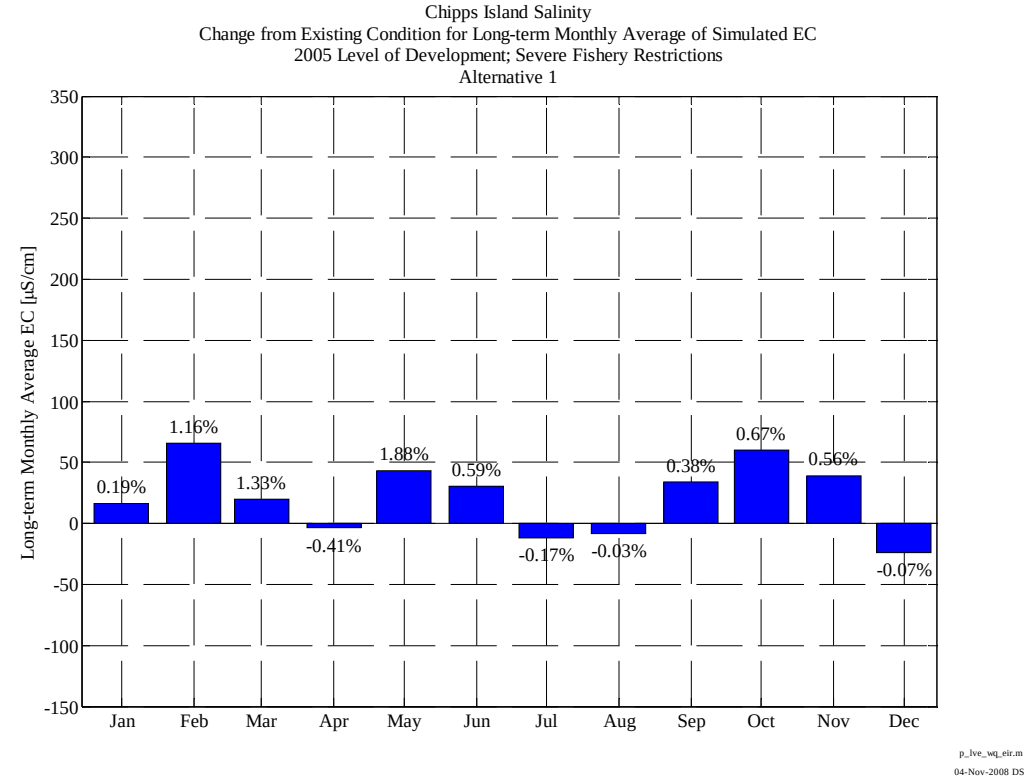
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

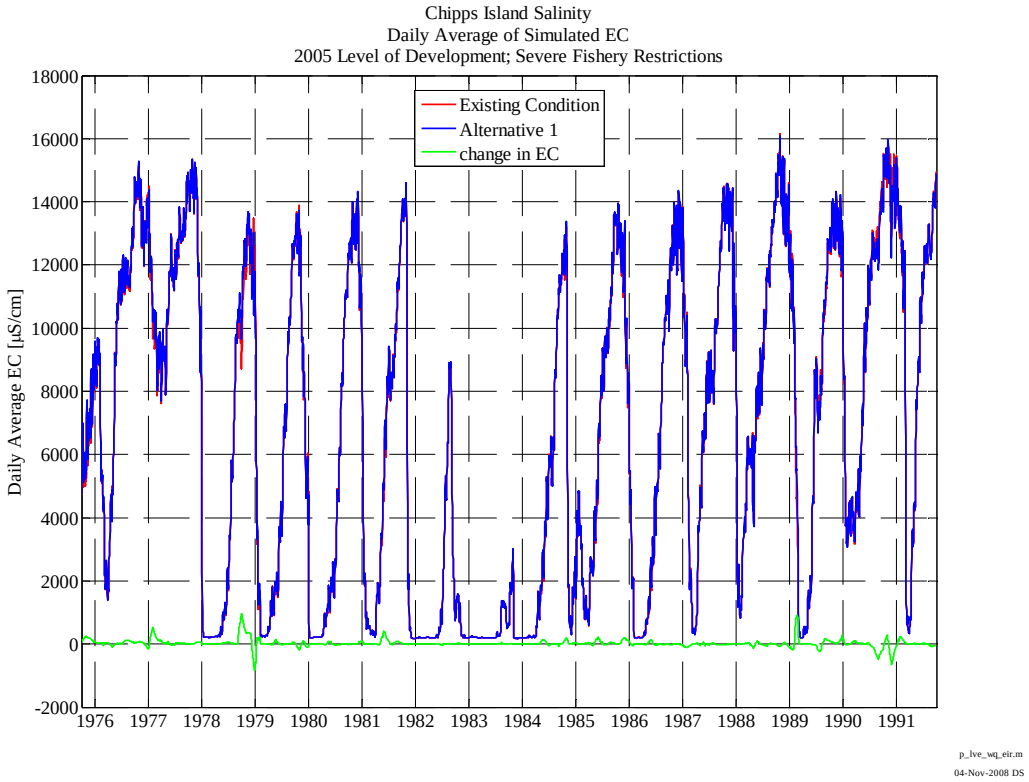
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,735	6,754	8,289	9,033	5,836	2,186	3,753	8,163	11,205	11,777	11,635	13,225
1977	14,501	13,535	13,322	12,058	9,910	9,012	8,971	10,840	11,944	12,480	13,079	13,962
1978	14,535	14,417	10,367	496	213	214	243	563	1,488	4,215	8,411	10,428
1979	12,061	13,051	11,742	3,882	327	294	950	1,594	3,153	6,220	9,512	12,257
1980	12,864	10,204	5,797	294	217	221	590	1,380	2,048	4,416	8,331	11,284
1981	12,822	13,186	11,424	2,825	575	341	1,428	3,902	7,404	8,488	9,811	12,402
1982	13,795	2,344	184	202	194	207	192	217	578	3,326	7,636	3,003
1983	1,274	353	201	232	218	206	205	200	198	274	1,084	794
1984	1,882	266	193	206	235	229	932	2,310	4,450	5,773	8,751	11,508
1985	12,325	2,229	1,608	3,717	2,125	1,021	2,268	4,132	7,388	9,128	10,236	12,620
1986	13,137	12,356	9,122	3,330	207	207	404	1,457	3,216	5,295	8,597	10,586
1987	12,123	12,892	13,027	10,474	3,632	568	2,633	5,852	8,023	8,379	9,900	12,460
1988	13,892	13,706	11,543	2,648	2,605	5,243	5,520	6,958	8,306	10,357	12,042	13,662
1989	15,060	14,242	13,200	11,222	6,282	449	383	1,475	6,089	7,627	9,476	12,004
1990	13,172	13,511	13,034	6,149	3,938	3,969	4,748	7,570	10,451	12,132	12,365	13,506
1991	15,014	14,397	14,284	13,929	12,138	1,970	2,243	6,573	10,258	12,144	12,612	13,985
Avg	11,512	9,840	8,584	5,044	3,041	1,646	2,217	3,949	6,013	7,627	9,592	11,105
W/AN/BN	9,935	7,570	5,372	1,234	230	225	503	1,103	2,162	4,217	7,475	8,551
D/C	12,738	11,606	11,081	8,006	5,227	2,751	3,550	6,163	9,008	10,279	11,240	13,092

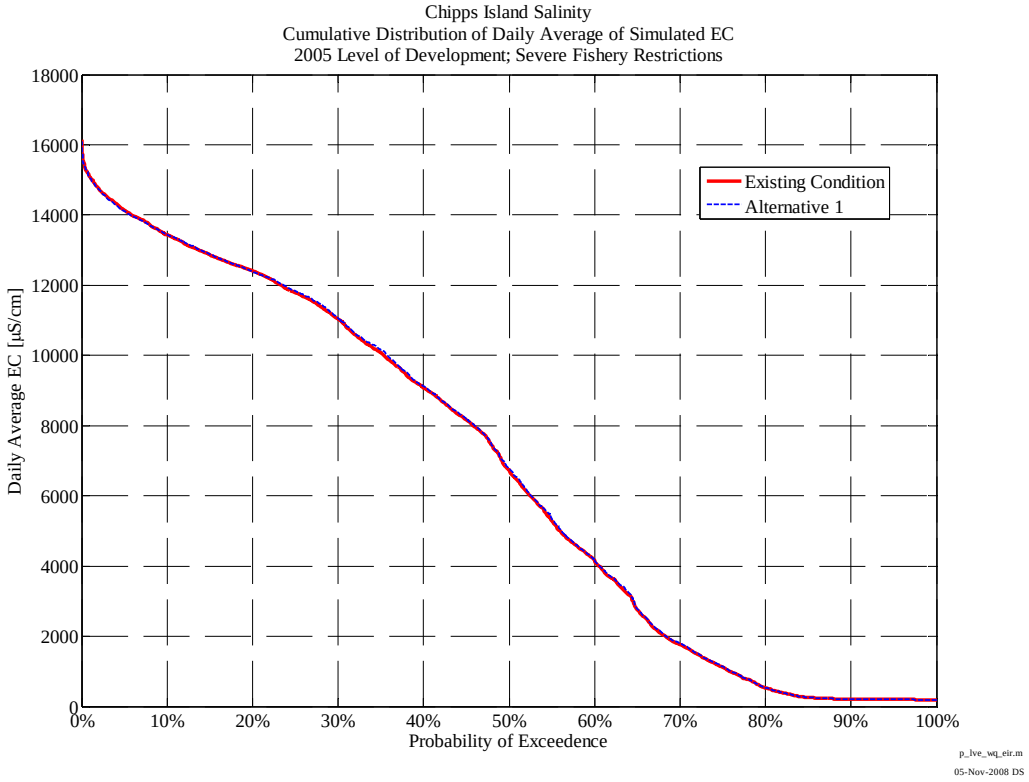
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	3.0%	3.1%	1.3%	0.4%	0.3%	1.3%	-0.6%	-0.3%	0.2%	0.6%	1.0%	0.4%
1977	0.4%	0.4%	-0.5%	2.1%	3.1%	1.3%	0.3%	0.3%	-0.1%	0.2%	0.2%	0.1%
1978	0.1%	0.2%	0.5%	0.5%	-0.2%	-0.2%	-0.7%	1.9%	3.2%	0.9%	0.1%	5.9%
1979	5.1%	2.8%	-3.5%	0.5%	4.4%	0.8%	-1.2%	4.1%	0.6%	-0.2%	0.0%	0.3%
1980	-0.7%	0.1%	-0.9%	-1.3%	0.1%	-0.1%	-1.7%	4.1%	0.1%	-0.5%	-0.1%	0.0%
1981	0.0%	0.1%	0.6%	1.0%	0.1%	-0.5%	-0.8%	6.1%	3.2%	0.1%	0.5%	0.4%
1982	0.1%	-0.1%	0.0%	0.2%	0.1%	0.0%	0.0%	0.4%	-0.8%	-0.2%	0.1%	0.2%
1983	1.1%	0.6%	0.0%	-0.1%	0.0%	0.0%	0.2%	-0.2%	0.0%	0.0%	0.3%	0.1%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	4.8%	0.6%	-0.3%	0.0%	0.0%
1985	1.0%	2.1%	1.3%	0.4%	0.1%	2.0%	-0.3%	2.6%	1.6%	-0.1%	0.3%	0.3%
1986	0.0%	1.0%	1.6%	-0.3%	-0.1%	-0.4%	-1.8%	5.3%	0.8%	-0.2%	-0.1%	-0.1%
1987	-0.1%	0.1%	-0.1%	-0.8%	-2.0%	-1.1%	0.0%	0.1%	-0.1%	0.2%	-0.1%	-0.2%
1988	-0.1%	-0.1%	0.0%	0.3%	0.1%	0.4%	-0.8%	0.3%	0.3%	-0.4%	0.0%	0.0%
1989	-0.3%	0.0%	-0.1%	-1.3%	11.8%	15.1%	0.1%	0.3%	-0.2%	-2.2%	0.2%	1.1%
1990	0.6%	0.2%	1.0%	0.5%	-0.2%	1.7%	0.7%	0.2%	0.1%	-0.5%	-2.6%	-2.1%
1991	0.5%	-1.6%	-2.2%	0.8%	1.1%	0.9%	0.1%	0.1%	0.1%	0.1%	-0.3%	-0.4%
Avg	0.7%	0.6%	-0.1%	0.2%	1.2%	1.3%	-0.4%	1.9%	0.6%	-0.2%	0.0%	0.4%
W/AN/BN	0.8%	0.7%	-0.3%	-0.1%	0.6%	0.0%	-0.8%	2.9%	0.6%	-0.1%	0.0%	0.9%
D/C	0.6%	0.5%	0.1%	0.4%	1.6%	2.3%	-0.1%	1.1%	0.5%	-0.2%	-0.1%	0.0%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.19%
1.16%
1.33%
-0.41%
1.88%
0.59%
-0.17%
-0.03%
0.38%
0.67%
0.56%
-0.07%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

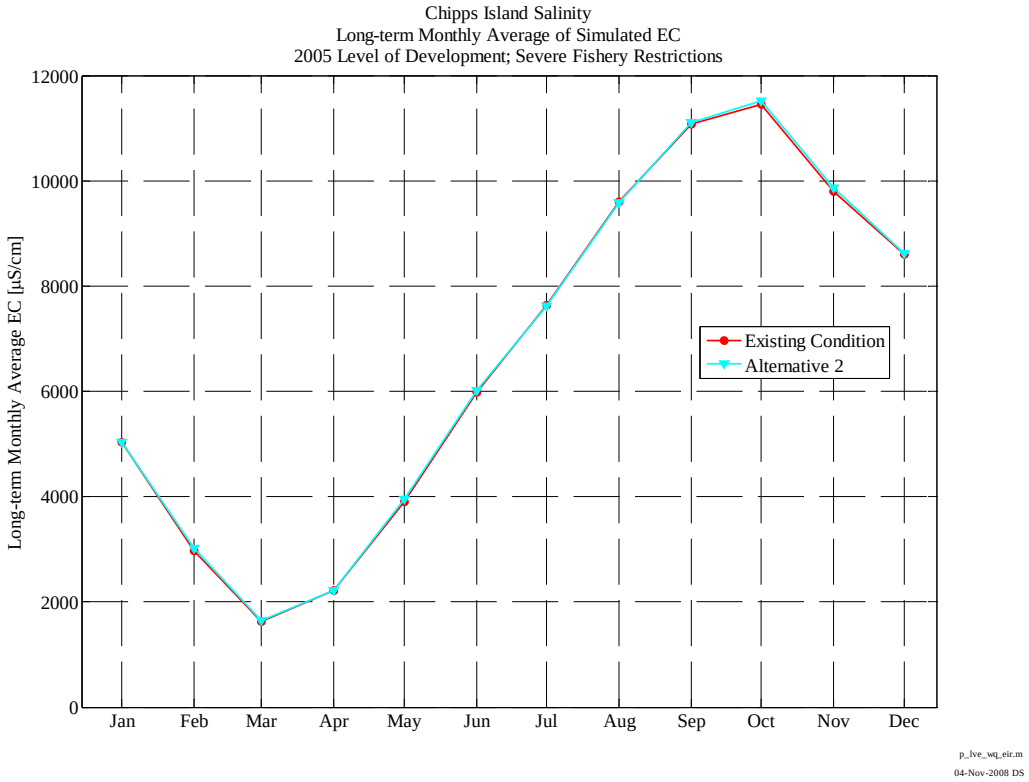
Alternative 2

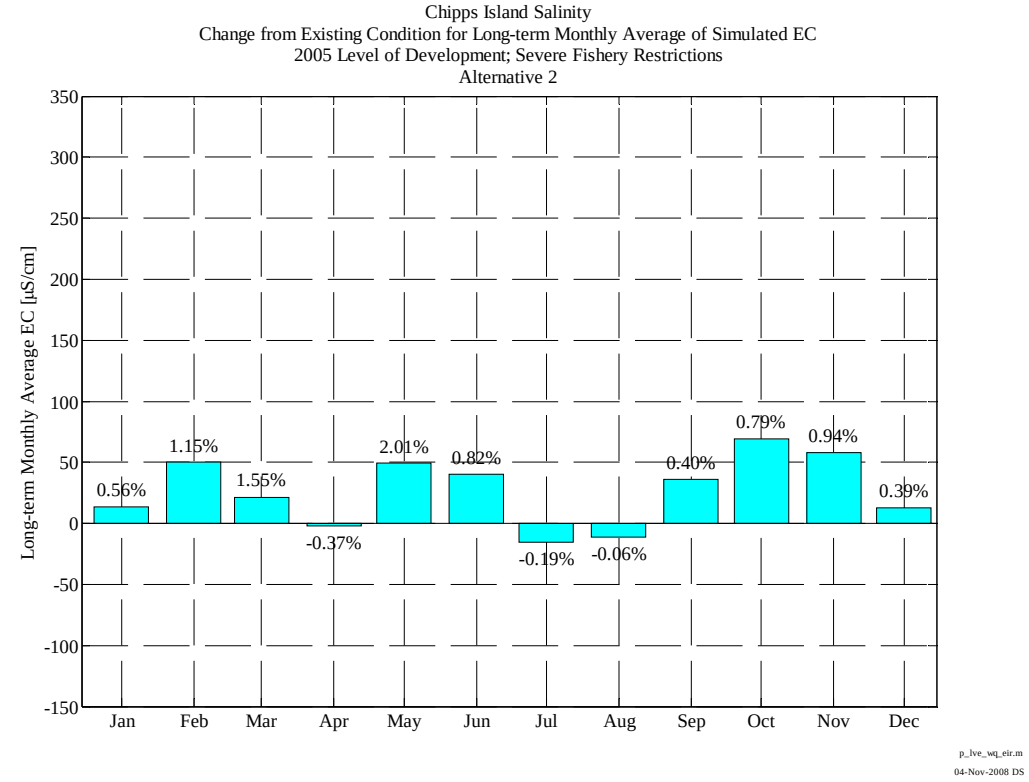
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

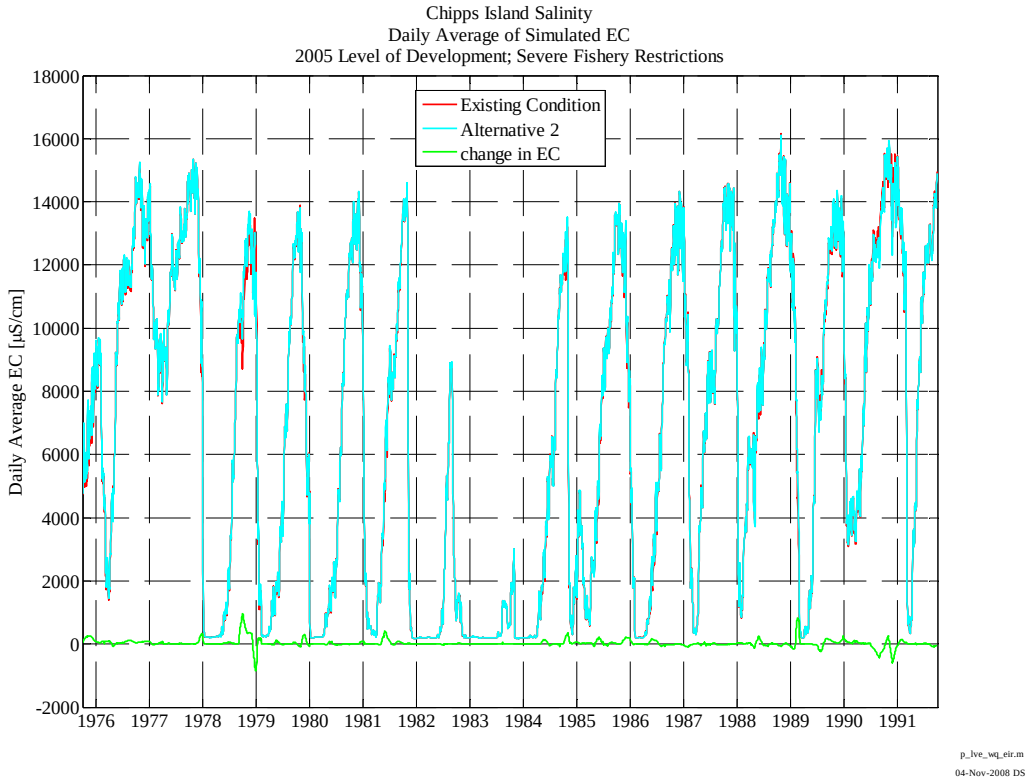
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,735	6,796	8,326	9,047	5,886	2,247	3,788	8,178	11,214	11,768	11,638	13,235
1977	14,494	13,548	13,476	11,830	9,611	8,945	8,954	10,825	11,955	12,469	13,070	13,950
1978	14,528	14,403	10,555	515	213	214	242	562	1,489	4,215	8,411	10,428
1979	12,061	13,052	11,735	3,873	326	295	951	1,594	3,153	6,220	9,512	12,257
1980	12,919	10,384	5,895	295	216	220	590	1,380	2,048	4,416	8,332	11,284
1981	12,823	13,187	11,425	2,826	575	341	1,428	3,903	7,400	8,485	9,810	12,403
1982	13,795	2,359	184	202	194	206	192	217	578	3,326	7,636	3,003
1983	1,285	355	201	232	218	206	205	200	198	274	1,084	793
1984	1,881	266	193	206	235	229	932	2,311	4,450	5,773	8,751	11,509
1985	12,418	2,279	1,629	3,733	2,148	1,033	2,268	4,127	7,387	9,118	10,229	12,619
1986	13,137	12,354	9,174	3,369	208	207	404	1,469	3,313	5,310	8,562	10,574
1987	12,117	12,886	13,028	10,490	3,664	571	2,632	5,851	8,023	8,379	9,900	12,460
1988	13,892	13,706	11,542	2,675	2,620	5,247	5,520	7,049	8,357	10,355	12,041	13,661
1989	15,063	14,239	13,211	11,239	6,218	444	382	1,475	6,089	7,628	9,472	12,024
1990	13,192	13,519	13,019	6,222	3,984	3,989	4,758	7,573	10,454	12,098	12,375	13,542
1991	15,000	14,420	14,331	13,896	12,092	1,972	2,245	6,574	10,258	12,144	12,609	13,981
Avg	11,521	9,859	8,620	5,041	3,026	1,648	2,218	3,955	6,023	7,624	9,590	11,108
W/AN/BN	9,944	7,596	5,420	1,242	230	225	503	1,105	2,175	4,219	7,470	8,550
D/C	12,748	11,620	11,110	7,995	5,200	2,754	3,553	6,173	9,015	10,271	11,238	13,097

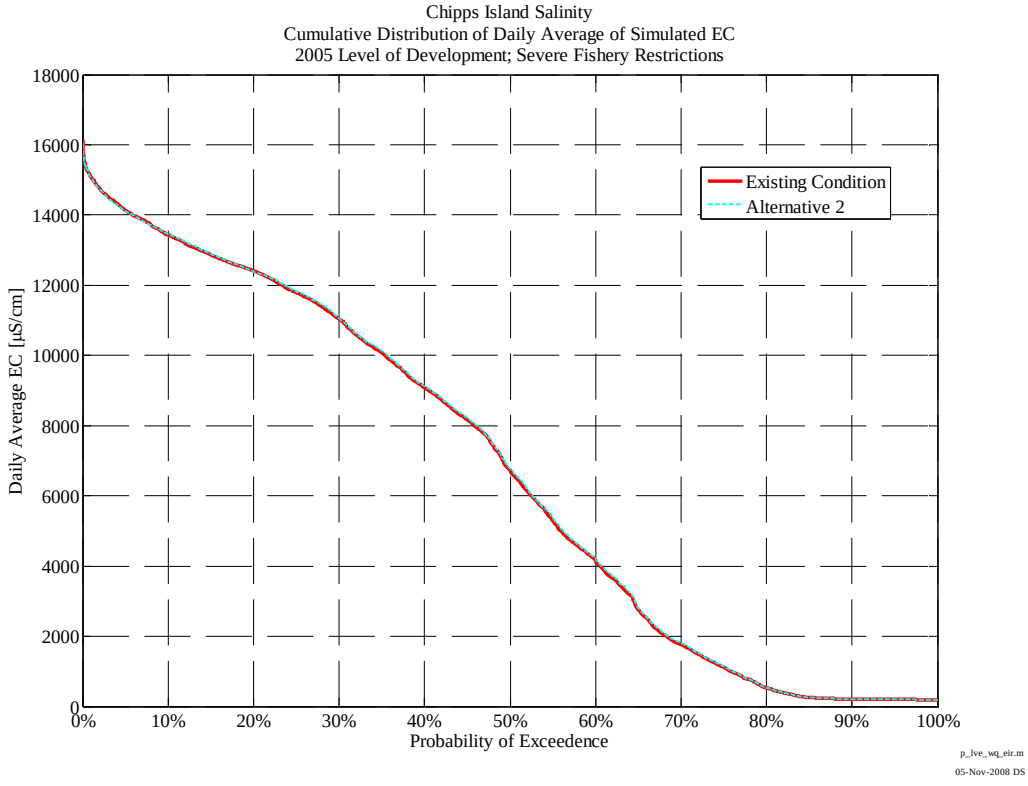
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	3.0%	3.8%	1.8%	0.6%	1.2%	4.1%	0.3%	-0.1%	0.3%	0.5%	1.0%	0.5%
1977	0.3%	0.5%	0.6%	0.1%	-0.1%	0.5%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%
1978	0.0%	0.1%	2.3%	4.4%	-0.1%	-0.2%	-1.1%	1.9%	3.2%	0.9%	0.1%	5.9%
1979	5.1%	2.8%	-3.5%	0.2%	4.3%	1.4%	-1.1%	4.1%	0.6%	-0.2%	0.0%	0.3%
1980	-0.3%	1.9%	0.8%	-0.9%	0.0%	-0.1%	-1.7%	4.1%	0.0%	-0.5%	-0.1%	0.0%
1981	0.0%	0.1%	0.6%	1.0%	0.1%	-0.5%	-0.8%	6.1%	3.1%	0.0%	0.5%	0.5%
1982	0.1%	0.6%	0.1%	0.0%	-0.1%	-0.1%	0.0%	0.4%	-0.8%	-0.2%	0.1%	0.2%
1983	2.0%	1.3%	0.0%	-0.1%	0.0%	0.0%	0.2%	-0.2%	0.0%	0.0%	0.3%	0.1%
1984	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	-0.1%	4.8%	0.6%	-0.3%	0.0%	0.0%
1985	1.7%	4.4%	2.7%	0.8%	1.1%	3.2%	-0.3%	2.5%	1.6%	-0.2%	0.2%	0.3%
1986	0.0%	1.0%	2.1%	0.9%	0.0%	-0.5%	-1.8%	6.1%	3.8%	0.0%	-0.5%	-0.2%
1987	-0.1%	0.0%	-0.1%	-0.6%	-1.1%	-0.5%	0.0%	0.1%	-0.1%	0.2%	-0.1%	-0.2%
1988	-0.1%	-0.1%	0.0%	1.3%	0.6%	0.4%	-0.8%	1.6%	0.9%	-0.4%	0.0%	0.0%
1989	-0.3%	-0.1%	-0.1%	-1.1%	10.7%	13.8%	0.1%	0.3%	-0.2%	-2.2%	0.1%	1.3%
1990	0.7%	0.3%	0.9%	1.7%	1.0%	2.2%	0.9%	0.3%	0.2%	-0.8%	-2.5%	-1.8%
1991	0.5%	-1.5%	-1.9%	0.6%	0.7%	1.0%	0.2%	0.1%	0.1%	0.1%	-0.3%	-0.5%
Avg	0.8%	0.9%	0.4%	0.6%	1.2%	1.6%	-0.4%	2.0%	0.8%	-0.2%	-0.1%	0.4%
W/AN/BN	1.0%	1.1%	0.2%	0.6%	0.6%	0.1%	-0.8%	3.0%	1.1%	-0.1%	0.0%	0.9%
D/C	0.6%	0.8%	0.5%	0.5%	1.6%	2.7%	0.0%	1.2%	0.6%	-0.3%	-0.1%	0.0%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.56%
1.15%
1.55%
-0.37%
2.01%
0.82%
-0.19%
-0.06%
0.40%
0.79%
0.94%
0.39%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

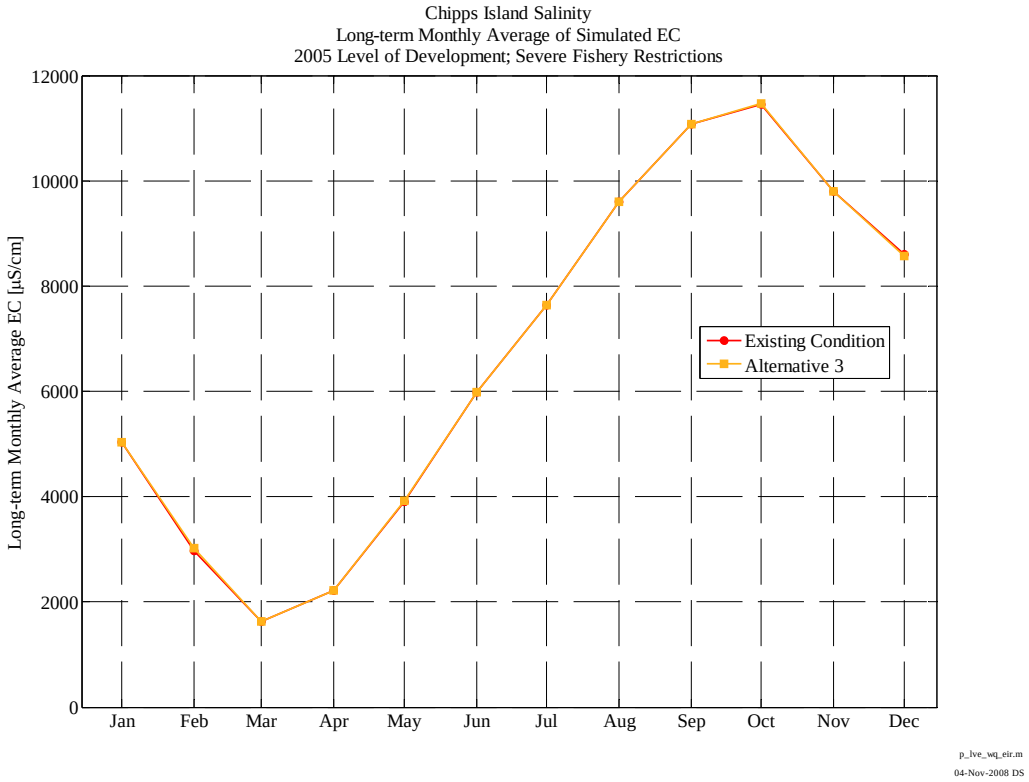
Alternative 3

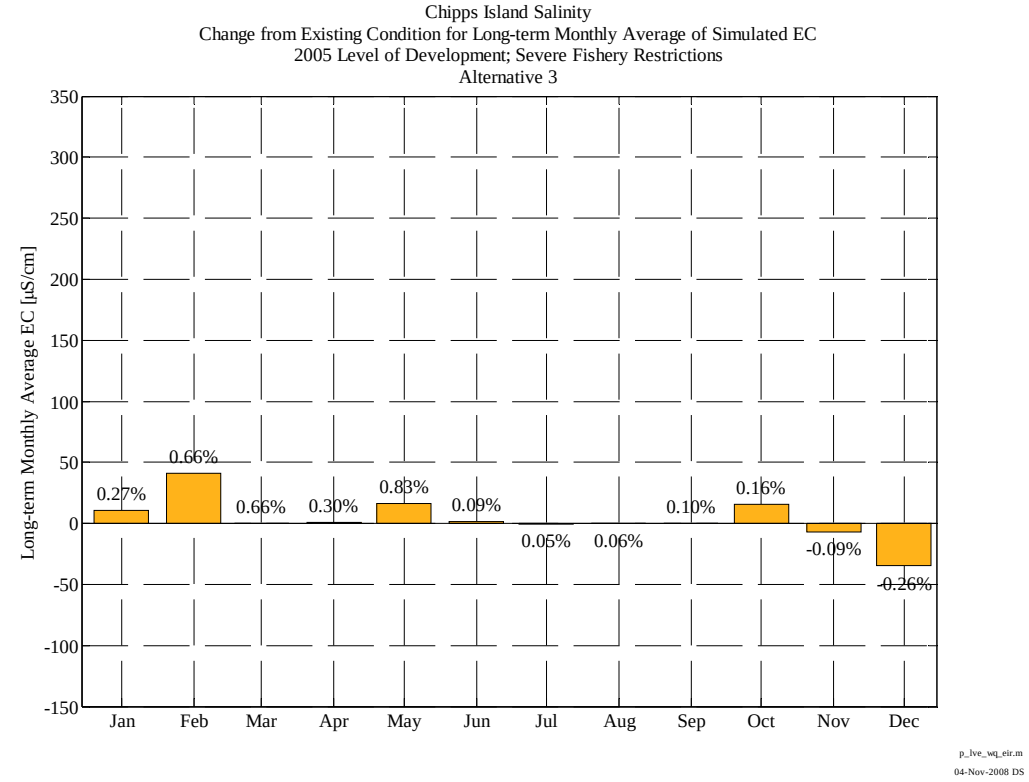
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

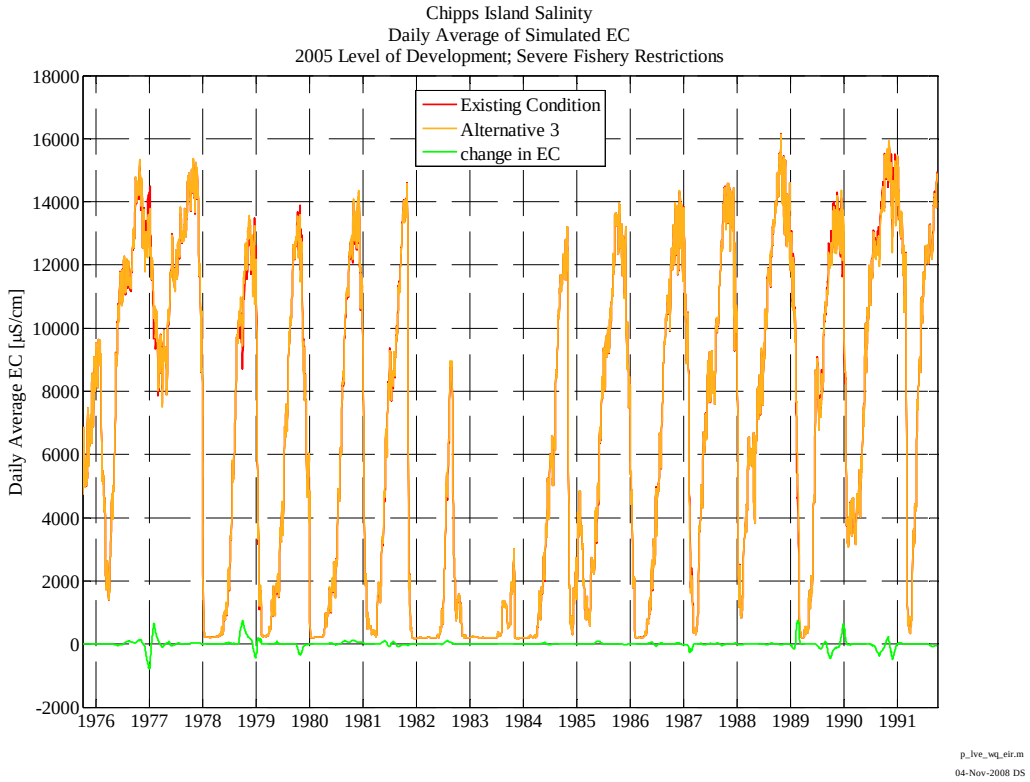
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,578	6,556	8,184	8,990	5,811	2,156	3,775	8,166	11,155	11,748	11,602	13,214
1977	14,547	13,495	12,877	11,865	9,951	8,883	8,925	10,831	11,923	12,480	13,068	13,951
1978	14,548	14,418	10,336	494	213	215	250	562	1,475	4,206	8,410	10,294
1979	11,925	12,887	11,925	3,933	324	295	968	1,560	3,143	6,223	9,510	12,230
1980	12,740	10,048	5,838	298	217	221	600	1,346	2,049	4,431	8,399	11,364
1981	12,913	13,264	11,409	2,814	576	346	1,443	3,748	7,174	8,506	9,748	12,298
1982	13,761	2,329	184	202	194	207	192	216	578	3,386	7,700	3,010
1983	1,260	351	201	232	218	206	205	200	198	274	1,083	794
1984	1,885	266	193	206	235	232	939	2,238	4,425	5,787	8,758	11,512
1985	12,205	2,183	1,587	3,701	2,124	1,001	2,275	4,091	7,323	9,147	10,218	12,596
1986	13,141	12,222	8,974	3,347	208	208	417	1,428	3,172	5,300	8,613	10,602
1987	12,139	12,912	13,040	10,535	3,499	550	2,641	5,834	8,030	8,363	9,929	12,463
1988	13,905	13,716	11,566	2,631	2,595	5,223	5,566	6,945	8,298	10,379	12,047	13,661
1989	15,099	14,237	13,228	11,267	6,152	436	383	1,472	6,099	7,687	9,463	11,608
1990	12,842	13,372	13,219	6,261	3,934	3,899	4,717	7,551	10,440	12,166	12,455	13,568
1991	14,994	14,454	14,399	13,832	12,010	1,952	2,240	6,566	10,253	12,129	12,608	13,984
Avg	11,468	9,794	8,572	5,038	3,016	1,627	2,221	3,922	5,984	7,638	9,601	11,072
W/AN/BN	9,894	7,503	5,379	1,245	230	226	510	1,079	2,149	4,230	7,496	8,544
D/C	12,691	11,577	11,056	7,988	5,184	2,716	3,552	6,134	8,966	10,290	11,238	13,038

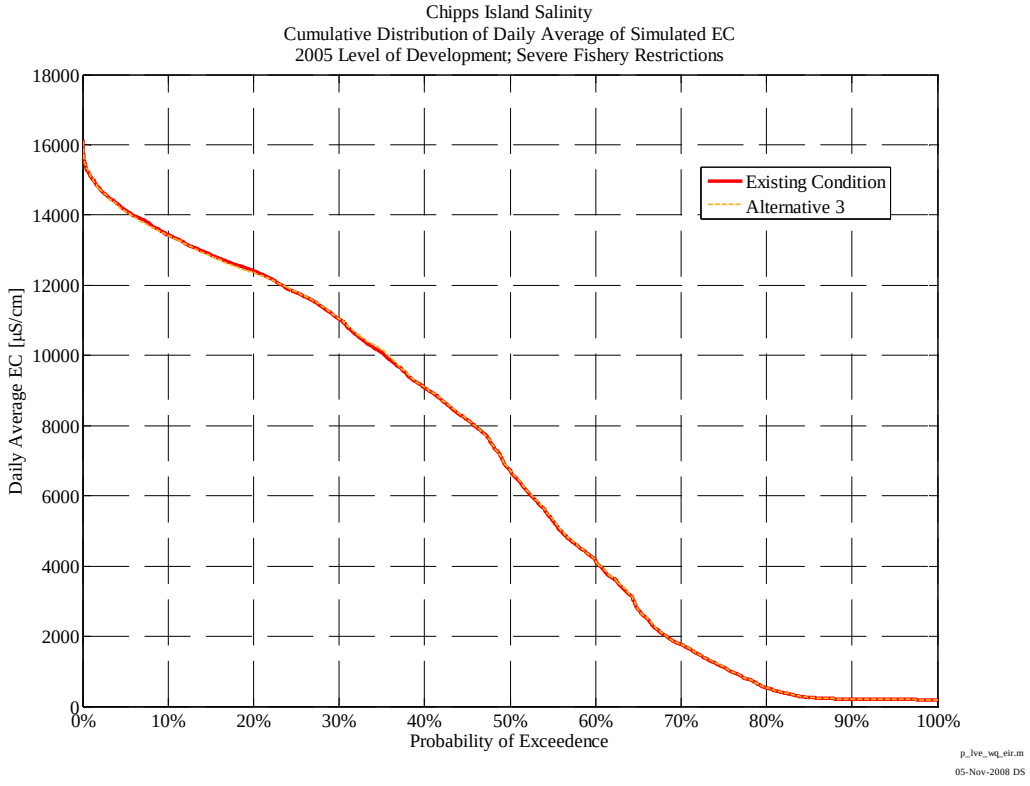
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.2%	0.1%	0.0%	0.0%	-0.1%	-0.1%	0.0%	-0.3%	-0.2%	0.4%	0.7%	0.4%
1977	0.7%	0.1%	-3.9%	0.4%	3.5%	-0.2%	-0.2%	0.2%	-0.3%	0.2%	0.1%	0.0%
1978	0.2%	0.2%	0.2%	0.1%	-0.1%	0.0%	2.0%	1.7%	2.3%	0.6%	0.1%	4.6%
1979	3.9%	1.5%	-2.0%	1.8%	3.4%	1.1%	0.6%	1.9%	0.3%	-0.1%	-0.1%	0.1%
1980	-1.7%	-1.4%	-0.2%	0.1%	0.1%	0.0%	0.0%	1.5%	0.1%	-0.2%	0.8%	0.7%
1981	0.7%	0.6%	0.4%	0.6%	0.2%	1.0%	0.3%	1.9%	-0.1%	0.3%	-0.2%	-0.4%
1982	-0.1%	-0.7%	0.0%	0.2%	0.1%	0.0%	0.0%	0.2%	-0.9%	1.6%	0.9%	0.4%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.2%
1984	0.2%	0.1%	0.0%	0.0%	0.1%	1.5%	0.6%	1.6%	0.1%	-0.1%	0.1%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.7%	0.1%	0.1%	0.1%
1986	0.0%	-0.1%	-0.1%	0.2%	0.0%	-0.2%	1.1%	3.2%	-0.6%	-0.1%	0.1%	0.1%
1987	0.0%	0.2%	0.0%	-0.2%	-5.6%	-4.2%	0.3%	-0.2%	0.0%	0.0%	0.2%	-0.2%
1988	0.0%	0.0%	0.2%	-0.4%	-0.3%	0.0%	0.0%	0.1%	0.2%	-0.2%	0.1%	0.0%
1989	-0.1%	-0.1%	0.1%	-0.9%	9.5%	11.8%	0.1%	0.1%	-0.1%	-1.4%	0.1%	-2.2%
1990	-2.0%	-0.8%	2.5%	2.4%	-0.3%	-0.1%	0.0%	0.0%	0.0%	-0.3%	-1.9%	-1.7%
1991	0.4%	-1.2%	-1.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.4%
Avg	0.2%	-0.1%	-0.3%	0.3%	0.7%	0.7%	0.3%	0.8%	0.1%	0.1%	0.1%	0.1%
W/AN/BN	0.4%	-0.1%	-0.3%	0.3%	0.5%	0.4%	0.6%	1.4%	0.2%	0.3%	0.3%	0.9%
D/C	0.0%	-0.1%	-0.2%	0.2%	0.8%	0.9%	0.1%	0.4%	0.0%	-0.1%	-0.1%	-0.5%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.27%
0.66%
0.66%
0.30%
0.83%
0.09%
-0.05%
-0.06%
0.10%
0.16%
-0.09%
-0.26%
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

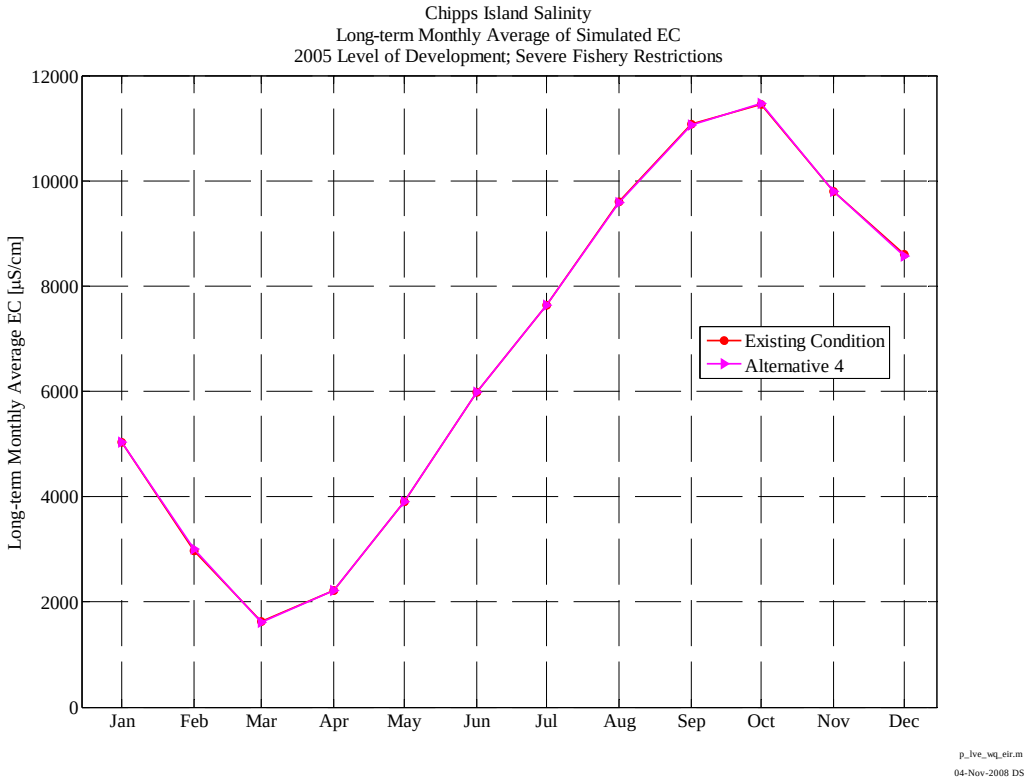
Alternative 4

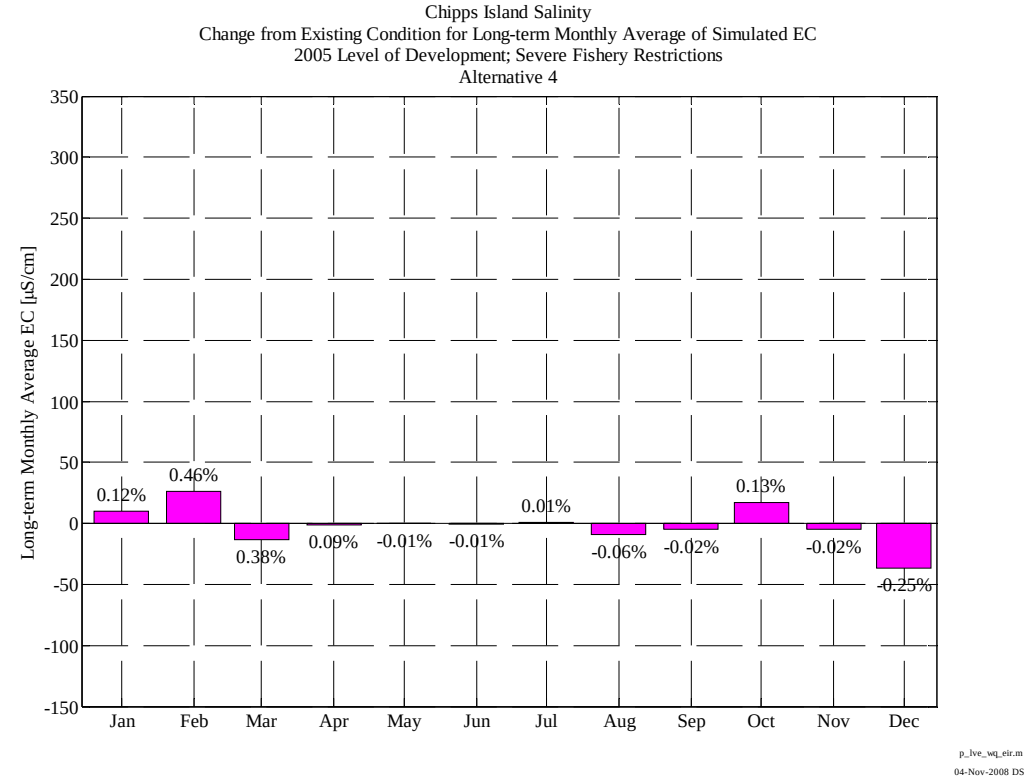
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

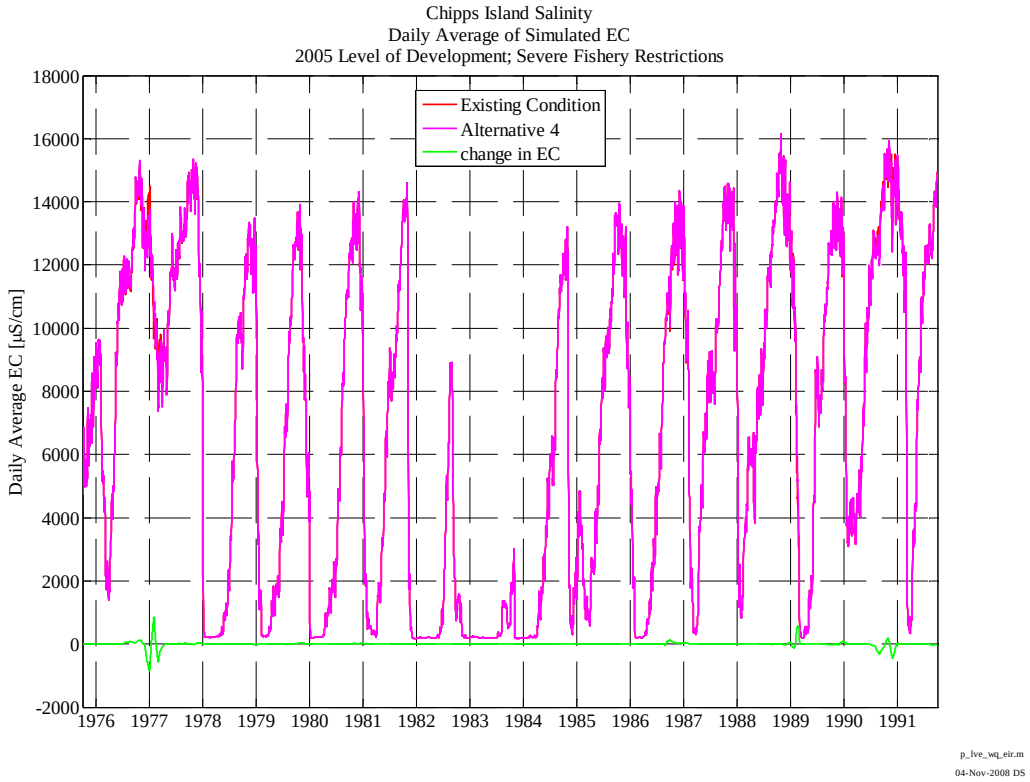
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,571	6,551	8,182	8,994	5,816	2,159	3,777	8,187	11,180	11,741	11,597	13,216
1977	14,536	13,508	12,865	11,957	9,615	8,652	8,925	10,814	11,955	12,469	13,070	13,964
1978	14,527	14,407	10,341	493	213	215	250	553	1,440	4,179	8,403	9,847
1979	11,477	12,697	12,153	3,855	313	292	962	1,532	3,134	6,225	9,515	12,224
1980	12,971	10,216	5,861	298	216	221	600	1,326	2,049	4,439	8,339	11,292
1981	12,832	13,193	11,377	2,806	576	343	1,439	3,679	7,178	8,483	9,767	12,349
1982	13,781	2,346	184	202	194	207	192	216	583	3,335	7,633	2,997
1983	1,259	351	201	232	218	206	205	200	198	274	1,082	793
1984	1,882	266	193	206	235	229	933	2,204	4,423	5,793	8,752	11,516
1985	12,210	2,185	1,587	3,701	2,124	1,001	2,275	4,027	7,274	9,136	10,205	12,587
1986	13,136	12,227	8,979	3,345	208	208	409	1,379	3,188	5,308	8,605	10,671
1987	12,220	12,913	13,062	10,593	3,713	573	2,633	5,846	8,033	8,363	9,908	12,484
1988	13,909	13,714	11,545	2,641	2,603	5,224	5,566	6,937	8,285	10,393	12,030	13,650
1989	15,105	14,232	13,236	11,297	6,031	425	382	1,471	6,102	7,799	9,461	11,852
1990	13,084	13,474	12,951	6,147	3,950	3,904	4,717	7,554	10,437	12,166	12,475	13,602
1991	14,999	14,467	14,417	13,827	12,003	1,952	2,240	6,566	10,253	12,130	12,628	14,020
Avg	11,469	9,797	8,571	5,037	3,002	1,613	2,219	3,906	5,982	7,640	9,592	11,067
W/AN/BN	9,862	7,501	5,416	1,233	228	225	508	1,058	2,145	4,222	7,476	8,477
D/C	12,718	11,582	11,025	7,996	5,159	2,692	3,550	6,120	8,966	10,298	11,238	13,081

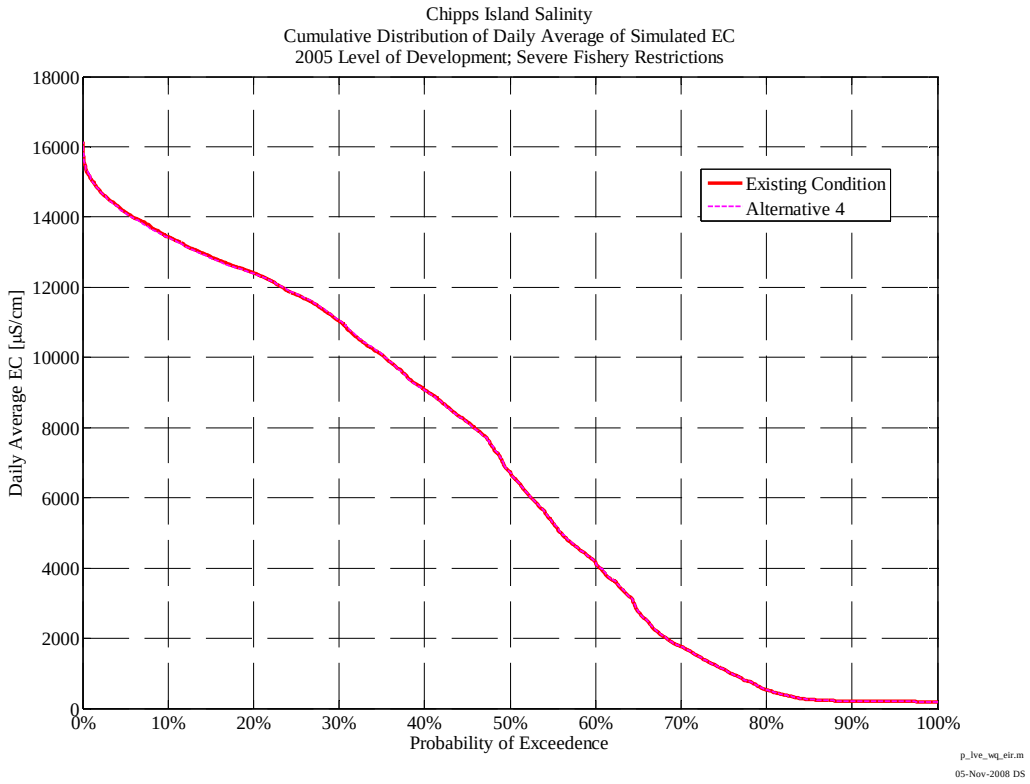
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.6%	0.4%
1977	0.6%	0.2%	-4.0%	1.2%	0.0%	-2.8%	-0.2%	0.0%	0.0%	0.1%	0.1%	0.1%
1978	0.0%	0.1%	0.3%	0.1%	-0.2%	0.0%	2.1%	0.2%	-0.2%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	-0.1%	-0.2%	-0.1%	0.2%	0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
1980	0.1%	0.3%	0.2%	0.1%	-0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
1981	0.1%	0.1%	0.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.6%	-0.4%	-0.1%	0.0%	0.0%	0.7%
1987	0.7%	0.2%	0.2%	0.4%	0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
1989	0.0%	-0.1%	0.1%	-0.6%	7.4%	8.9%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%
1990	-0.1%	-0.1%	0.4%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.3%	-1.7%	-1.4%
1991	0.4%	-1.2%	-1.3%	0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%
Avg	0.1%	0.0%	-0.3%	0.1%	0.5%	0.4%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
W/AN/BN	0.0%	0.1%	0.0%	0.0%	-0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%
D/C	0.2%	-0.1%	-0.5%	0.2%	0.9%	0.7%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.12%
0.46%
-0.38%
0.09%
-0.01%
-0.01%
0.01%
-0.06%
-0.02%
0.13%
-0.02%
-0.25%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Collinsville

Existing Condition

Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2,256	2,962	4,093	4,724	2,467	638	1,448	4,497	6,953	6,957	6,741	8,481
1977	9,646	8,585	8,561	7,063	5,099	4,493	4,633	6,472	7,545	7,818	8,323	9,240
1978	9,834	9,642	5,567	301	207	211	222	254	447	1,676	4,459	5,341
1979	6,860	8,000	7,268	1,691	231	214	332	478	1,103	2,788	5,186	7,532
1980	8,244	5,510	2,381	219	202	214	271	409	626	1,790	4,351	6,673
1981	8,151	8,408	6,420	1,022	238	202	474	1,384	3,667	4,200	5,200	7,753
1982	9,174	1,008	183	200	190	203	185	190	240	1,308	3,836	1,116
1983	352	202	197	222	197	185	199	196	195	209	349	250
1984	575	195	185	203	201	190	326	681	1,777	2,474	4,756	6,991
1985	7,462	860	510	1,370	630	311	764	1,522	3,746	4,788	5,608	7,997
1986	8,432	7,272	4,415	1,167	185	192	241	447	1,144	2,252	4,562	6,043
1987	7,565	8,223	8,268	5,805	1,388	252	1,022	2,703	4,239	4,092	5,402	7,933
1988	9,228	8,994	6,630	1,039	928	2,256	2,367	3,370	4,300	5,964	7,349	9,037
1989	10,480	9,402	8,274	6,347	2,346	228	208	454	3,084	3,662	4,992	7,283
1990	8,297	8,749	8,153	2,620	1,394	1,403	1,883	3,959	6,332	7,573	7,987	9,121
1991	10,246	9,920	9,954	9,024	7,196	922	829	3,278	6,217	7,580	7,916	9,389
Avg	7,300	6,121	5,066	2,688	1,444	757	963	1,893	3,226	4,071	5,439	6,886
W/AN/BN	6,210	4,547	2,885	572	202	201	254	379	790	1,785	3,929	4,850
D/C	8,148	7,345	6,762	4,335	2,409	1,189	1,514	3,071	5,120	5,848	6,613	8,470

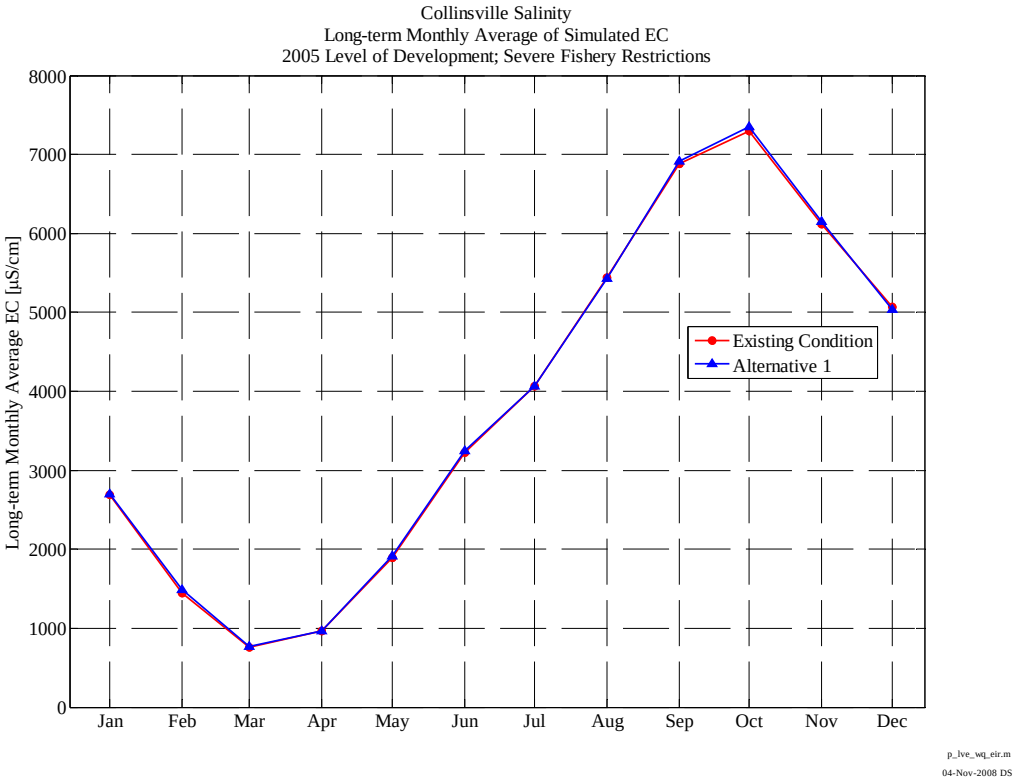
Alternative 1

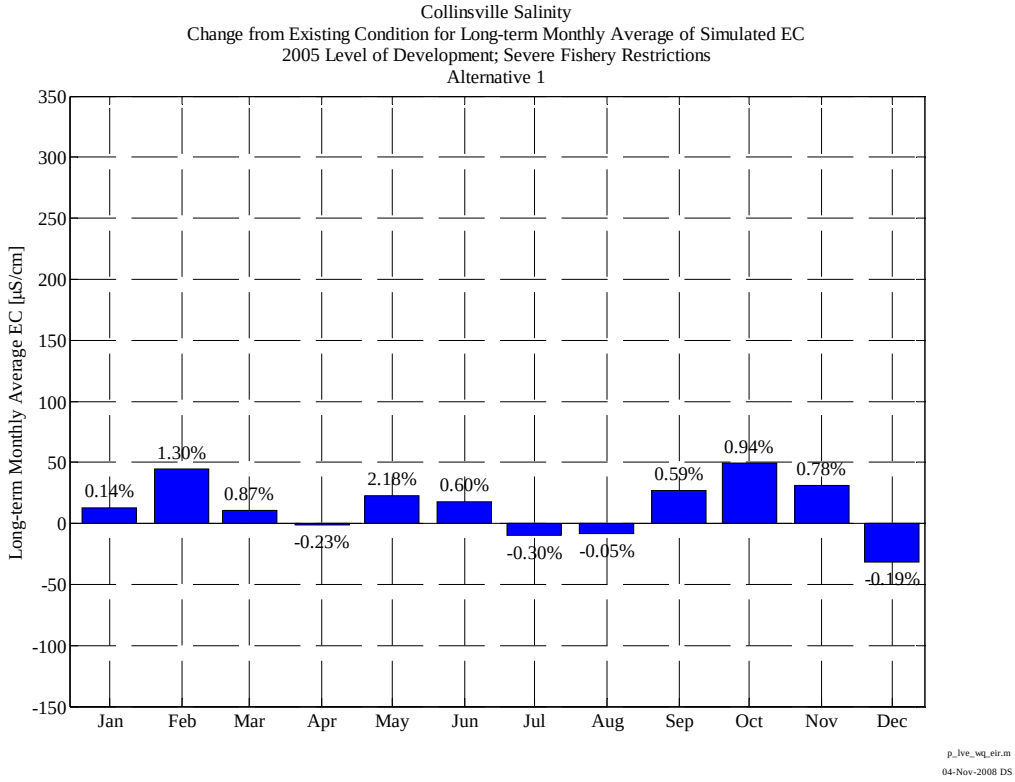
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

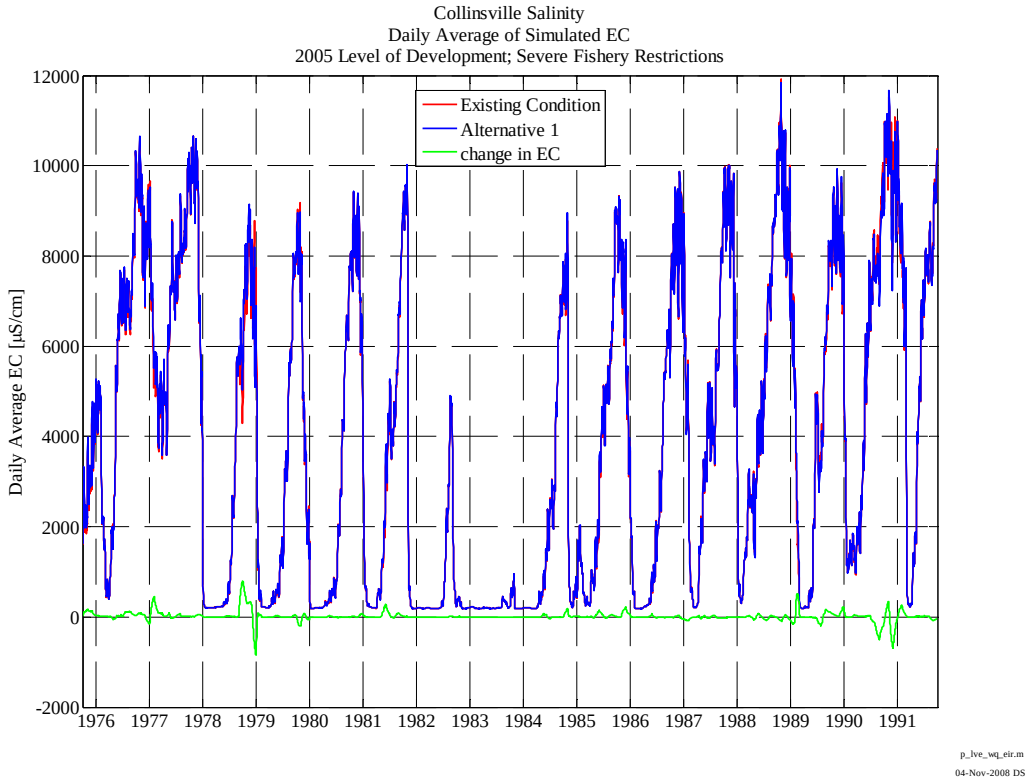
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2,358	3,098	4,168	4,750	2,478	646	1,433	4,484	6,980	7,039	6,855	8,537
1977	9,711	8,644	8,476	7,285	5,339	4,575	4,649	6,509	7,529	7,863	8,344	9,256
1978	9,847	9,670	5,609	302	207	210	222	255	459	1,687	4,463	5,841
1979	7,372	8,313	6,808	1,647	233	214	328	497	1,106	2,781	5,181	7,563
1980	8,112	5,518	2,357	218	202	214	269	424	623	1,778	4,347	6,669
1981	8,156	8,414	6,473	1,036	238	202	471	1,512	3,828	4,206	5,248	7,805
1982	9,182	1,007	183	201	190	203	185	190	239	1,305	3,842	1,119
1983	356	203	197	222	197	185	200	196	195	208	349	251
1984	575	195	185	203	201	191	326	721	1,782	2,460	4,754	6,986
1985	7,574	885	518	1,377	630	314	760	1,582	3,832	4,774	5,637	8,027
1986	8,428	7,414	4,516	1,164	185	192	241	471	1,149	2,245	4,550	6,037
1987	7,552	8,245	8,246	5,739	1,351	250	1,021	2,708	4,224	4,111	5,395	7,910
1988	9,211	8,986	6,627	1,040	929	2,271	2,341	3,394	4,312	5,906	7,364	9,044
1989	10,425	9,399	8,253	6,218	2,719	244	208	457	3,069	3,525	5,028	7,413
1990	8,367	8,773	8,303	2,642	1,389	1,438	1,900	3,973	6,350	7,492	7,631	8,830
1991	10,366	9,667	9,635	9,173	7,324	930	829	3,286	6,224	7,598	7,894	9,326
Avg	7,350	6,152	5,035	2,701	1,488	767	961	1,916	3,244	4,061	5,430	6,913
W/AN/BN	6,267	4,617	2,836	565	202	201	253	394	793	1,781	3,926	4,924
D/C	8,191	7,346	6,744	4,362	2,488	1,208	1,512	3,100	5,150	5,835	6,599	8,461

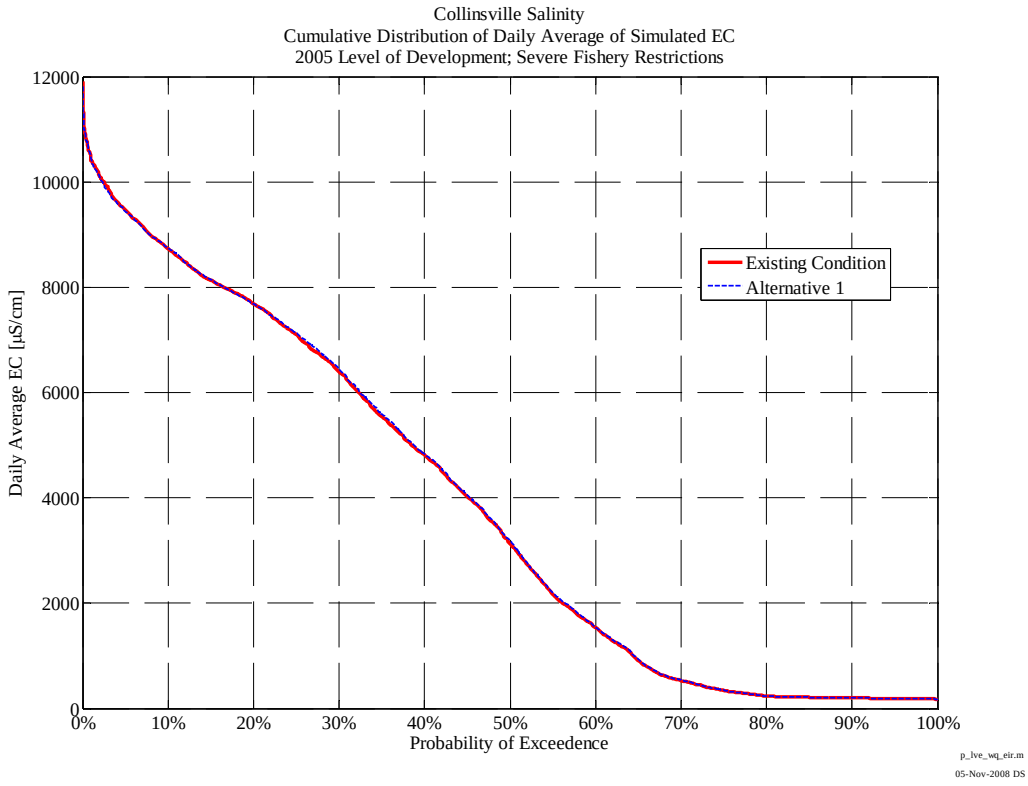
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	4.5%	4.6%	1.8%	0.6%	0.5%	1.3%	-1.1%	-0.3%	0.4%	1.2%	1.7%	0.7%
1977	0.7%	0.7%	-1.0%	3.2%	4.7%	1.8%	0.4%	0.6%	-0.2%	0.6%	0.3%	0.2%
1978	0.1%	0.3%	0.8%	0.4%	-0.1%	-0.2%	-0.1%	0.6%	2.9%	0.7%	0.1%	9.4%
1979	7.5%	3.9%	-6.3%	-2.6%	0.6%	-0.4%	-1.1%	4.0%	0.3%	-0.2%	-0.1%	0.4%
1980	-1.6%	0.1%	-1.0%	-0.7%	0.0%	-0.1%	-0.7%	3.8%	-0.5%	-0.7%	-0.1%	-0.1%
1981	0.1%	0.1%	0.8%	1.4%	0.2%	0.1%	-0.5%	9.3%	4.4%	0.1%	0.9%	0.7%
1982	0.1%	-0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	-0.2%	-0.4%	-0.2%	0.1%	0.3%
1983	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.2%	0.0%	-0.1%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	5.9%	0.3%	-0.6%	-0.1%	-0.1%
1985	1.5%	2.9%	1.5%	0.5%	0.1%	1.1%	-0.5%	4.0%	2.3%	-0.3%	0.5%	0.4%
1986	0.0%	2.0%	2.3%	-0.2%	0.0%	-0.2%	0.0%	5.4%	0.4%	-0.3%	-0.3%	-0.1%
1987	-0.2%	0.3%	-0.3%	-1.1%	-2.7%	-0.7%	-0.1%	0.2%	-0.3%	0.5%	-0.1%	-0.3%
1988	-0.2%	-0.1%	0.0%	0.2%	0.1%	0.7%	-1.1%	0.7%	0.3%	-1.0%	0.2%	0.1%
1989	-0.5%	0.0%	-0.3%	-2.0%	15.9%	7.0%	0.3%	0.6%	-0.5%	-3.7%	0.7%	1.8%
1990	0.8%	0.3%	1.8%	0.8%	-0.4%	2.5%	0.9%	0.3%	0.3%	-1.1%	-4.5%	-3.2%
1991	1.2%	-2.5%	-3.2%	1.6%	1.8%	1.0%	0.1%	0.2%	0.1%	0.2%	-0.3%	-0.7%
Avg	0.9%	0.8%	-0.2%	0.1%	1.3%	0.9%	-0.2%	2.2%	0.6%	-0.3%	-0.1%	0.6%
W/AN/BN	1.0%	0.9%	-0.6%	-0.4%	0.1%	-0.1%	-0.3%	2.8%	0.4%	-0.2%	0.0%	1.4%
D/C	0.9%	0.7%	0.1%	0.6%	2.2%	1.6%	-0.2%	1.7%	0.7%	-0.4%	-0.1%	0.0%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.14%
1.30%
0.87%
-0.23%
2.18%
0.60%
-0.30%
-0.05%
0.59%
0.94%
0.78%
-0.19%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

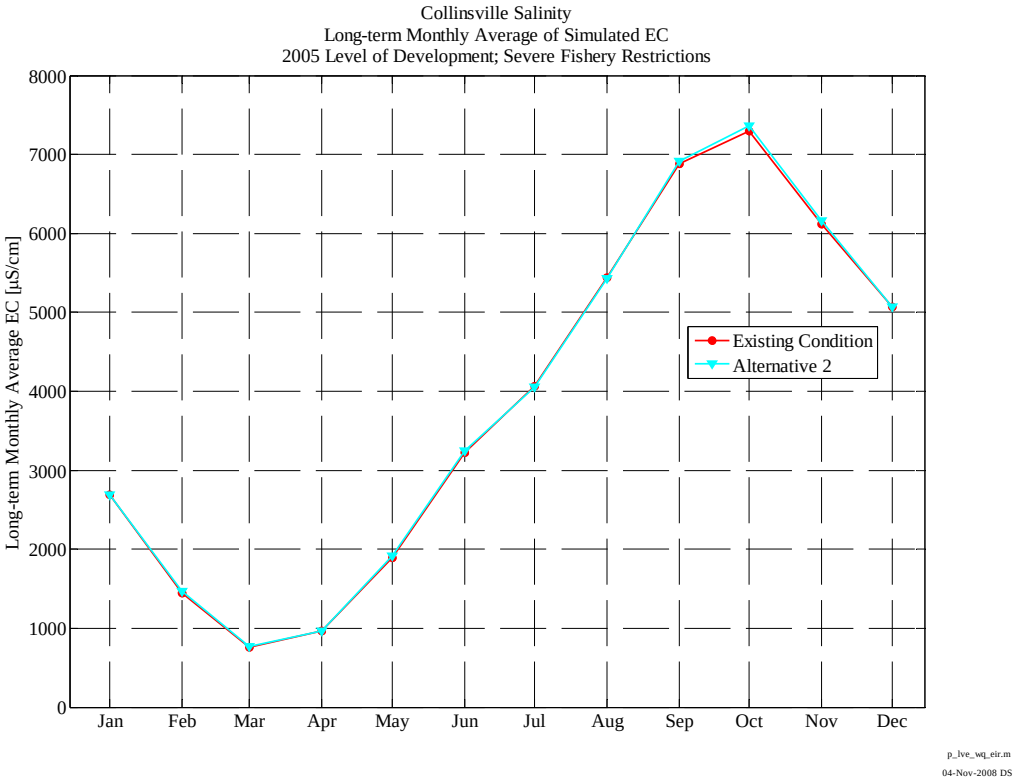
Alternative 2

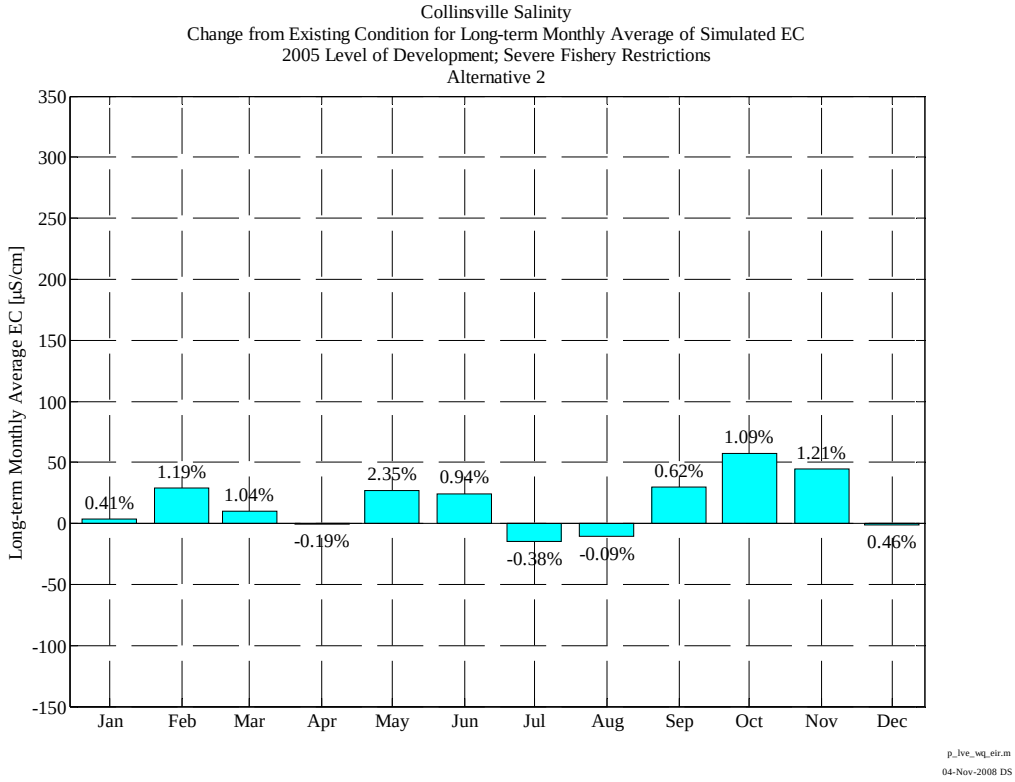
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

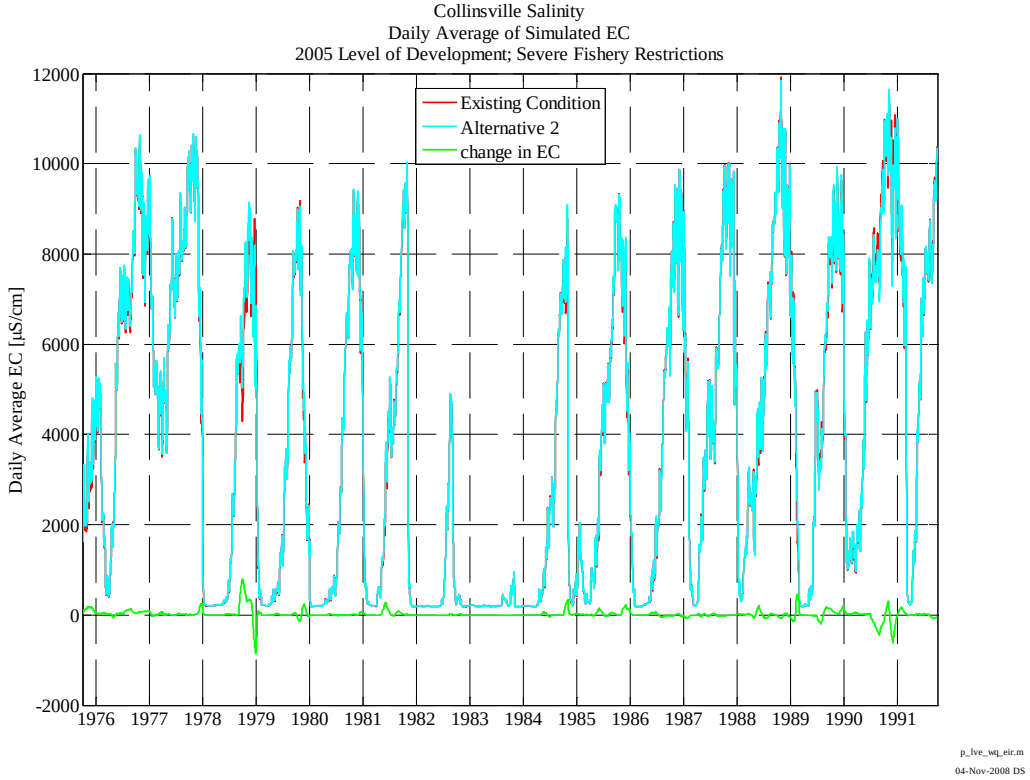
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2,359	3,127	4,194	4,760	2,506	665	1,447	4,494	6,987	7,028	6,858	8,546
1977	9,702	8,659	8,645	7,073	5,096	4,534	4,640	6,490	7,543	7,844	8,337	9,245
1978	9,840	9,655	5,756	311	207	210	222	255	459	1,687	4,463	5,841
1979	7,372	8,314	6,800	1,642	233	214	328	497	1,106	2,781	5,181	7,564
1980	8,161	5,659	2,417	219	202	214	270	424	623	1,778	4,347	6,669
1981	8,157	8,415	6,473	1,036	238	202	471	1,512	3,824	4,204	5,248	7,806
1982	9,182	1,010	183	200	190	203	185	190	239	1,305	3,842	1,120
1983	359	203	197	222	197	185	200	196	195	208	349	251
1984	575	195	185	203	201	190	326	721	1,782	2,460	4,754	6,986
1985	7,663	907	526	1,384	637	316	760	1,579	3,832	4,765	5,631	8,026
1986	8,428	7,412	4,552	1,183	185	192	241	476	1,198	2,246	4,525	6,027
1987	7,548	8,237	8,248	5,751	1,365	251	1,020	2,707	4,224	4,111	5,395	7,910
1988	9,210	8,986	6,627	1,047	934	2,273	2,341	3,466	4,349	5,902	7,363	9,043
1989	10,429	9,395	8,264	6,232	2,681	242	208	456	3,069	3,526	5,024	7,436
1990	8,384	8,780	8,284	2,679	1,410	1,448	1,905	3,974	6,352	7,453	7,644	8,868
1991	10,348	9,695	9,683	9,133	7,282	929	829	3,286	6,224	7,598	7,892	9,321
Avg	7,357	6,166	5,065	2,692	1,473	767	962	1,920	3,250	4,056	5,428	6,916
W/AN/BN	6,274	4,636	2,870	569	202	201	253	394	800	1,781	3,923	4,922
D/C	8,200	7,356	6,772	4,344	2,461	1,207	1,514	3,107	5,156	5,826	6,599	8,467

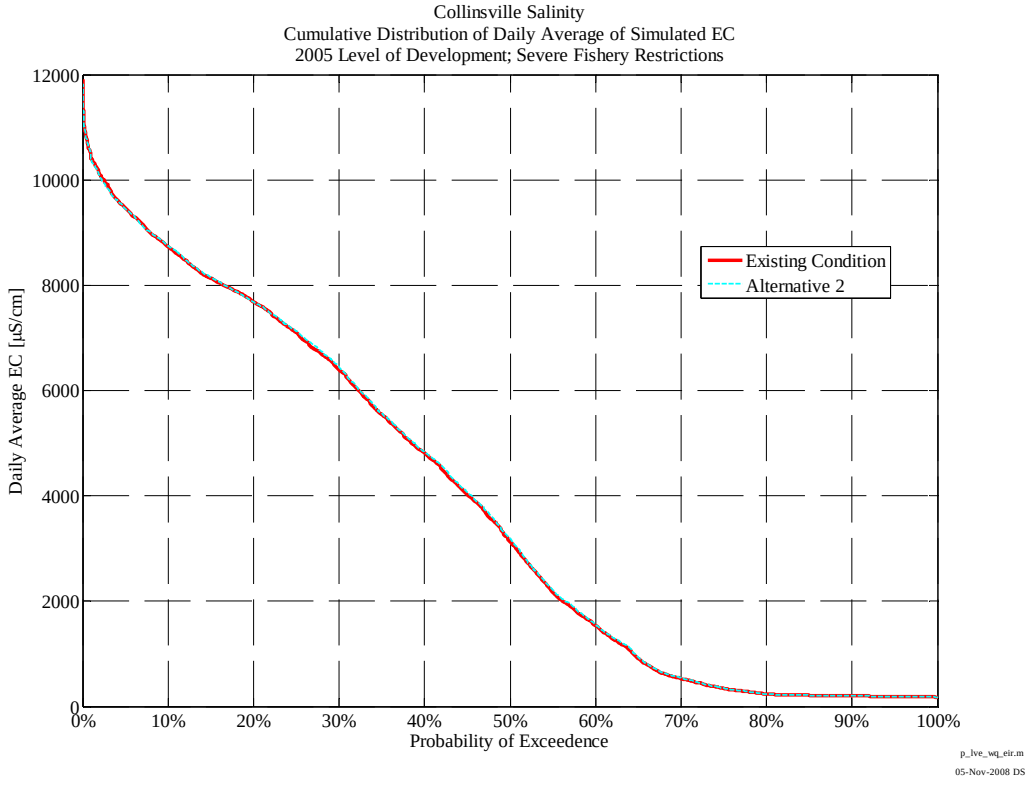
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	4.5%	5.6%	2.5%	0.8%	1.6%	4.4%	-0.1%	-0.1%	0.5%	1.0%	1.7%	0.8%
1977	0.6%	0.9%	1.0%	0.1%	-0.1%	0.9%	0.2%	0.3%	0.0%	0.3%	0.2%	0.0%
1978	0.1%	0.1%	3.4%	3.5%	-0.1%	-0.2%	-0.2%	0.6%	2.9%	0.7%	0.1%	9.4%
1979	7.5%	3.9%	-6.4%	-2.8%	0.6%	-0.4%	-1.2%	4.0%	0.3%	-0.2%	-0.1%	0.4%
1980	-1.0%	2.7%	1.5%	-0.4%	0.0%	-0.1%	-0.6%	3.7%	-0.5%	-0.7%	-0.1%	-0.1%
1981	0.1%	0.1%	0.8%	1.4%	0.2%	0.1%	-0.5%	9.3%	4.3%	0.1%	0.9%	0.7%
1982	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.4%	-0.2%	0.2%	0.3%
1983	1.8%	0.3%	0.0%	-0.1%	0.0%	0.0%	0.1%	-0.2%	0.0%	-0.1%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	5.9%	0.3%	-0.6%	-0.1%	-0.1%
1985	2.7%	5.5%	3.0%	1.0%	1.2%	1.7%	-0.6%	3.8%	2.3%	-0.5%	0.4%	0.4%
1986	-0.1%	1.9%	3.1%	1.4%	0.0%	-0.3%	0.0%	6.5%	4.7%	-0.3%	-0.8%	-0.3%
1987	-0.2%	0.2%	-0.2%	-0.9%	-1.6%	-0.4%	-0.2%	0.1%	-0.3%	0.5%	-0.1%	-0.3%
1988	-0.2%	-0.1%	0.0%	0.9%	0.6%	0.8%	-1.1%	2.9%	1.1%	-1.0%	0.2%	0.1%
1989	-0.5%	-0.1%	-0.1%	-1.8%	14.3%	6.2%	0.1%	0.4%	-0.5%	-3.7%	0.6%	2.1%
1990	1.1%	0.4%	1.6%	2.3%	1.2%	3.2%	1.1%	0.4%	0.3%	-1.6%	-4.3%	-2.8%
1991	1.0%	-2.3%	-2.7%	1.2%	1.2%	0.8%	0.1%	0.2%	0.1%	0.2%	-0.3%	-0.7%
Avg	1.1%	1.2%	0.5%	0.4%	1.2%	1.0%	-0.2%	2.4%	0.9%	-0.4%	-0.1%	0.6%
W/AN/BN	1.2%	1.3%	0.2%	0.2%	0.1%	-0.2%	-0.3%	2.9%	1.0%	-0.2%	-0.1%	1.4%
D/C	1.0%	1.1%	0.6%	0.6%	2.1%	2.0%	-0.1%	1.9%	0.9%	-0.5%	-0.1%	0.0%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.41%
1.19%
1.04%
-0.19%
2.35%
0.94%
-0.38%
-0.09%
0.62%
1.09%
1.21%
0.46%
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

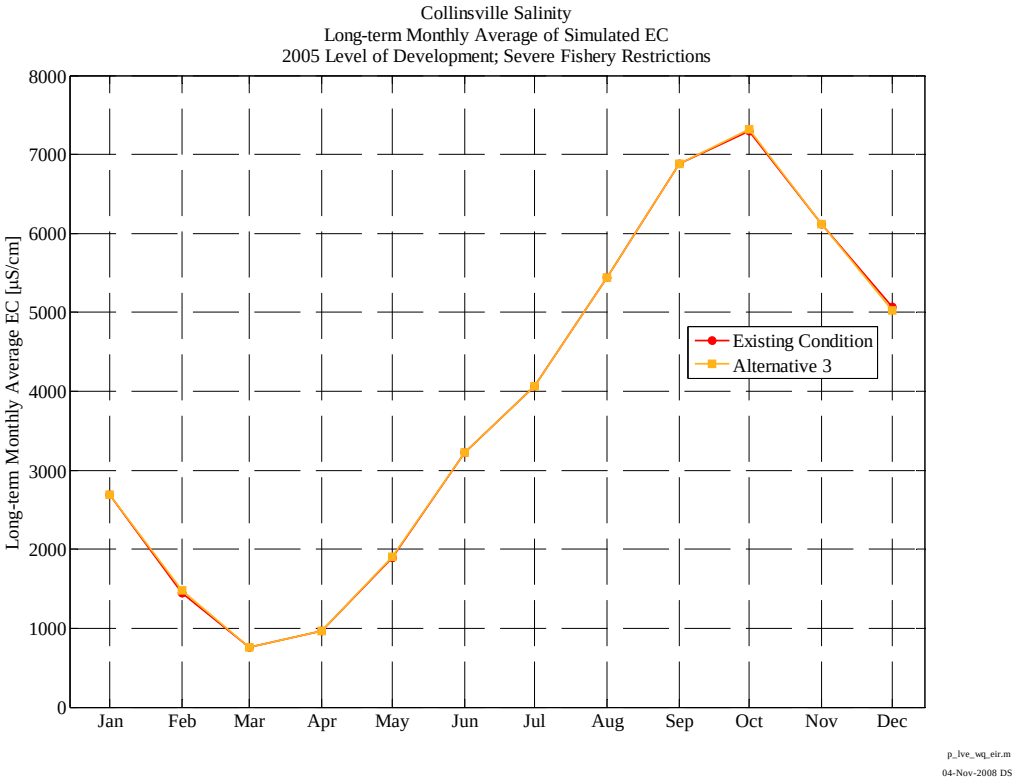
Alternative 3

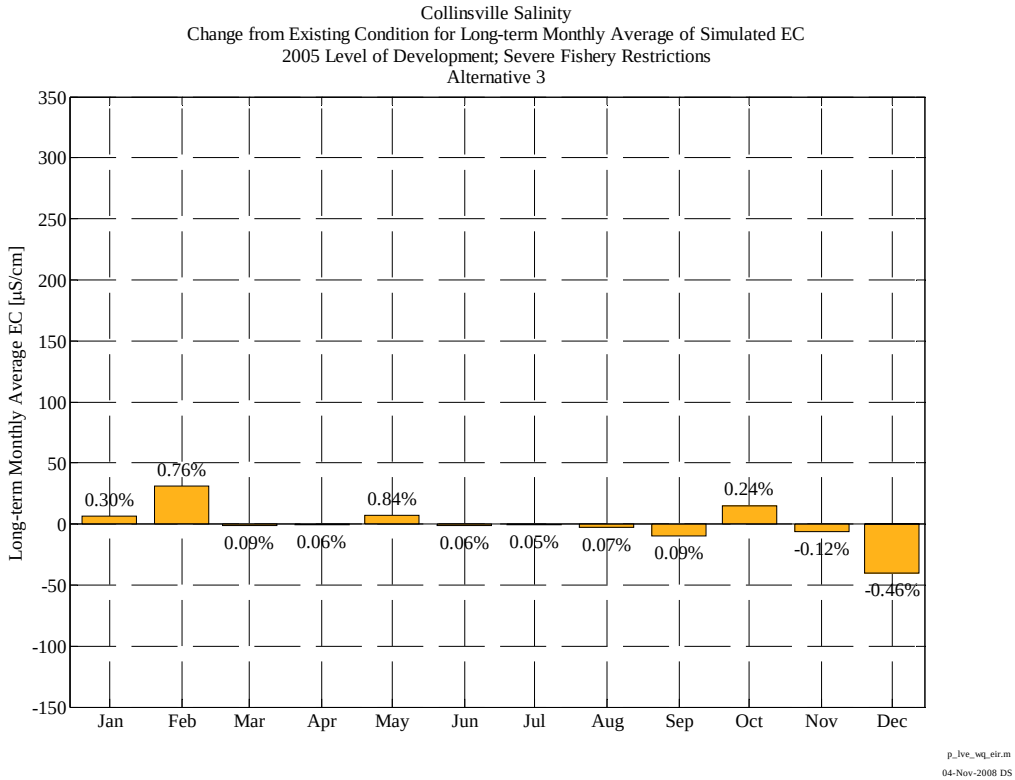
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

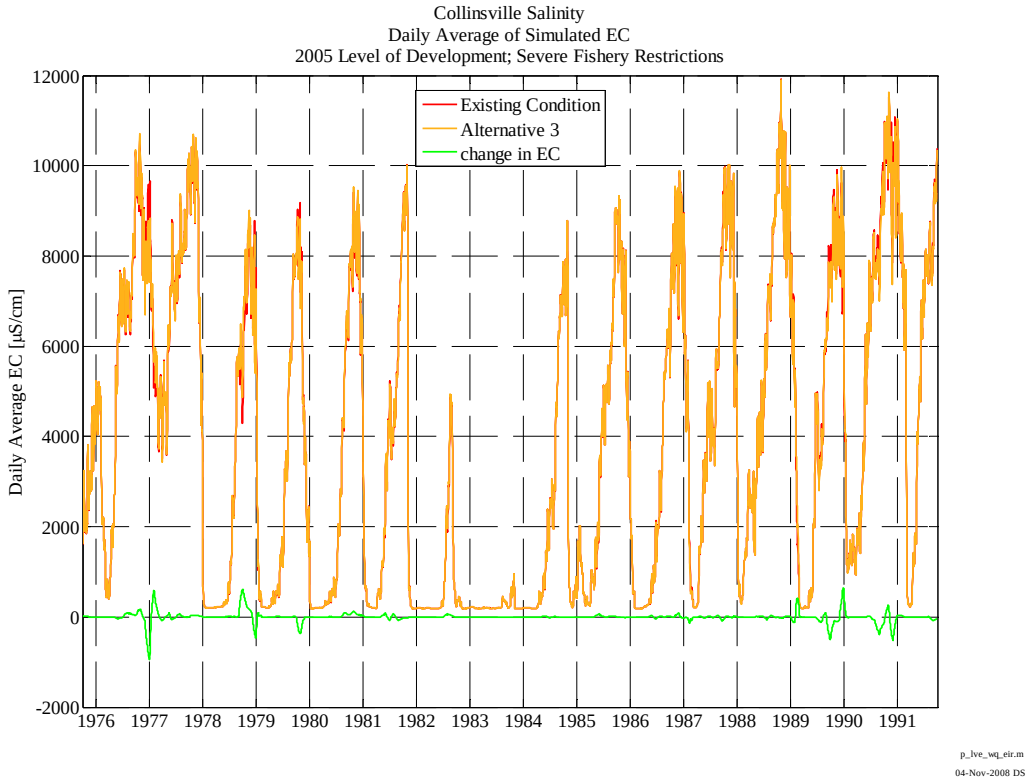
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2,263	2,966	4,095	4,721	2,463	637	1,448	4,477	6,927	7,009	6,821	8,533
1977	9,770	8,602	7,938	7,119	5,385	4,464	4,618	6,499	7,508	7,866	8,333	9,244
1978	9,862	9,671	5,583	301	207	211	224	255	456	1,684	4,464	5,725
1979	7,252	8,159	6,995	1,696	233	214	332	486	1,106	2,782	5,179	7,541
1980	7,997	5,393	2,376	220	202	214	271	414	625	1,787	4,403	6,741
1981	8,243	8,486	6,460	1,029	238	201	474	1,421	3,657	4,224	5,179	7,705
1982	9,155	1,002	183	201	190	203	185	190	239	1,340	3,888	1,124
1983	352	202	197	222	197	185	199	196	195	209	349	251
1984	576	195	185	203	201	190	325	694	1,775	2,470	4,760	6,989
1985	7,459	859	510	1,370	630	311	764	1,557	3,781	4,792	5,619	8,006
1986	8,436	7,262	4,409	1,169	185	192	240	460	1,131	2,252	4,563	6,053
1987	7,568	8,275	8,263	5,789	1,301	247	1,027	2,694	4,243	4,086	5,420	7,883
1988	9,224	8,992	6,640	1,038	927	2,258	2,367	3,376	4,315	5,935	7,363	9,035
1989	10,470	9,391	8,282	6,257	2,642	241	209	456	3,079	3,571	5,009	6,987
1990	8,073	8,652	8,544	2,722	1,387	1,401	1,885	3,957	6,341	7,529	7,729	8,885
1991	10,338	9,725	9,752	9,060	7,206	921	828	3,278	6,218	7,579	7,888	9,325
Avg	7,315	6,115	5,026	2,695	1,475	755	962	1,901	3,225	4,070	5,436	6,877
W/AN/BN	6,233	4,555	2,847	573	202	201	254	385	790	1,789	3,944	4,918
D/C	8,156	7,328	6,720	4,345	2,464	1,187	1,513	3,079	5,119	5,843	6,596	8,400

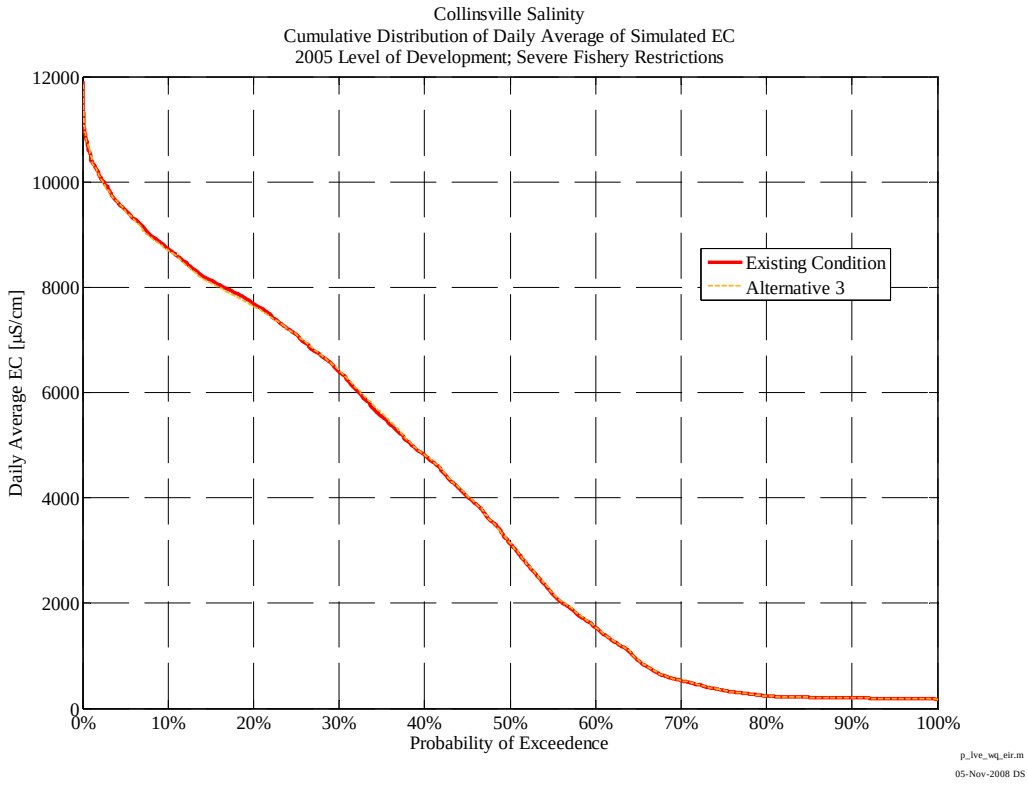
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.3%	0.2%	0.1%	-0.1%	-0.1%	-0.2%	0.0%	-0.5%	-0.4%	0.7%	1.2%	0.6%
1977	1.3%	0.2%	-7.3%	0.8%	5.6%	-0.6%	-0.3%	0.4%	-0.5%	0.6%	0.1%	0.0%
1978	0.3%	0.3%	0.3%	0.1%	-0.1%	0.0%	0.7%	0.6%	2.1%	0.5%	0.1%	7.2%
1979	5.7%	2.0%	-3.8%	0.3%	0.6%	-0.3%	0.2%	1.7%	0.2%	-0.2%	-0.1%	0.1%
1980	-3.0%	-2.1%	-0.2%	0.1%	0.1%	0.0%	0.0%	1.3%	0.0%	-0.2%	1.2%	1.0%
1981	1.1%	0.9%	0.6%	0.7%	0.1%	-0.1%	0.0%	2.7%	-0.3%	0.6%	-0.4%	-0.6%
1982	-0.2%	-0.6%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	-0.4%	2.5%	1.3%	0.7%
1983	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
1984	0.2%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.2%	1.8%	-0.1%	-0.2%	0.1%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.9%	0.1%	0.2%	0.1%
1986	0.0%	-0.1%	-0.1%	0.2%	0.0%	-0.1%	-0.4%	3.0%	-1.2%	0.0%	0.0%	0.2%
1987	0.0%	0.6%	-0.1%	-0.3%	-6.2%	-2.2%	0.5%	-0.3%	0.1%	-0.1%	0.3%	-0.6%
1988	0.0%	0.0%	0.2%	-0.1%	-0.1%	0.1%	0.0%	0.2%	0.3%	-0.5%	0.2%	0.0%
1989	-0.1%	-0.1%	0.1%	-1.4%	12.6%	5.4%	0.4%	0.4%	-0.2%	-2.5%	0.3%	-4.1%
1990	-2.7%	-1.1%	4.8%	3.9%	-0.5%	-0.2%	0.1%	-0.1%	0.1%	-0.6%	-3.2%	-2.6%
1991	0.9%	-2.0%	-2.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.7%
Avg	0.2%	-0.1%	-0.5%	0.3%	0.8%	0.1%	0.1%	0.8%	0.1%	0.0%	0.1%	0.1%
W/AN/BN	0.4%	-0.1%	-0.5%	0.1%	0.1%	-0.1%	0.0%	1.2%	0.1%	0.3%	0.4%	1.3%
D/C	0.1%	-0.2%	-0.4%	0.4%	1.3%	0.3%	0.1%	0.6%	0.0%	-0.2%	-0.2%	-0.9%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.30%
0.76%
-0.09%
-0.06%
0.84%
-0.06%
-0.05%
-0.07%
-0.09%
0.24%
-0.12%
-0.46%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

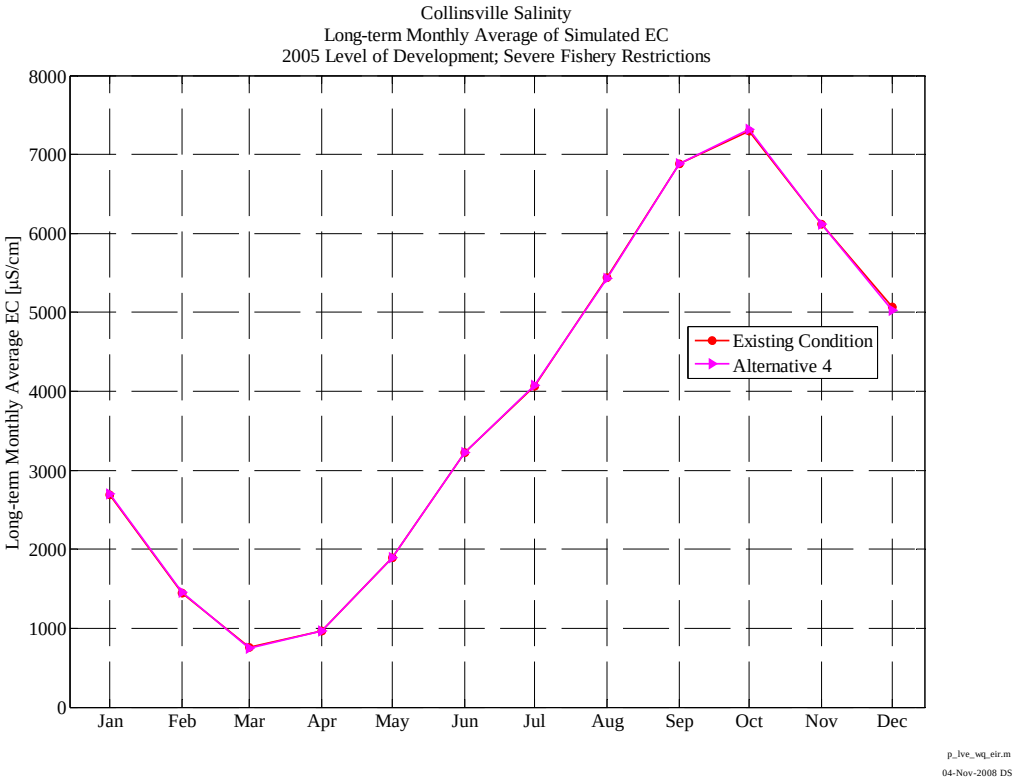
Alternative 4

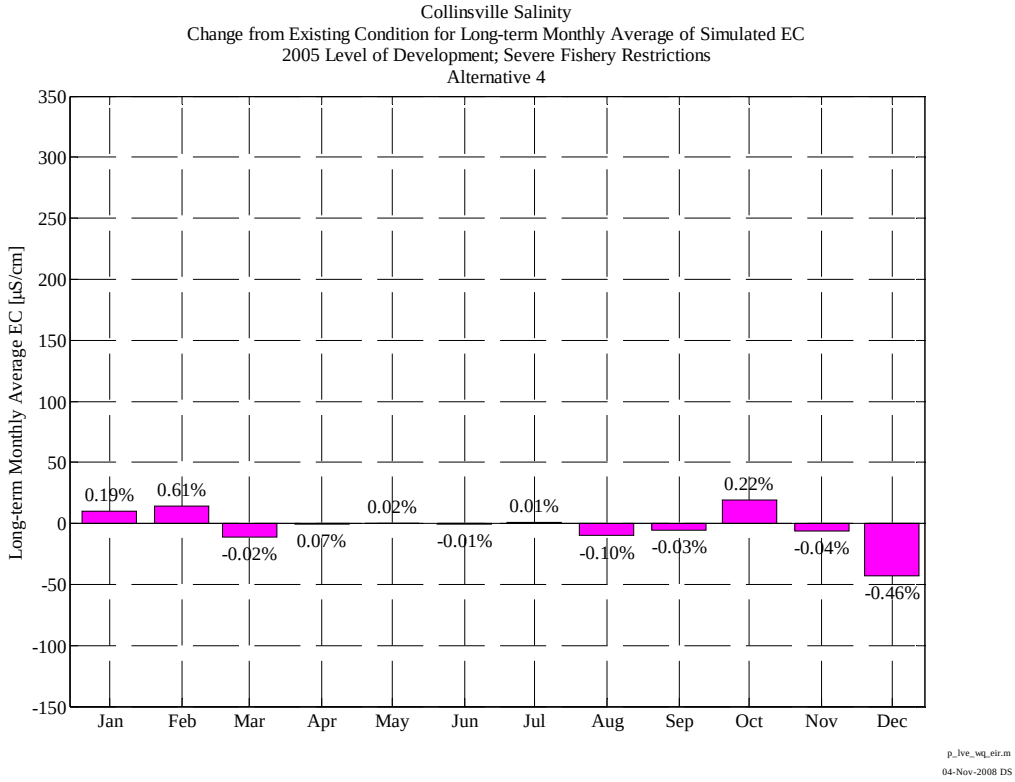
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

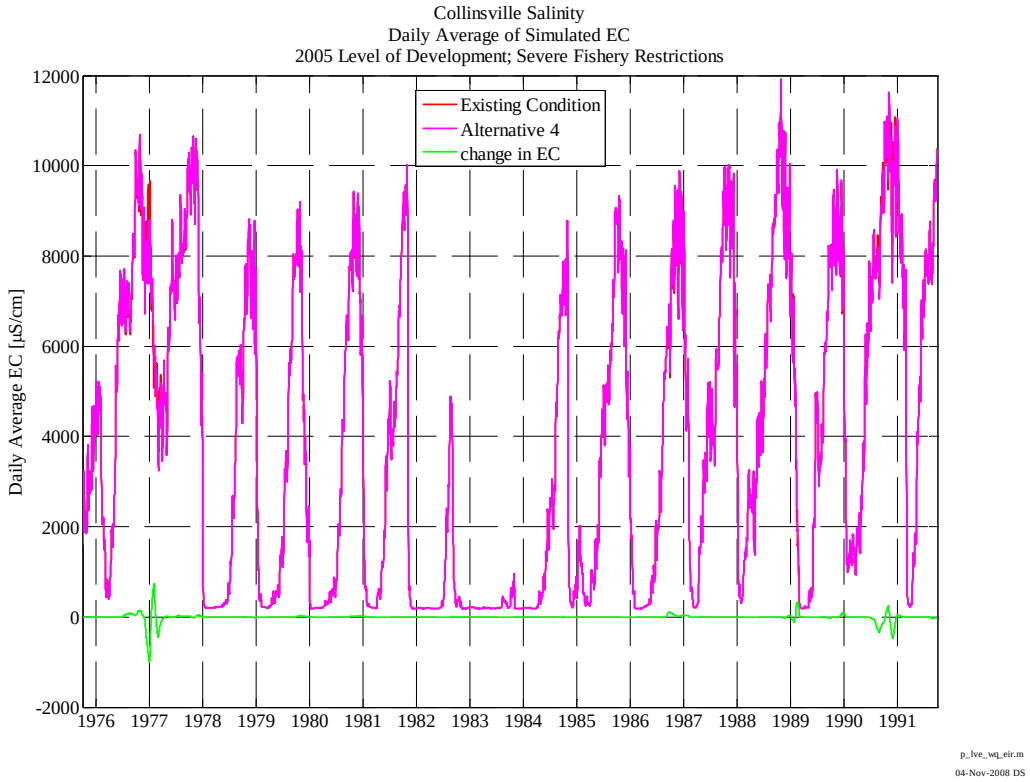
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2,259	2,963	4,093	4,724	2,466	637	1,448	4,496	6,949	6,999	6,817	8,534
1977	9,756	8,616	7,925	7,206	5,091	4,303	4,624	6,478	7,542	7,841	8,333	9,259
1978	9,838	9,660	5,589	301	207	211	224	255	446	1,675	4,461	5,343
1979	6,862	7,999	7,257	1,686	231	214	332	478	1,103	2,780	5,186	7,534
1980	8,261	5,531	2,387	220	202	214	271	409	626	1,791	4,353	6,678
1981	8,166	8,421	6,435	1,026	238	202	474	1,384	3,667	4,200	5,202	7,755
1982	9,173	1,008	183	200	190	203	185	190	240	1,309	3,840	1,118
1983	352	202	197	222	197	185	199	196	195	208	349	251
1984	575	195	185	203	201	190	326	681	1,777	2,474	4,756	6,994
1985	7,464	860	510	1,370	630	311	764	1,522	3,747	4,784	5,607	7,998
1986	8,433	7,268	4,413	1,168	185	192	241	446	1,143	2,252	4,562	6,112
1987	7,643	8,245	8,292	5,834	1,393	252	1,022	2,703	4,238	4,093	5,402	7,935
1988	9,228	8,994	6,630	1,039	928	2,256	2,367	3,370	4,300	5,962	7,342	9,031
1989	10,478	9,385	8,291	6,284	2,572	237	209	455	3,083	3,661	4,995	7,264
1990	8,285	8,742	8,214	2,640	1,395	1,403	1,883	3,959	6,333	7,533	7,749	8,927
1991	10,340	9,741	9,770	9,054	7,198	921	828	3,278	6,217	7,582	7,904	9,361
Avg	7,320	6,114	5,023	2,699	1,458	746	962	1,894	3,226	4,071	5,429	6,881
W/AN/BN	6,214	4,552	2,887	571	202	201	254	379	790	1,784	3,930	4,861
D/C	8,180	7,330	6,684	4,353	2,435	1,169	1,513	3,072	5,120	5,850	6,594	8,451

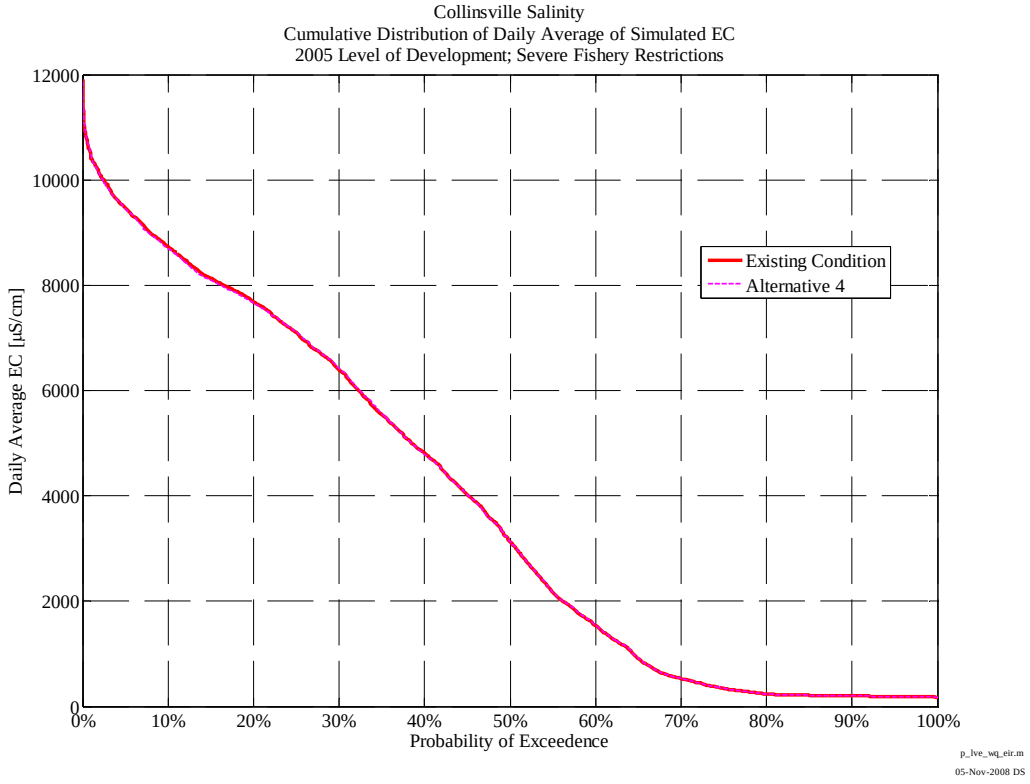
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	1.1%	0.6%
1977	1.1%	0.4%	-7.4%	2.0%	-0.2%	-4.2%	-0.2%	0.1%	0.0%	0.3%	0.1%	0.2%
1978	0.0%	0.2%	0.4%	0.0%	-0.1%	0.0%	1.0%	0.4%	-0.1%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	-0.2%	-0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.0%	0.0%
1980	0.2%	0.4%	0.3%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
1981	0.2%	0.2%	0.2%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1986	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	1.1%
1987	1.0%	0.3%	0.3%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
1989	0.0%	-0.2%	0.2%	-1.0%	9.6%	4.1%	0.4%	0.1%	-0.1%	0.0%	0.1%	-0.3%
1990	-0.1%	-0.1%	0.7%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.5%	-3.0%	-2.1%
1991	0.9%	-1.8%	-1.8%	0.3%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.3%
Avg	0.2%	0.0%	-0.5%	0.2%	0.6%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
W/AN/BN	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%
D/C	0.4%	-0.1%	-0.9%	0.3%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.19%
0.61%
-0.02%
0.07%
0.02%
-0.01%
0.01%
-0.10%
-0.03%
0.22%
-0.04%
-0.46%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Emmaton

Existing Condition

Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	390	511	794	1,025	478	218	343	1,265	2,468	1,884	1,848	2,953
1977	3,159	2,452	2,552	2,106	1,278	1,081	1,076	2,060	2,686	2,650	2,851	3,535
1978	3,891	3,718	1,307	206	195	195	197	200	214	386	1,154	1,240
1979	1,829	2,265	1,893	437	205	194	209	215	288	541	1,282	2,255
1980	2,644	1,287	471	188	190	191	208	213	233	418	1,051	1,863
1981	2,520	2,456	1,463	317	193	187	217	330	975	874	1,250	2,633
1982	3,286	295	179	193	182	192	180	182	190	339	855	274
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	200	178	180	187	187	183	207	241	405	461	1,236	2,022
1985	2,010	259	200	280	213	202	252	335	984	1,056	1,384	2,664
1986	2,745	1,963	955	308	182	183	203	211	295	487	1,095	1,543
1987	2,290	2,441	2,365	1,380	328	195	292	568	1,119	819	1,323	2,712
1988	3,061	2,808	1,562	322	262	493	456	717	1,102	1,563	2,179	3,405
1989	4,052	3,061	2,320	1,439	504	187	187	197	838	733	1,176	2,291
1990	2,382	2,707	2,390	515	297	300	365	998	2,135	2,287	2,567	3,399
1991	3,898	3,663	3,631	3,143	1,956	287	259	783	2,124	2,418	2,569	3,586
Avg	2,409	1,890	1,403	765	427	279	302	544	1,015	1,069	1,501	2,285
W/AN/BN	2,111	1,413	739	245	189	188	198	206	258	403	981	1,340
D/C	2,640	2,262	1,920	1,170	612	350	383	806	1,604	1,587	1,905	3,020

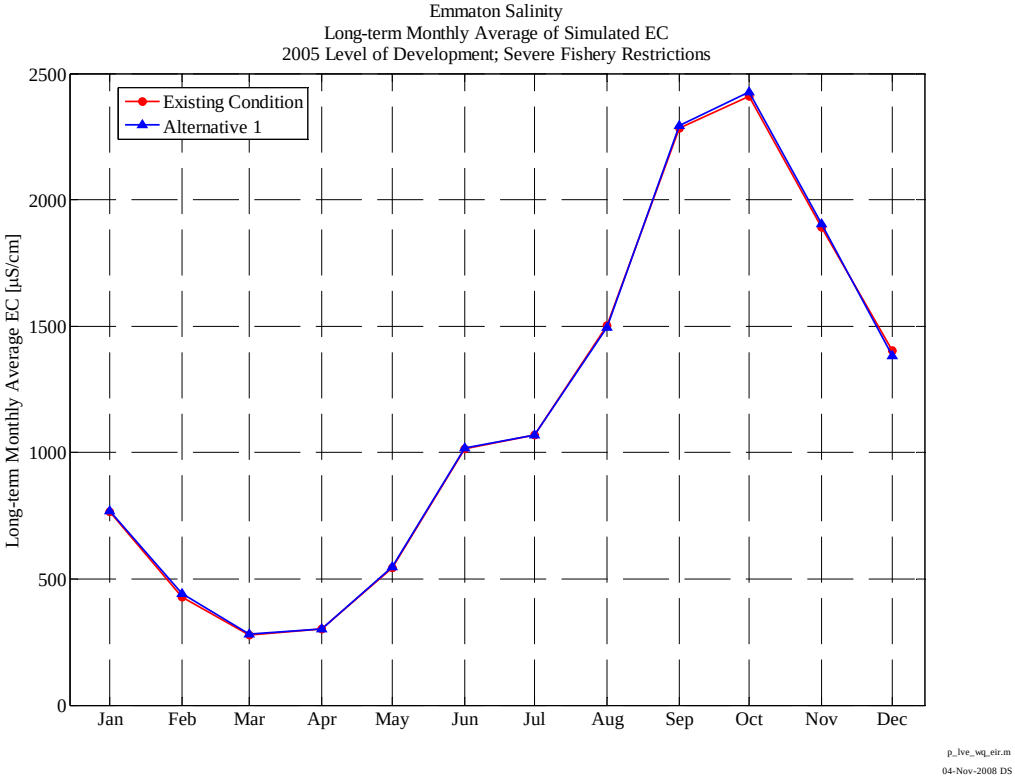
Alternative 1

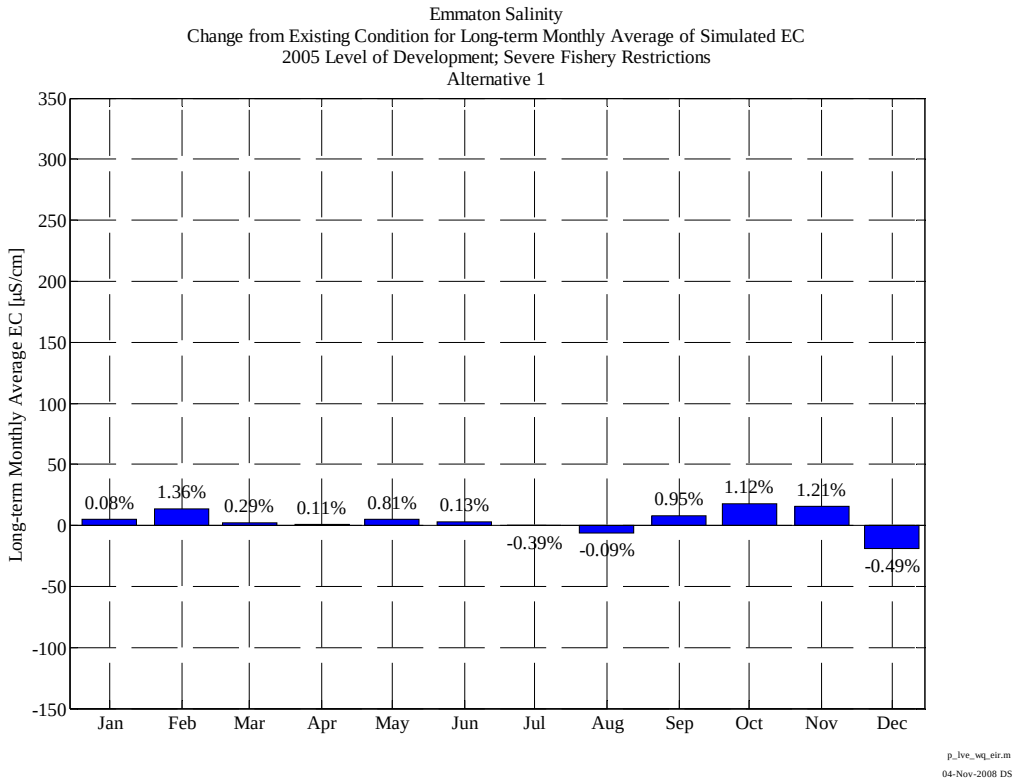
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

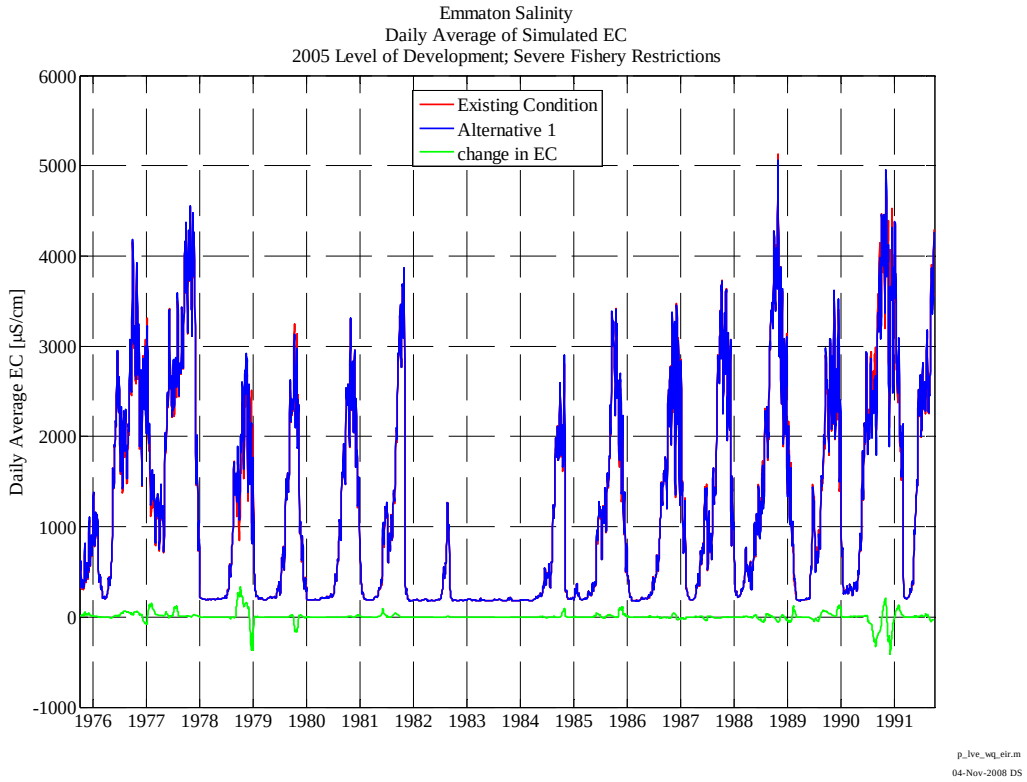
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	406	540	815	1,033	480	218	340	1,264	2,481	1,930	1,907	2,991
1977	3,212	2,489	2,501	2,173	1,372	1,106	1,092	2,089	2,690	2,741	2,865	3,544
1978	3,901	3,735	1,321	206	194	195	197	200	214	380	1,150	1,430
1979	2,042	2,401	1,688	422	205	193	208	215	288	540	1,279	2,271
1980	2,521	1,292	470	187	190	191	208	213	232	416	1,050	1,862
1981	2,526	2,457	1,481	321	193	187	218	347	1,015	875	1,270	2,659
1982	3,286	295	179	193	182	192	180	182	190	338	857	275
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	200	178	180	187	188	183	207	243	403	458	1,237	2,020
1985	2,060	264	201	282	213	201	251	341	1,017	1,051	1,398	2,678
1986	2,741	2,050	979	309	182	183	204	212	295	488	1,086	1,542
1987	2,284	2,473	2,343	1,363	322	195	294	572	1,095	826	1,319	2,701
1988	3,053	2,803	1,561	322	262	497	453	725	1,086	1,518	2,203	3,410
1989	4,018	3,058	2,312	1,393	570	188	187	198	820	700	1,198	2,357
1990	2,420	2,719	2,491	519	296	304	369	1,003	2,146	2,223	2,321	3,216
1991	3,974	3,563	3,439	3,219	2,014	289	259	786	2,129	2,428	2,584	3,550
Avg	2,427	1,906	1,384	770	441	281	303	548	1,018	1,069	1,495	2,293
W/AN/BN	2,125	1,448	714	243	189	188	198	207	258	402	979	1,368
D/C	2,661	2,263	1,905	1,181	636	354	385	814	1,609	1,588	1,896	3,012

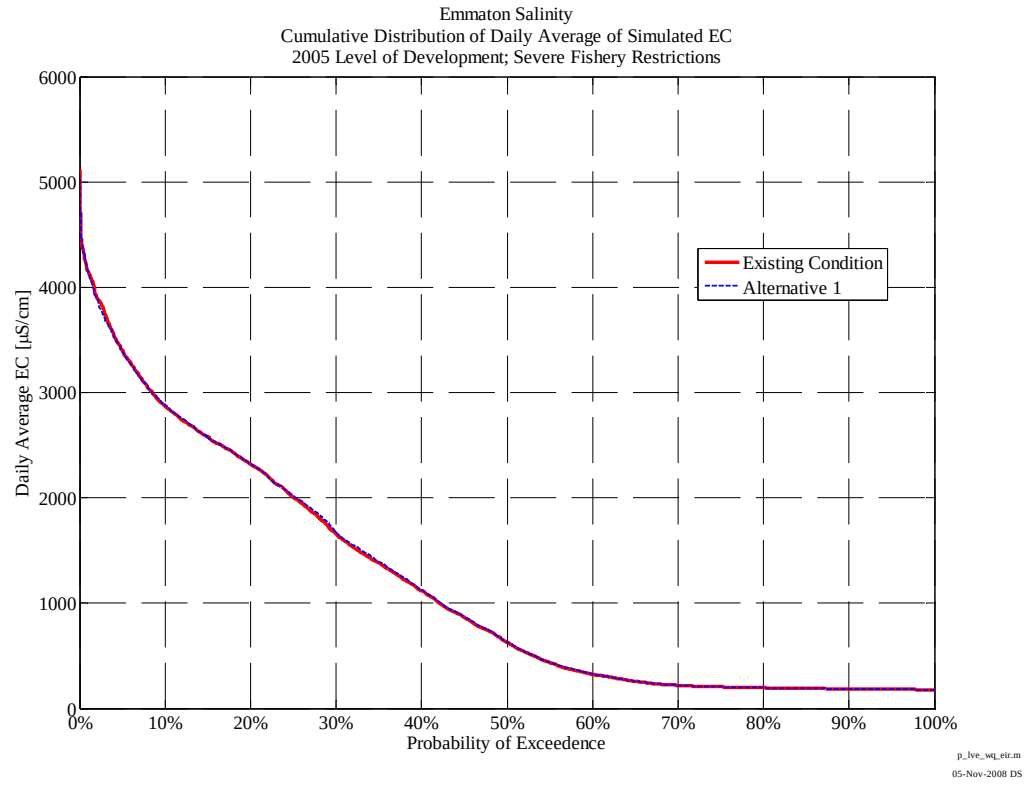
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	4.2%	5.6%	2.6%	0.8%	0.5%	0.1%	-0.9%	-0.1%	0.5%	2.4%	3.2%	1.3%
1977	1.7%	1.5%	-2.0%	3.2%	7.4%	2.4%	1.6%	1.4%	0.1%	3.4%	0.5%	0.3%
1978	0.3%	0.4%	1.1%	0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	-1.6%	-0.4%	15.3%
1979	11.7%	6.0%	-10.8%	-3.5%	-0.1%	-0.2%	-0.1%	0.1%	0.0%	-0.2%	-0.3%	0.7%
1980	-4.7%	0.4%	-0.3%	-0.1%	0.0%	0.0%	0.0%	0.1%	-0.3%	-0.5%	-0.1%	-0.1%
1981	0.2%	0.0%	1.2%	1.2%	0.1%	0.1%	0.3%	5.2%	4.1%	0.1%	1.6%	1.0%
1982	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.2%	0.2%
1983	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%	0.9%	-0.5%	-0.6%	0.1%	-0.1%
1985	2.5%	1.9%	0.4%	0.4%	0.1%	-0.2%	-0.5%	1.8%	3.3%	-0.5%	1.0%	0.5%
1986	-0.1%	4.4%	2.4%	0.3%	0.0%	-0.1%	0.2%	0.5%	-0.1%	0.2%	-0.8%	-0.1%
1987	-0.3%	1.3%	-0.9%	-1.3%	-1.9%	-0.1%	0.7%	0.8%	-2.2%	0.8%	-0.3%	-0.4%
1988	-0.3%	-0.2%	-0.1%	0.1%	0.0%	0.7%	-0.6%	1.2%	-1.5%	-2.9%	1.1%	0.1%
1989	-0.8%	-0.1%	-0.4%	-3.1%	13.1%	0.3%	0.2%	0.4%	-2.2%	-4.5%	1.9%	2.8%
1990	1.6%	0.5%	4.2%	0.8%	-0.3%	1.2%	1.1%	0.5%	0.5%	-2.8%	-9.6%	-5.4%
1991	1.9%	-2.8%	-5.3%	2.4%	2.9%	0.6%	0.0%	0.3%	0.3%	0.4%	0.6%	-1.0%
Avg	1.1%	1.2%	-0.5%	0.1%	1.4%	0.3%	0.1%	0.8%	0.1%	-0.4%	-0.1%	0.9%
W/AN/BN	1.0%	1.6%	-1.1%	-0.5%	0.0%	0.0%	0.0%	0.2%	-0.1%	-0.4%	-0.2%	2.3%
D/C	1.2%	0.9%	0.0%	0.5%	2.4%	0.6%	0.2%	1.3%	0.3%	-0.4%	0.0%	-0.1%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.08%
1.36%
0.29%
0.11%
0.81%
0.13%
-0.39%
-0.09%
0.95%
1.12%
1.21%
-0.49%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

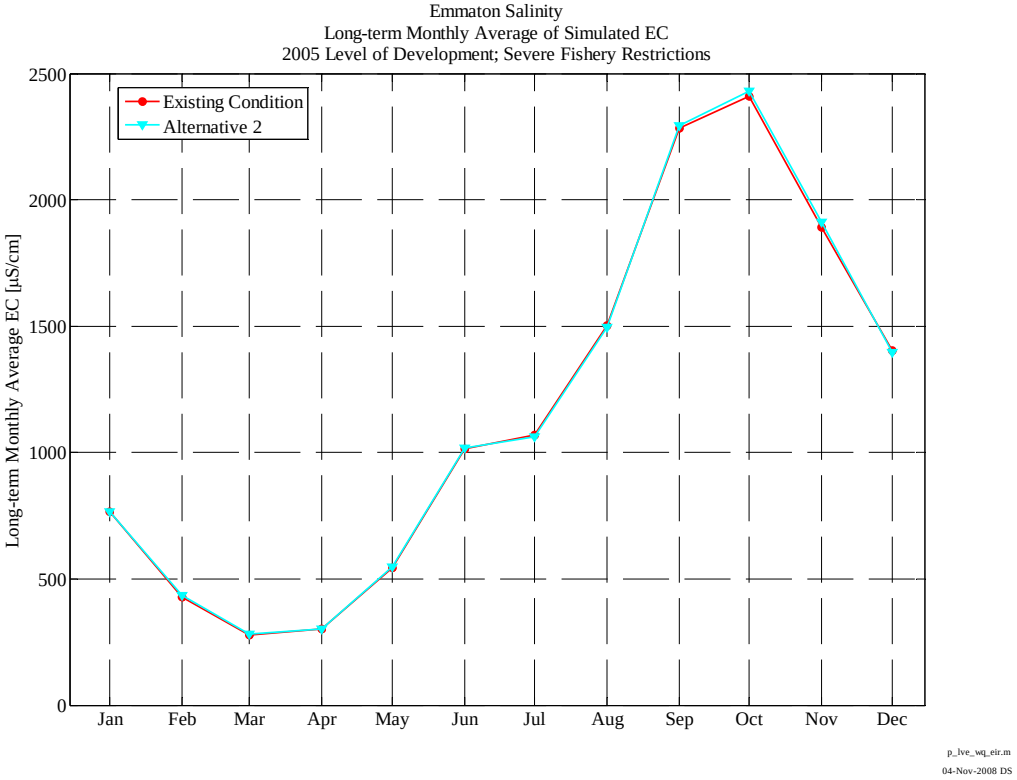
Alternative 2

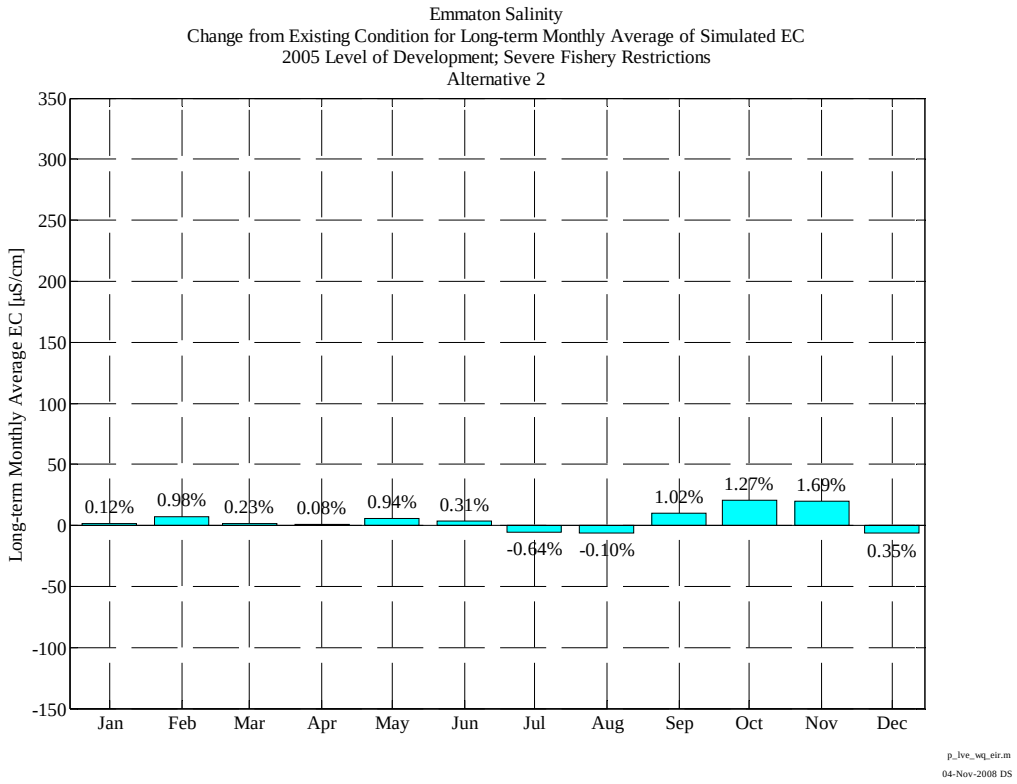
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

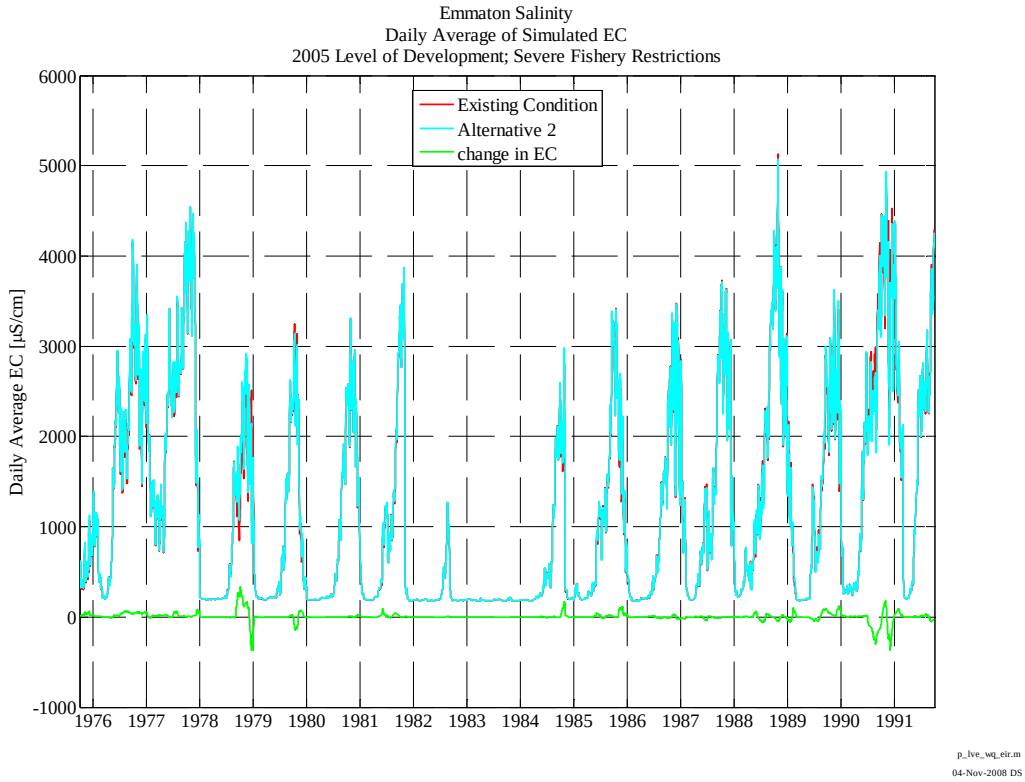
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	406	546	822	1,036	484	219	340	1,267	2,483	1,924	1,909	2,995
1977	3,205	2,498	2,600	2,110	1,289	1,093	1,090	2,080	2,685	2,699	2,861	3,538
1978	3,897	3,726	1,365	207	194	195	197	200	214	380	1,151	1,430
1979	2,042	2,401	1,685	421	205	193	208	215	288	540	1,279	2,272
1980	2,541	1,338	485	188	190	190	208	213	232	416	1,050	1,862
1981	2,526	2,457	1,481	321	193	187	218	347	1,012	875	1,271	2,659
1982	3,286	297	179	193	181	192	180	182	190	338	857	275
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	200	178	180	187	187	183	207	243	403	458	1,237	2,020
1985	2,101	269	202	283	213	201	250	340	1,016	1,047	1,395	2,678
1986	2,741	2,050	988	313	182	183	204	213	302	485	1,080	1,538
1987	2,282	2,464	2,347	1,366	324	195	294	572	1,095	825	1,319	2,701
1988	3,053	2,803	1,561	323	263	497	453	745	1,098	1,516	2,202	3,409
1989	4,021	3,056	2,317	1,399	563	188	187	198	820	700	1,197	2,374
1990	2,425	2,723	2,478	524	299	305	370	1,003	2,148	2,197	2,335	3,242
1991	3,963	3,573	3,467	3,200	1,995	289	259	786	2,126	2,429	2,584	3,547
Avg	2,430	1,910	1,396	767	434	281	303	549	1,018	1,064	1,495	2,295
W/AN/BN	2,128	1,454	724	244	189	188	198	207	259	401	978	1,368
D/C	2,665	2,266	1,919	1,174	625	353	385	815	1,609	1,579	1,897	3,016

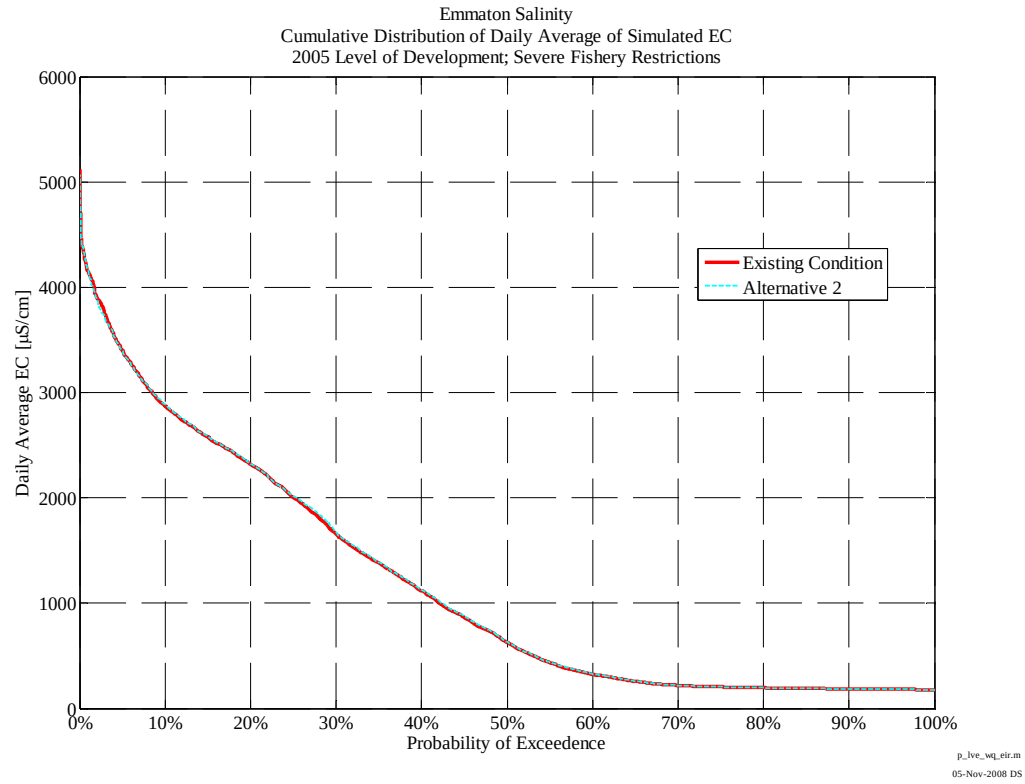
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	4.2%	6.8%	3.6%	1.1%	1.4%	0.3%	-0.8%	0.1%	0.6%	2.1%	3.3%	1.4%
1977	1.4%	1.9%	1.9%	0.2%	0.9%	1.2%	1.4%	1.0%	0.0%	1.8%	0.4%	0.1%
1978	0.2%	0.2%	4.4%	0.6%	-0.1%	-0.1%	-0.2%	-0.1%	0.0%	-1.6%	-0.3%	15.3%
1979	11.7%	6.0%	-11.0%	-3.7%	-0.1%	-0.2%	-0.2%	0.1%	-0.1%	-0.2%	-0.3%	0.7%
1980	-3.9%	4.0%	3.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	-0.3%	-0.5%	-0.1%	-0.1%
1981	0.2%	0.0%	1.2%	1.2%	0.1%	0.1%	0.3%	5.2%	3.8%	0.1%	1.7%	1.0%
1982	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.2%	0.2%
1983	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.9%	-0.5%	-0.6%	0.1%	-0.1%
1985	4.6%	4.2%	0.8%	0.8%	0.2%	-0.4%	-0.7%	1.7%	3.3%	-0.8%	0.8%	0.5%
1986	-0.1%	4.4%	3.4%	1.4%	0.0%	-0.1%	0.2%	0.7%	2.3%	-0.3%	-1.4%	-0.4%
1987	-0.3%	1.0%	-0.8%	-1.0%	-1.3%	-0.1%	0.7%	0.8%	-2.2%	0.8%	-0.3%	-0.4%
1988	-0.3%	-0.2%	-0.1%	0.5%	0.2%	0.7%	-0.6%	3.9%	-0.4%	-3.0%	1.0%	0.1%
1989	-0.8%	-0.2%	-0.1%	-2.7%	11.6%	0.3%	0.1%	0.1%	-2.2%	-4.5%	1.8%	3.6%
1990	1.8%	0.6%	3.7%	1.8%	0.8%	1.6%	1.2%	0.5%	0.6%	-3.9%	-9.0%	-4.6%
1991	1.7%	-2.5%	-4.5%	1.8%	2.0%	0.4%	-0.2%	0.3%	0.1%	0.4%	0.6%	-1.1%
Avg	1.3%	1.7%	0.4%	0.1%	1.0%	0.2%	0.1%	0.9%	0.3%	-0.6%	-0.1%	1.0%
W/AN/BN	1.1%	2.2%	0.0%	-0.2%	0.0%	-0.1%	0.0%	0.2%	0.2%	-0.5%	-0.3%	2.2%
D/C	1.4%	1.3%	0.6%	0.4%	1.8%	0.5%	0.1%	1.5%	0.4%	-0.8%	0.0%	0.1%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.12%
0.98%
0.23%
0.08%
0.94%
0.31%
-0.64%
-0.10%
1.02%
1.27%
1.69%
0.35%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

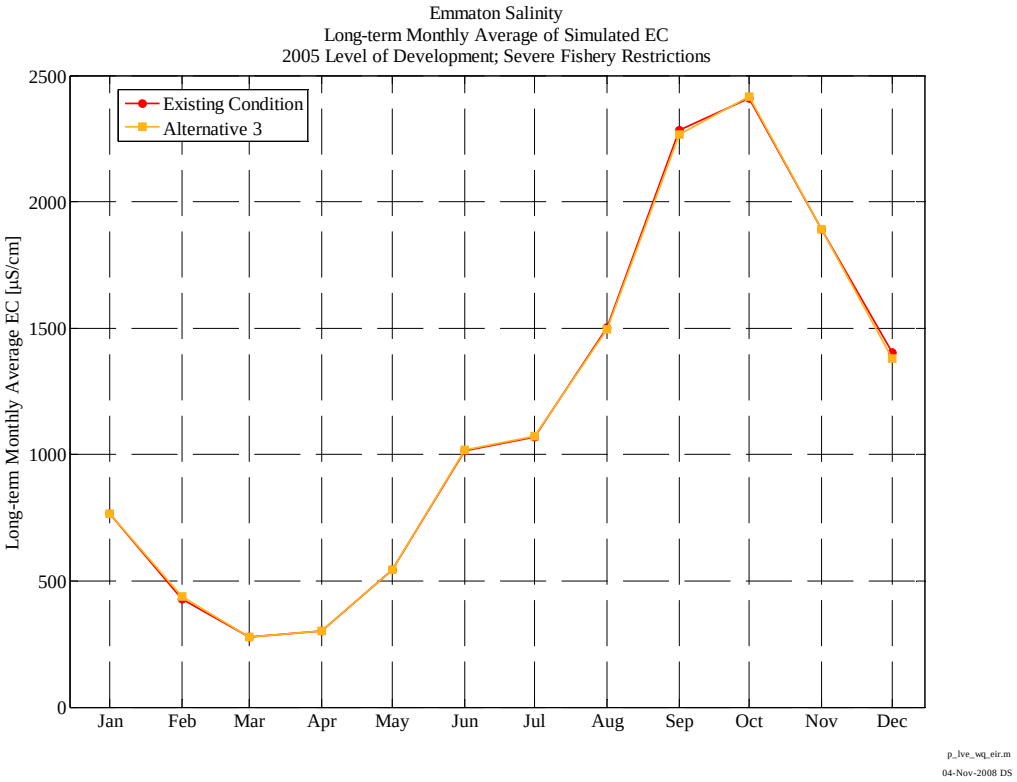
Alternative 3

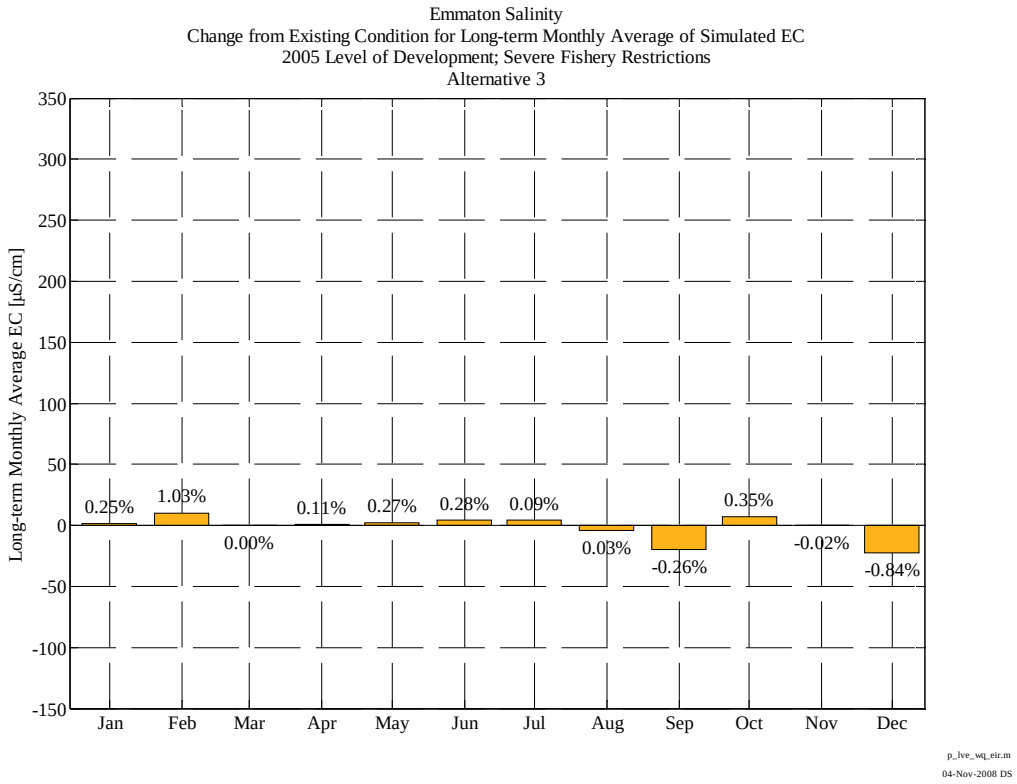
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

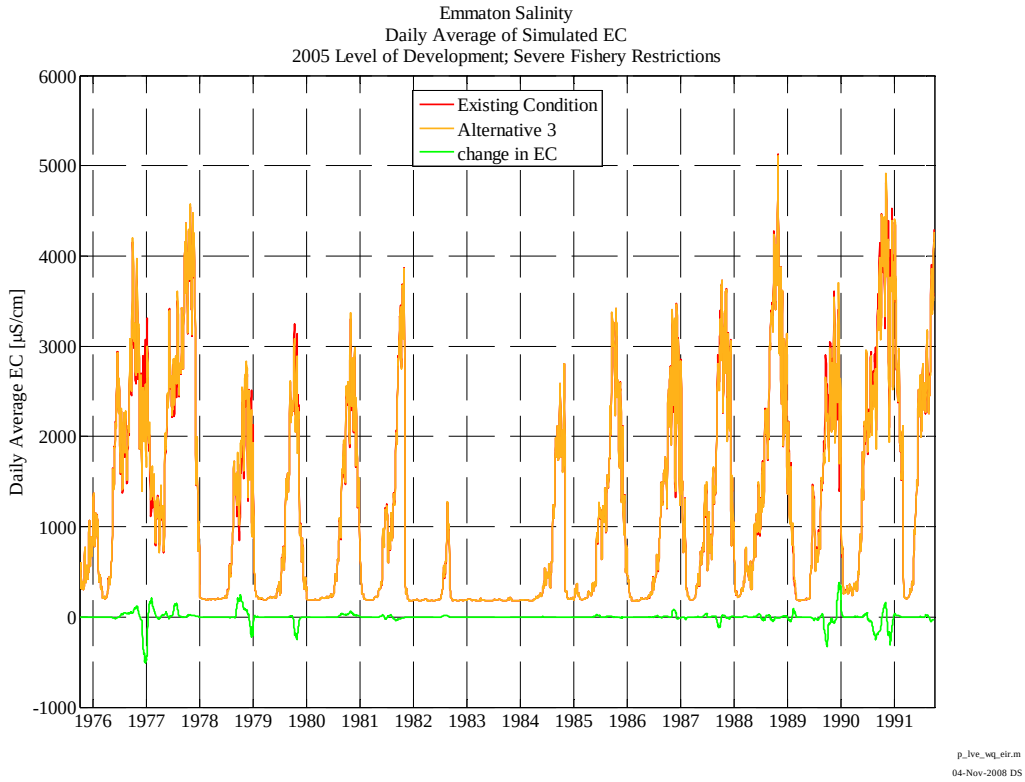
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	391	512	794	1,024	477	218	343	1,258	2,457	1,914	1,889	2,998
1977	3,254	2,463	2,158	2,119	1,396	1,077	1,086	2,086	2,692	2,766	2,868	3,537
1978	3,910	3,735	1,313	206	194	195	198	200	214	380	1,153	1,384
1979	1,991	2,331	1,762	435	205	193	208	215	289	539	1,278	2,261
1980	2,471	1,247	470	188	190	191	208	213	233	418	1,070	1,892
1981	2,563	2,487	1,477	319	193	187	216	334	972	881	1,239	2,608
1982	3,271	294	179	193	182	192	180	182	190	345	870	276
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	201	178	180	187	187	183	206	242	405	460	1,237	2,020
1985	2,009	258	200	280	213	202	252	338	1,000	1,057	1,389	2,668
1986	2,746	1,957	954	308	182	183	203	212	293	494	1,091	1,549
1987	2,291	2,505	2,351	1,376	317	194	293	568	1,141	817	1,332	2,625
1988	3,065	2,797	1,565	323	263	498	458	719	1,128	1,539	2,192	3,378
1989	4,044	3,058	2,324	1,409	556	188	187	198	827	711	1,187	2,084
1990	2,307	2,655	2,666	537	296	300	368	998	2,162	2,247	2,387	3,230
1991	3,956	3,584	3,506	3,167	1,962	287	259	783	2,126	2,416	2,579	3,548
Avg	2,416	1,890	1,380	767	437	279	303	546	1,019	1,073	1,497	2,265
W/AN/BN	2,111	1,418	720	245	189	188	198	207	258	404	984	1,366
D/C	2,653	2,258	1,894	1,173	630	350	385	809	1,612	1,594	1,896	2,964

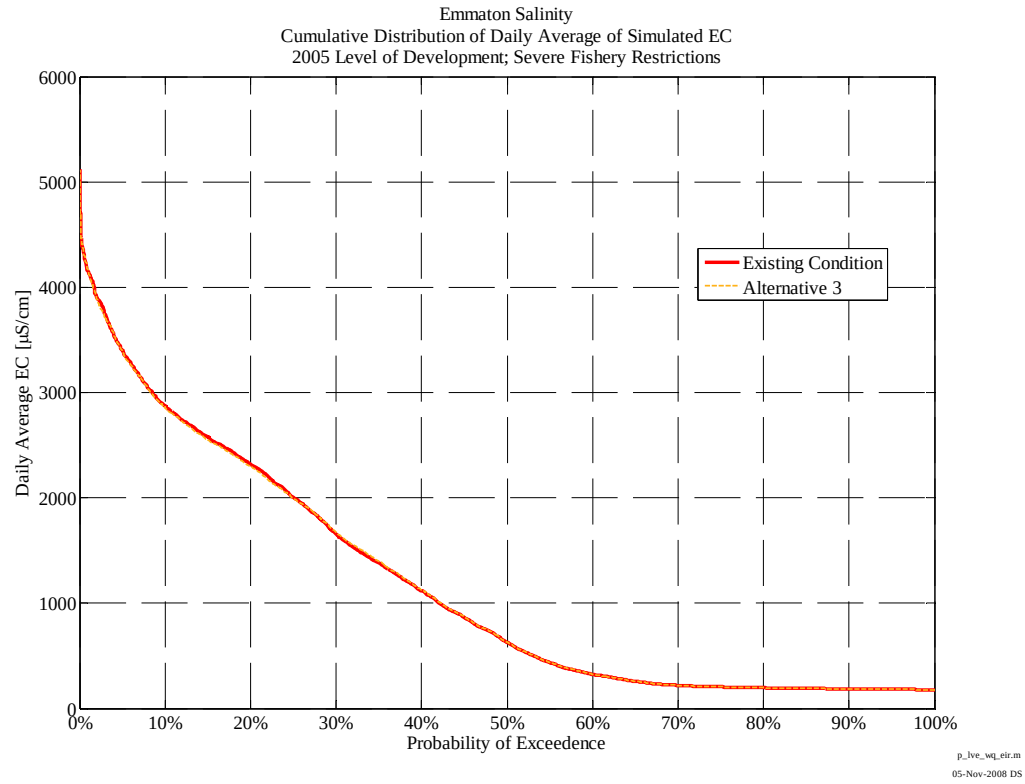
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.3%	0.2%	0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.6%	-0.4%	1.6%	2.2%	1.5%
1977	3.0%	0.5%	-15.4%	0.6%	9.2%	-0.3%	1.0%	1.3%	0.2%	4.4%	0.6%	0.1%
1978	0.5%	0.5%	0.4%	0.0%	-0.1%	0.0%	0.5%	0.1%	0.0%	-1.6%	-0.2%	11.7%
1979	8.9%	2.9%	-6.9%	-0.4%	-0.1%	-0.2%	-0.1%	0.0%	0.2%	-0.4%	-0.4%	0.2%
1980	-6.6%	-3.1%	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	1.8%	1.6%
1981	1.7%	1.3%	1.0%	0.5%	0.0%	-0.1%	-0.4%	1.3%	-0.4%	0.7%	-0.9%	-0.9%
1982	-0.5%	-0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	1.7%	0.5%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.6%	0.2%	0.0%	-0.2%	0.1%	-0.1%
1985	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.6%	0.1%	0.3%	0.1%
1986	0.1%	-0.3%	-0.1%	0.1%	0.0%	0.0%	-0.3%	0.2%	-0.9%	1.4%	-0.4%	0.3%
1987	0.0%	2.6%	-0.6%	-0.3%	-3.3%	-0.2%	0.4%	0.1%	1.9%	-0.2%	0.7%	-3.2%
1988	0.1%	-0.4%	0.1%	0.5%	0.4%	1.0%	0.3%	0.3%	2.3%	-1.5%	0.6%	-0.8%
1989	-0.2%	-0.1%	0.1%	-2.1%	10.2%	0.3%	0.2%	0.6%	-1.4%	-3.0%	1.0%	-9.0%
1990	-3.2%	-1.9%	11.6%	4.4%	-0.3%	-0.1%	0.8%	0.0%	1.2%	-1.7%	-7.0%	-5.0%
1991	1.5%	-2.2%	-3.4%	0.8%	0.3%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.4%	-1.1%
Avg	0.4%	0.0%	-0.8%	0.3%	1.0%	0.0%	0.1%	0.3%	0.3%	0.1%	0.0%	-0.3%
W/AN/BN	0.3%	0.0%	-1.0%	0.0%	0.0%	-0.1%	-0.1%	0.1%	-0.1%	0.2%	0.4%	2.0%
D/C	0.4%	0.0%	-0.7%	0.5%	1.8%	0.1%	0.3%	0.4%	0.6%	0.0%	-0.2%	-2.0%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.25%
1.03%
0.00%
0.11%
0.27%
0.28%
0.09%
0.03%
-0.26%
0.35%
-0.02%
-0.84%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

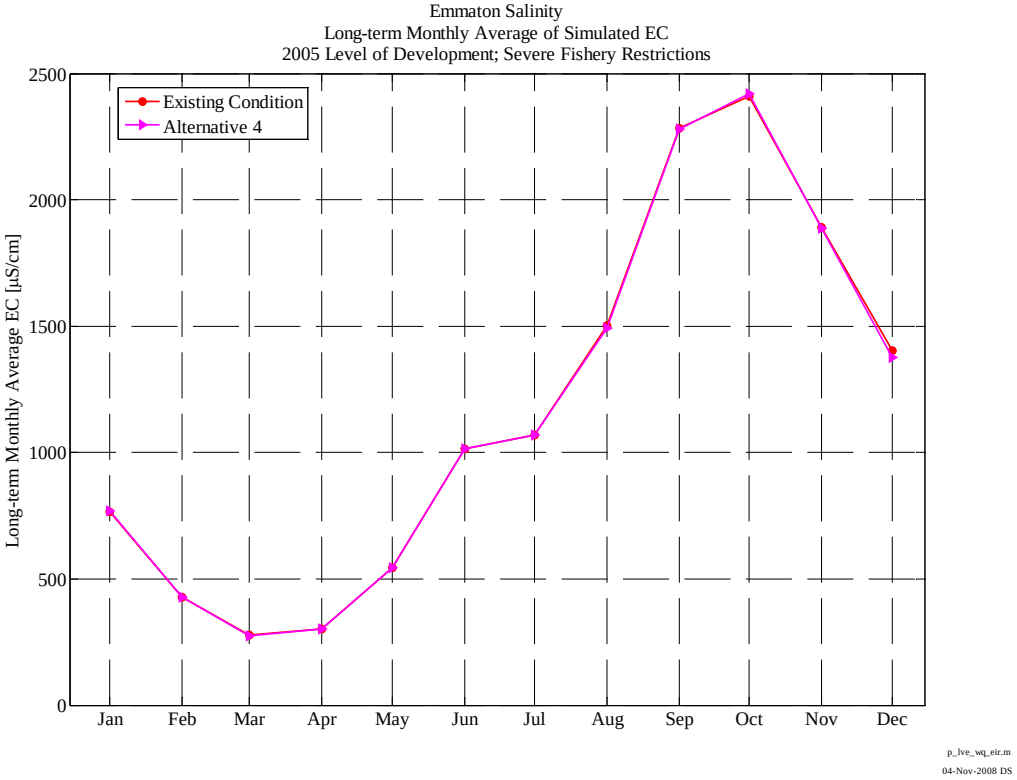
Alternative 4

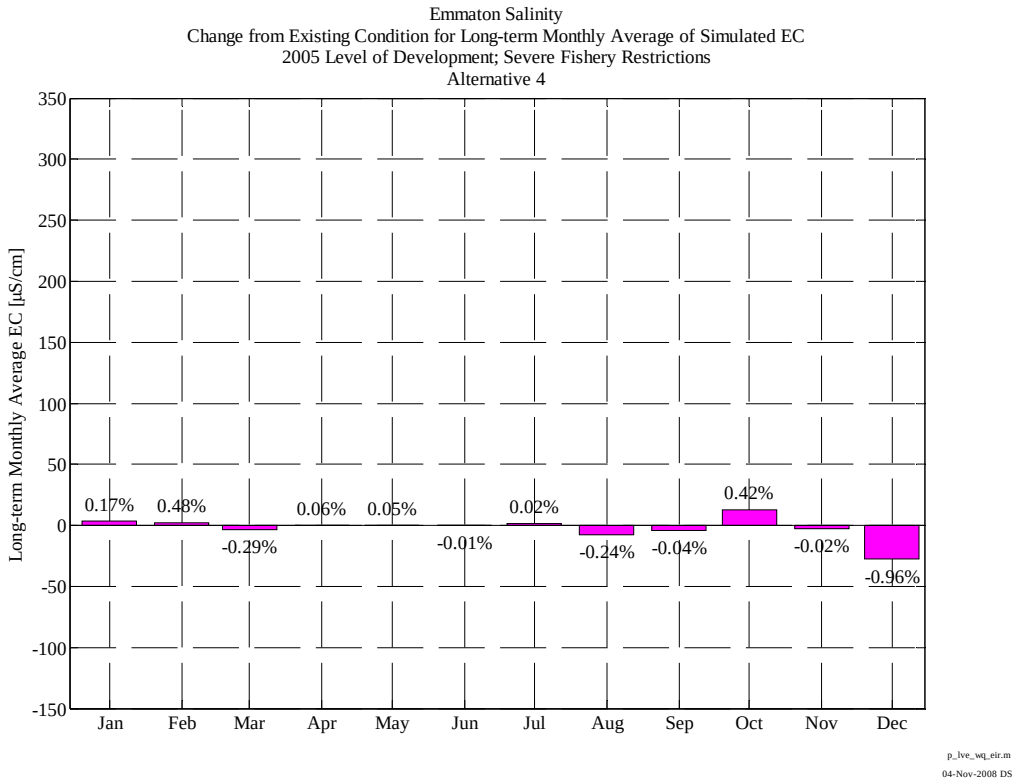
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

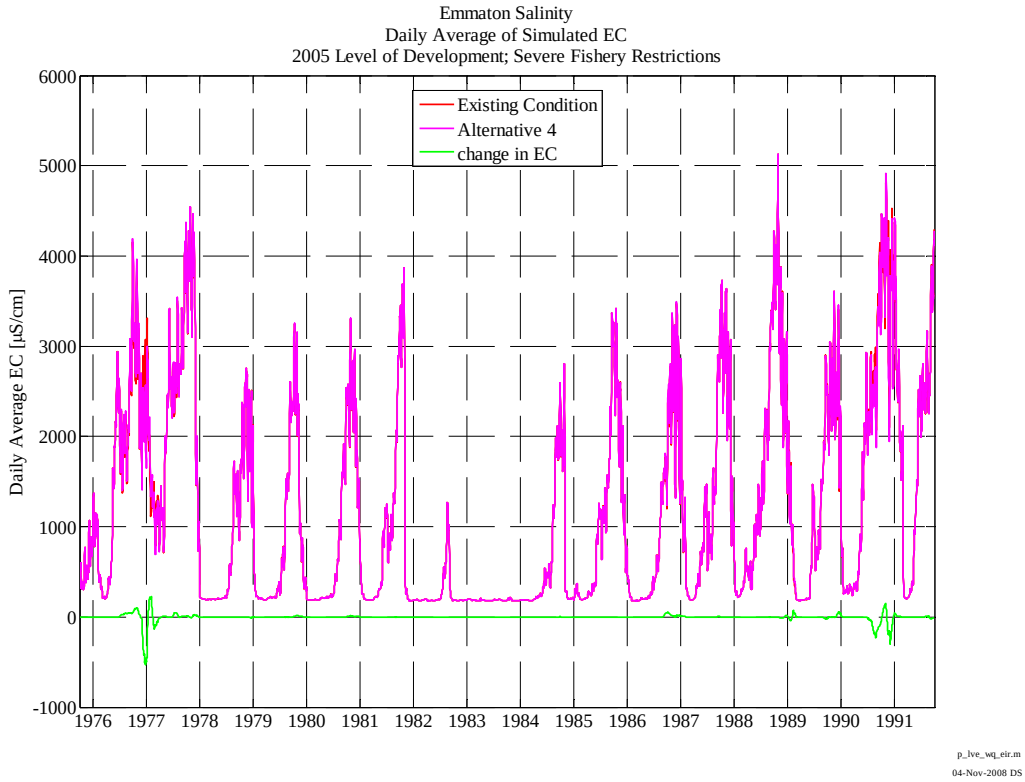
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	390	512	794	1,025	478	218	343	1,265	2,466	1,907	1,888	2,996
1977	3,244	2,472	2,150	2,149	1,272	1,028	1,076	2,064	2,685	2,691	2,851	3,544
1978	3,896	3,728	1,315	206	194	195	198	201	214	385	1,155	1,241
1979	1,830	2,264	1,887	436	205	194	209	215	288	538	1,285	2,256
1980	2,655	1,294	473	188	190	191	208	213	233	418	1,052	1,865
1981	2,528	2,461	1,468	318	193	187	217	330	975	874	1,251	2,634
1982	3,284	295	179	193	182	192	180	182	190	339	857	274
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	200	178	180	187	187	183	207	241	405	461	1,236	2,024
1985	2,010	259	200	280	213	202	252	335	984	1,054	1,384	2,664
1986	2,745	1,961	955	308	182	183	203	211	295	487	1,095	1,571
1987	2,328	2,445	2,381	1,388	329	195	292	568	1,119	819	1,324	2,715
1988	3,061	2,808	1,562	322	262	493	456	717	1,102	1,561	2,175	3,402
1989	4,051	3,053	2,328	1,419	543	188	187	198	838	733	1,177	2,277
1990	2,379	2,702	2,429	519	297	300	365	998	2,136	2,254	2,398	3,282
1991	3,957	3,591	3,517	3,164	1,959	287	259	783	2,123	2,420	2,573	3,569
Avg	2,421	1,888	1,375	769	430	276	302	544	1,015	1,071	1,493	2,281
W/AN/BN	2,113	1,415	739	245	189	188	199	207	258	403	981	1,344
D/C	2,661	2,256	1,870	1,176	616	344	383	806	1,603	1,591	1,891	3,009

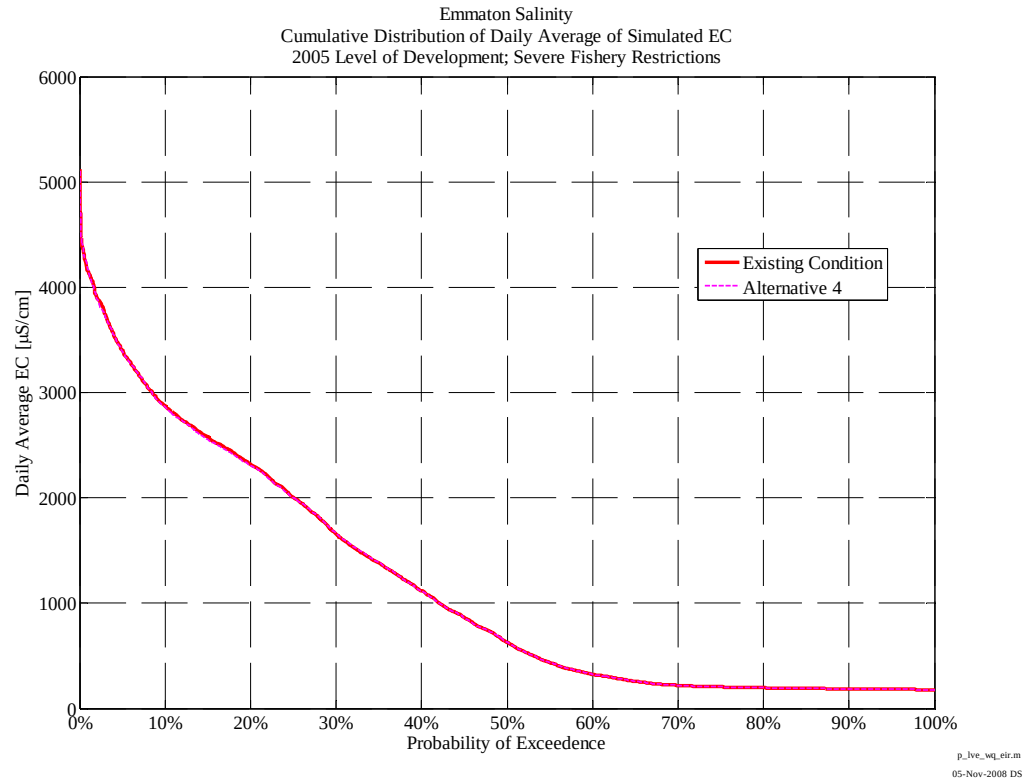
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	1.2%	2.1%	1.5%
1977	2.7%	0.8%	-15.7%	2.0%	-0.5%	-4.9%	0.0%	0.2%	0.0%	1.5%	0.0%	0.3%
1978	0.1%	0.3%	0.6%	0.0%	-0.1%	0.0%	0.7%	0.3%	0.1%	-0.3%	0.1%	0.1%
1979	0.1%	0.0%	-0.3%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.6%	0.2%	0.0%
1980	0.4%	0.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%
1981	0.3%	0.2%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1982	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1986	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%
1987	1.7%	0.2%	0.7%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%
1989	0.0%	-0.3%	0.3%	-1.3%	7.7%	0.2%	0.2%	0.3%	0.0%	0.0%	0.1%	-0.6%
1990	-0.1%	-0.2%	1.6%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	-1.4%	-6.6%	-3.4%
1991	1.5%	-2.0%	-3.1%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	-0.5%
Avg	0.4%	0.0%	-1.0%	0.2%	0.5%	-0.3%	0.1%	0.1%	0.0%	0.0%	-0.2%	0.0%
W/AN/BN	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	0.1%	0.3%
D/C	0.7%	-0.1%	-1.8%	0.3%	0.9%	-0.5%	0.0%	0.1%	0.0%	0.1%	-0.5%	-0.3%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.17%
0.48%
-0.29%
0.06%
0.05%
-0.01%
0.02%
-0.24%
-0.04%
0.42%
-0.02%
-0.96%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Jersey Point

Existing Condition

Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	380	572	1,238	1,349	629	266	282	705	1,379	2,361	2,124	2,452
1977	3,070	2,466	2,858	1,758	874	676	700	1,082	1,599	1,747	1,953	2,398
1978	2,699	2,596	1,532	341	264	293	287	255	237	280	777	1,436
1979	1,783	2,496	2,505	692	279	245	246	251	238	574	1,397	2,501
1980	2,627	1,781	839	271	294	286	269	250	242	283	869	1,959
1981	2,056	2,182	2,474	837	241	224	255	312	530	1,457	1,746	2,185
1982	2,725	972	205	241	229	248	220	200	209	256	763	322
1983	187	203	245	315	298	262	243	230	226	219	200	186
1984	192	195	235	254	230	210	242	268	281	427	913	2,123
1985	2,250	799	241	319	257	246	284	320	541	1,368	1,683	2,368
1986	2,505	2,259	1,593	478	260	273	253	226	239	313	867	1,632
1987	1,717	2,111	2,846	1,812	549	258	272	410	630	1,389	1,839	2,299
1988	2,468	2,421	2,461	813	275	325	358	471	622	1,416	2,027	2,363
1989	2,745	2,421	2,334	2,078	870	251	221	220	457	1,365	1,833	2,301
1990	2,570	2,452	2,317	753	301	268	297	542	1,166	2,074	2,100	2,394
1991	2,663	2,439	2,576	2,142	1,615	488	271	473	1,147	1,900	1,940	2,446
Avg	2,040	1,773	1,656	903	467	301	294	388	609	1,089	1,439	1,960
W/AN/BN	1,817	1,500	1,022	370	265	260	251	240	239	336	826	1,451
D/C	2,213	1,985	2,149	1,318	624	334	327	504	897	1,675	1,916	2,356

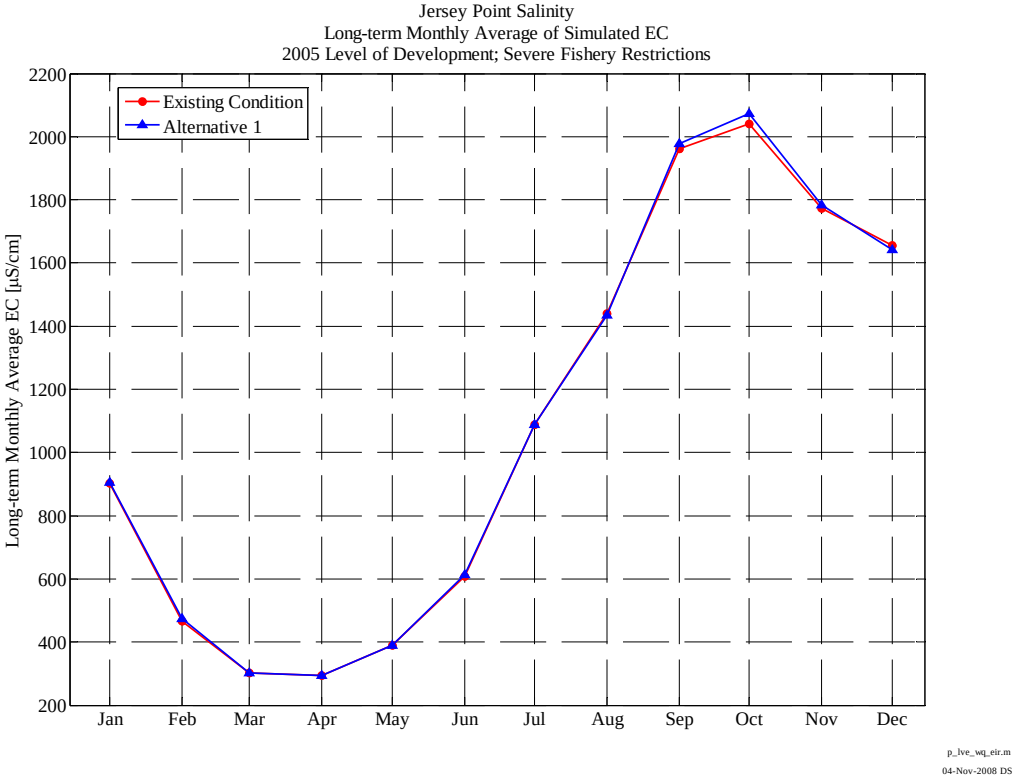
Alternative 1

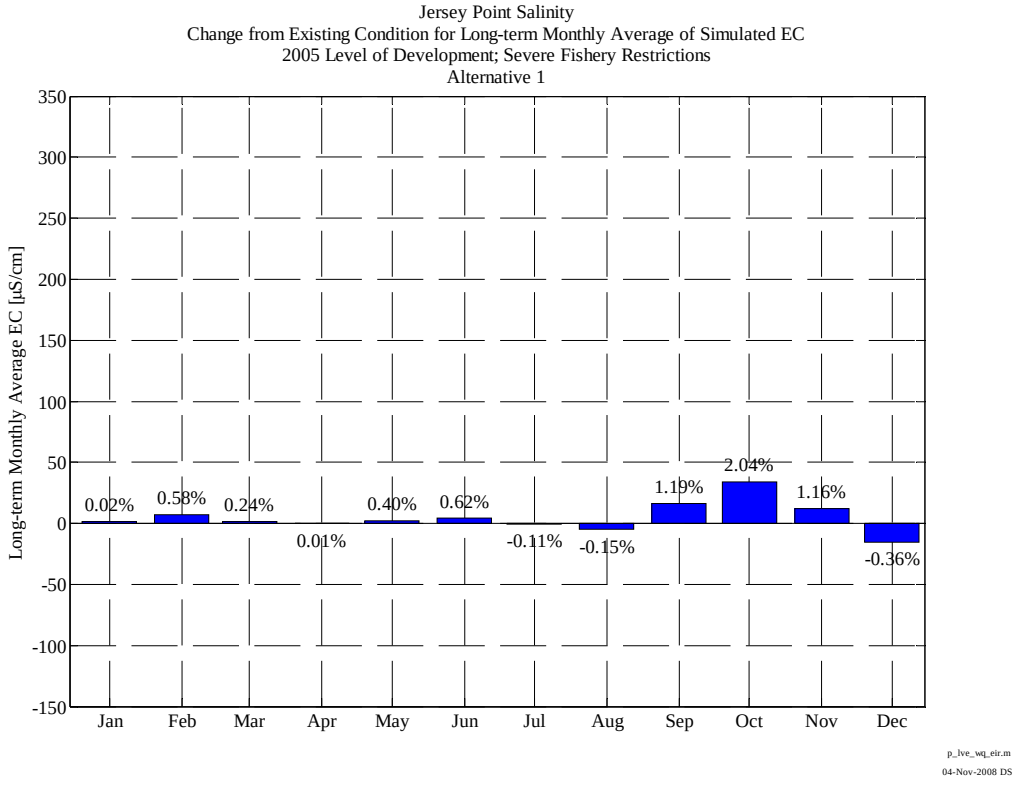
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	408	622	1,279	1,364	634	266	280	709	1,394	2,351	2,107	2,440
1977	3,051	2,453	2,782	1,830	936	698	699	1,093	1,590	1,721	1,966	2,407
1978	2,708	2,615	1,556	343	264	291	288	254	235	281	786	1,704
1979	2,061	2,707	2,361	641	276	243	246	249	237	570	1,397	2,530
1980	2,717	1,824	828	269	295	285	269	248	242	282	868	1,957
1981	2,057	2,187	2,518	855	242	225	257	317	558	1,428	1,737	2,203
1982	2,731	983	205	242	230	248	220	199	209	256	767	323
1983	187	203	245	314	298	262	244	230	226	219	200	186
1984	192	195	235	254	230	210	242	265	279	422	908	2,123
1985	2,339	839	244	321	257	243	282	322	552	1,354	1,681	2,381
1986	2,501	2,243	1,631	487	260	272	254	225	238	312	876	1,634
1987	1,710	2,071	2,856	1,782	535	257	273	419	638	1,381	1,834	2,288
1988	2,459	2,418	2,462	816	275	327	356	480	634	1,485	2,036	2,364
1989	2,707	2,425	2,316	1,993	875	255	223	223	460	1,356	1,837	2,373
1990	2,587	2,446	2,317	748	300	268	296	546	1,173	2,089	2,060	2,310
1991	2,771	2,324	2,421	2,218	1,677	496	271	475	1,149	1,913	1,901	2,406
Avg	2,074	1,785	1,641	905	474	303	294	391	613	1,089	1,435	1,977
W/AN/BN	1,871	1,539	1,009	364	265	259	252	239	238	335	829	1,494
D/C	2,232	1,976	2,133	1,325	637	337	326	509	905	1,675	1,906	2,353

Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	7.4%	8.7%	3.3%	1.1%	0.8%	-0.1%	-0.7%	0.6%	1.1%	-0.4%	-0.8%	-0.5%
1977	-0.6%	-0.5%	-2.7%	4.1%	7.1%	3.2%	-0.1%	1.0%	-0.6%	-1.5%	0.7%	0.4%
1978	0.3%	0.7%	1.6%	0.6%	-0.1%	-0.5%	0.2%	-0.3%	-0.7%	0.4%	1.1%	18.7%
1979	15.6%	8.5%	-5.8%	-7.4%	-0.9%	-0.9%	0.0%	-0.7%	-0.4%	-0.8%	0.0%	1.1%
1980	3.4%	2.4%	-1.2%	-0.7%	0.2%	-0.2%	0.2%	-0.9%	-0.2%	-0.1%	0.0%	-0.1%
1981	0.1%	0.2%	1.8%	2.1%	0.5%	0.6%	0.9%	1.8%	5.4%	-2.0%	-0.5%	0.8%
1982	0.2%	1.1%	0.2%	0.5%	0.2%	-0.1%	0.0%	-0.4%	0.1%	0.1%	0.5%	0.4%
1983	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.2%	-0.4%	0.0%	-0.1%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	-0.1%	-0.9%	-0.8%	-1.3%	-0.6%	0.0%
1985	3.9%	5.0%	1.2%	0.7%	0.2%	-1.0%	-0.9%	0.7%	1.9%	-1.1%	-0.1%	0.6%
1986	-0.1%	-0.7%	2.4%	1.9%	0.0%	-0.6%	0.5%	-0.5%	-0.3%	0.0%	1.0%	0.1%
1987	-0.4%	-1.9%	0.3%	-1.7%	-2.5%	-0.4%	0.4%	2.0%	1.2%	-0.6%	-0.3%	-0.5%
1988	-0.4%	-0.1%	0.0%	0.4%	0.1%	0.5%	-0.5%	2.1%	1.9%	4.9%	0.4%	0.0%
1989	-1.4%	0.2%	-0.8%	-4.1%	0.5%	1.4%	0.6%	1.2%	0.6%	-0.7%	0.2%	3.1%
1990	0.7%	-0.2%	0.0%	-0.6%	-0.5%	0.3%	-0.4%	0.8%	0.6%	0.7%	-1.9%	-3.5%
1991	4.0%	-4.7%	-6.0%	3.6%	3.8%	1.5%	-0.1%	0.3%	0.2%	0.7%	-2.0%	-1.6%
Avg	2.0%	1.2%	-0.4%	0.0%	0.6%	0.2%	0.0%	0.4%	0.6%	-0.1%	-0.2%	1.2%
W/AN/BN	2.8%	1.7%	-0.4%	-0.8%	-0.1%	-0.3%	0.1%	-0.6%	-0.3%	-0.2%	0.3%	2.9%
D/C	1.5%	0.7%	-0.3%	0.6%	1.1%	0.7%	-0.1%	1.2%	1.4%	0.0%	-0.5%	-0.1%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.02%
0.58%
0.24%
0.01%
0.40%
0.62%
-0.11%
-0.15%
1.19%
2.04%
1.16%
-0.36%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
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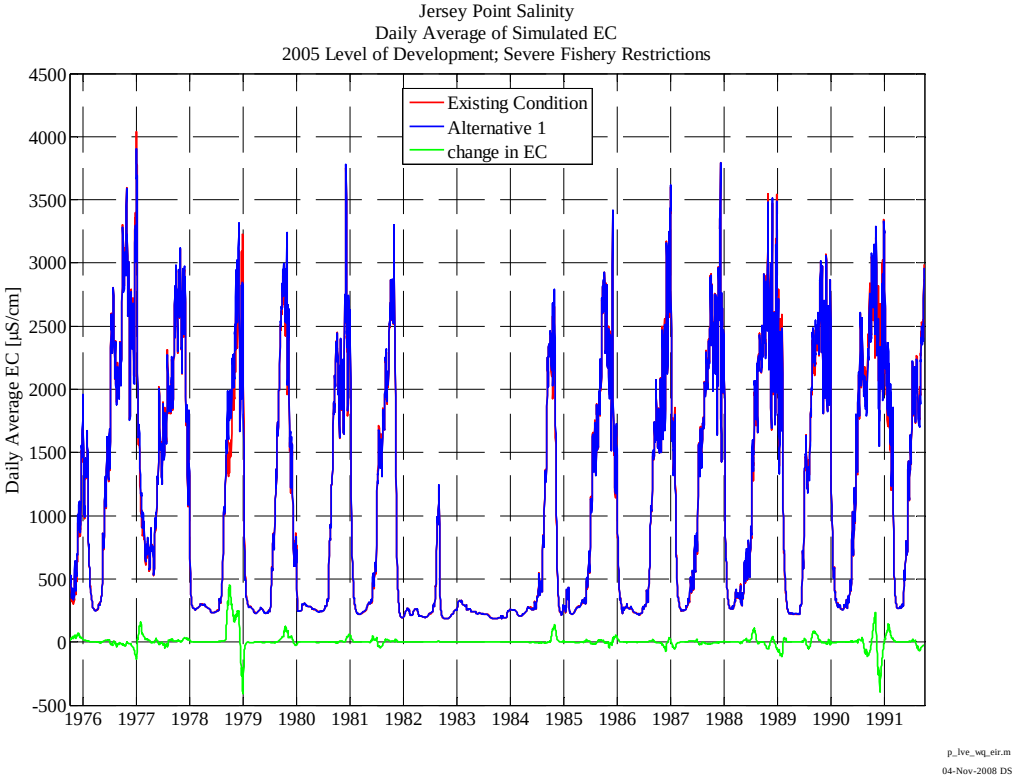
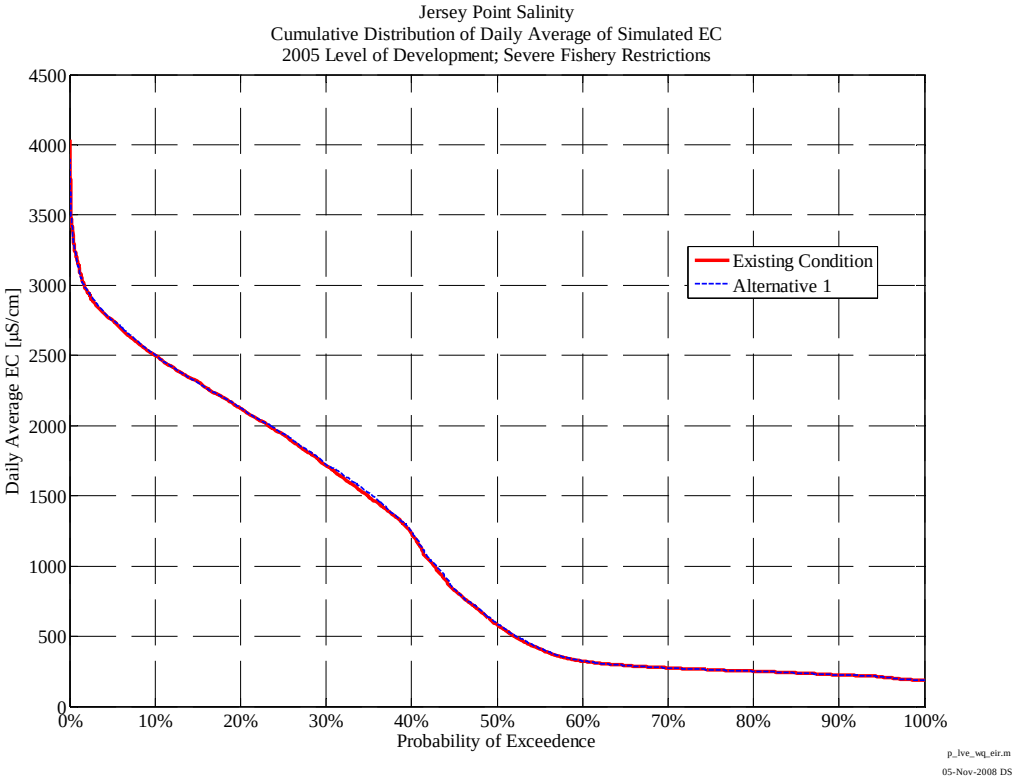
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

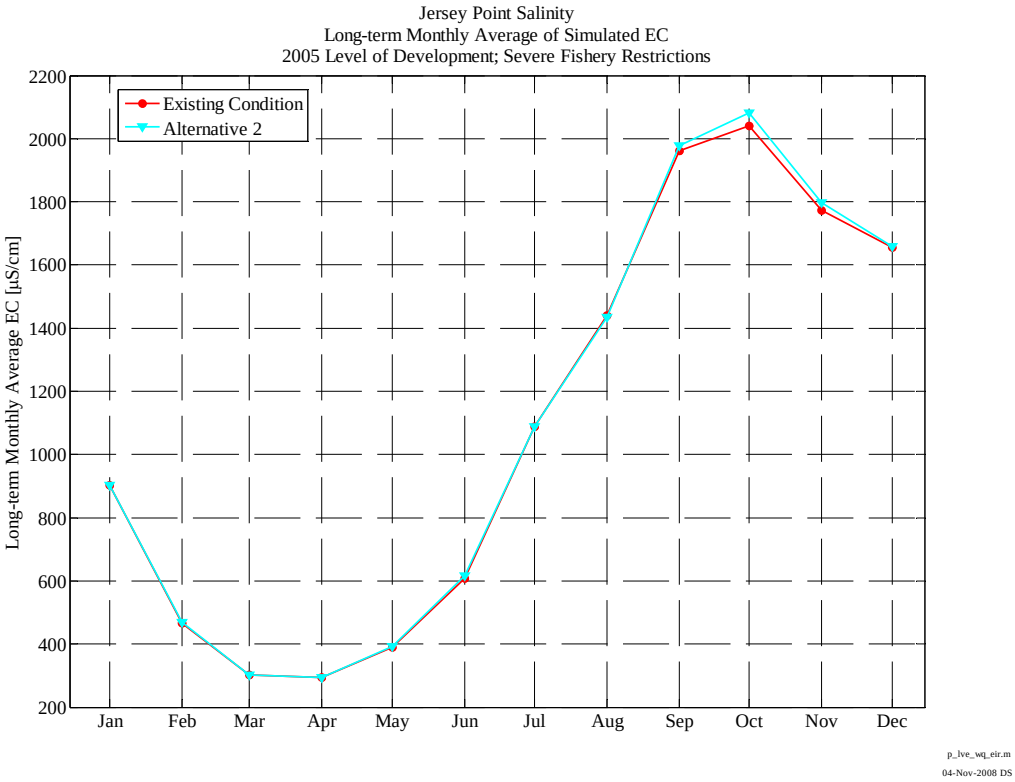
Alternative 2

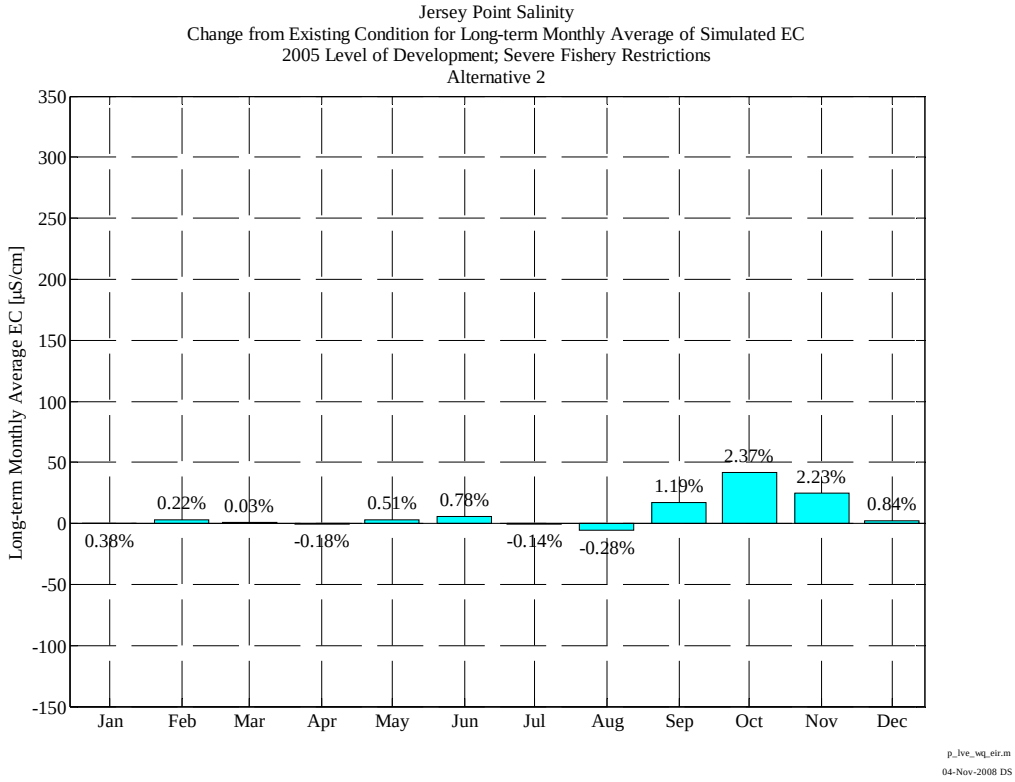
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	409	636	1,294	1,370	642	265	277	710	1,396	2,347	2,109	2,446
1977	3,046	2,458	2,858	1,752	868	686	696	1,088	1,600	1,734	1,960	2,401
1978	2,704	2,606	1,648	357	264	291	288	254	235	281	784	1,703
1979	2,061	2,707	2,361	640	277	242	245	249	237	570	1,397	2,531
1980	2,777	1,942	868	270	295	285	269	248	241	282	868	1,957
1981	2,058	2,188	2,519	855	242	225	257	317	558	1,428	1,737	2,204
1982	2,731	999	206	240	229	248	220	199	209	256	767	323
1983	187	203	245	314	298	262	244	230	226	219	200	186
1984	192	195	235	254	230	210	242	265	279	422	907	2,123
1985	2,412	885	247	323	258	242	280	322	551	1,353	1,682	2,382
1986	2,502	2,242	1,656	497	260	272	254	225	239	311	863	1,628
1987	1,709	2,078	2,854	1,788	539	257	273	419	638	1,381	1,834	2,288
1988	2,459	2,418	2,463	824	275	327	356	496	643	1,482	2,035	2,363
1989	2,709	2,422	2,325	2,003	872	254	222	221	459	1,356	1,835	2,374
1990	2,601	2,452	2,313	765	305	269	296	546	1,174	2,087	2,064	2,323
1991	2,756	2,336	2,445	2,199	1,657	494	270	474	1,150	1,911	1,897	2,403
Avg	2,082	1,798	1,659	903	469	302	293	391	615	1,089	1,434	1,977
W/AN/BN	1,879	1,556	1,031	368	265	259	252	239	238	334	827	1,493
D/C	2,240	1,986	2,146	1,320	629	335	325	510	908	1,676	1,906	2,354

Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	7.4%	11.0%	4.5%	1.5%	2.1%	-0.5%	-1.9%	0.6%	1.3%	-0.6%	-0.7%	-0.2%
1977	-0.8%	-0.3%	0.0%	-0.3%	-0.7%	1.5%	-0.5%	0.5%	0.1%	-0.8%	0.4%	0.1%
1978	0.2%	0.4%	7.6%	4.6%	-0.1%	-0.5%	0.2%	-0.3%	-0.8%	0.3%	0.9%	18.6%
1979	15.6%	8.5%	-5.8%	-7.5%	-0.8%	-1.1%	-0.3%	-0.8%	-0.4%	-0.8%	0.0%	1.2%
1980	5.7%	9.0%	3.5%	-0.2%	0.1%	-0.2%	0.2%	-0.9%	-0.3%	-0.1%	0.0%	-0.1%
1981	0.1%	0.3%	1.8%	2.2%	0.5%	0.6%	0.9%	1.8%	5.4%	-2.0%	-0.6%	0.8%
1982	0.2%	2.7%	0.5%	0.0%	-0.1%	-0.1%	0.0%	-0.4%	0.1%	0.1%	0.5%	0.4%
1983	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.2%	-0.4%	0.0%	-0.1%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	-0.1%	-0.9%	-0.8%	-1.3%	-0.6%	0.0%
1985	7.2%	10.8%	2.7%	1.3%	0.5%	-1.6%	-1.4%	0.7%	1.9%	-1.1%	-0.1%	0.6%
1986	-0.1%	-0.7%	3.9%	4.1%	0.1%	-0.7%	0.5%	-0.5%	0.1%	-0.6%	-0.5%	-0.3%
1987	-0.4%	-1.6%	0.3%	-1.3%	-1.8%	-0.3%	0.4%	2.0%	1.2%	-0.6%	-0.3%	-0.5%
1988	-0.4%	-0.1%	0.1%	1.4%	0.3%	0.5%	-0.5%	5.3%	3.3%	4.7%	0.3%	0.0%
1989	-1.3%	0.0%	-0.4%	-3.6%	0.2%	1.2%	0.3%	0.3%	0.5%	-0.6%	0.1%	3.2%
1990	1.2%	0.0%	-0.2%	1.6%	1.1%	0.6%	-0.4%	0.8%	0.7%	0.6%	-1.8%	-3.0%
1991	3.5%	-4.2%	-5.1%	2.7%	2.6%	1.2%	-0.5%	0.2%	0.2%	0.5%	-2.2%	-1.8%
Avg	2.4%	2.2%	0.8%	0.4%	0.2%	0.0%	-0.2%	0.5%	0.8%	-0.1%	-0.3%	1.2%
W/AN/BN	3.1%	2.8%	1.4%	0.1%	-0.2%	-0.4%	0.1%	-0.6%	-0.3%	-0.3%	0.0%	2.8%
D/C	1.8%	1.8%	0.4%	0.6%	0.5%	0.3%	-0.4%	1.4%	1.6%	0.0%	-0.5%	-0.1%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.38%
0.22%
0.03%
-0.18%
0.51%
0.78%
-0.14%
-0.28%
1.19%
2.37%
2.23%
0.84%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
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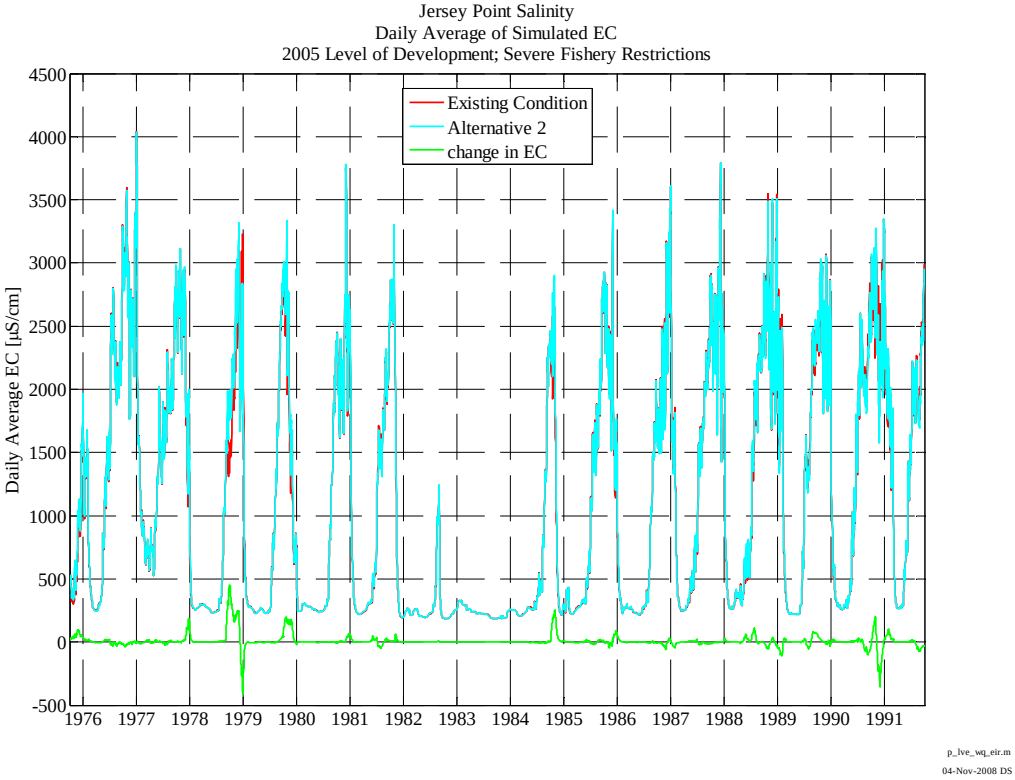
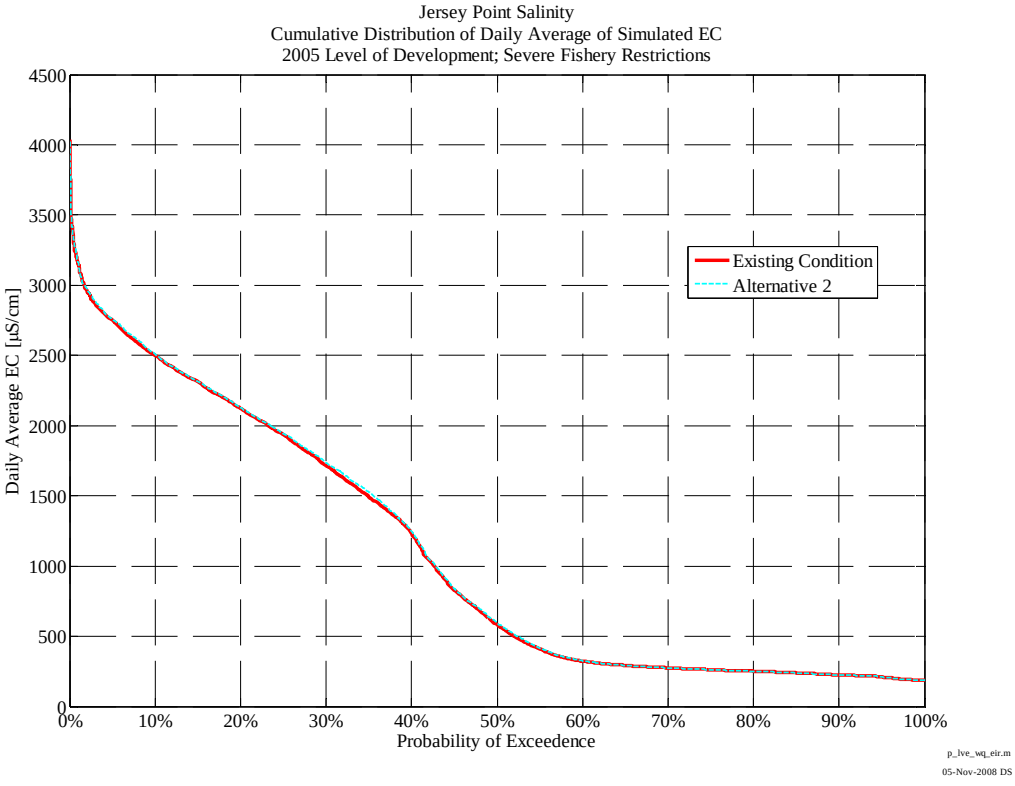
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

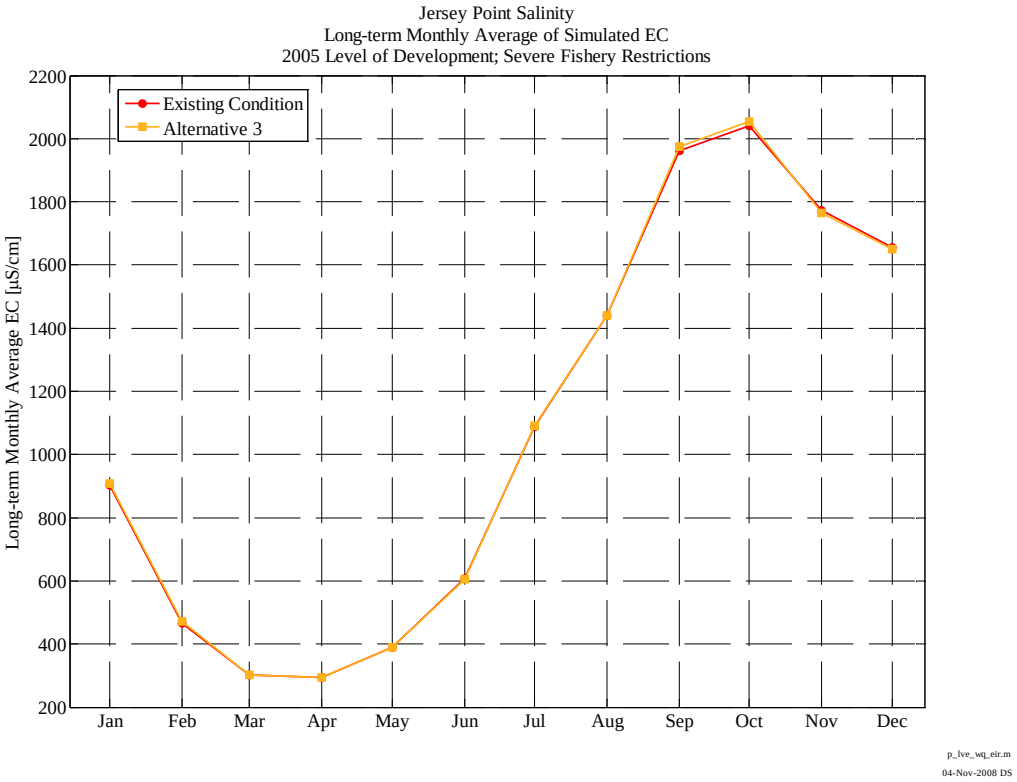
Alternative 3

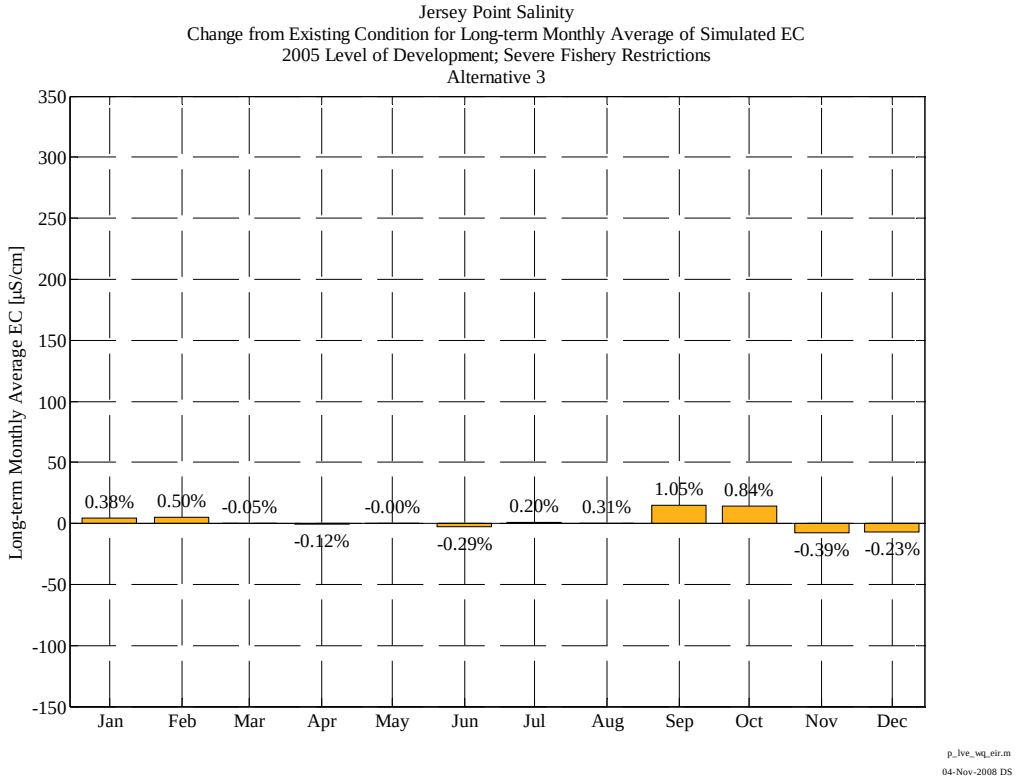
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

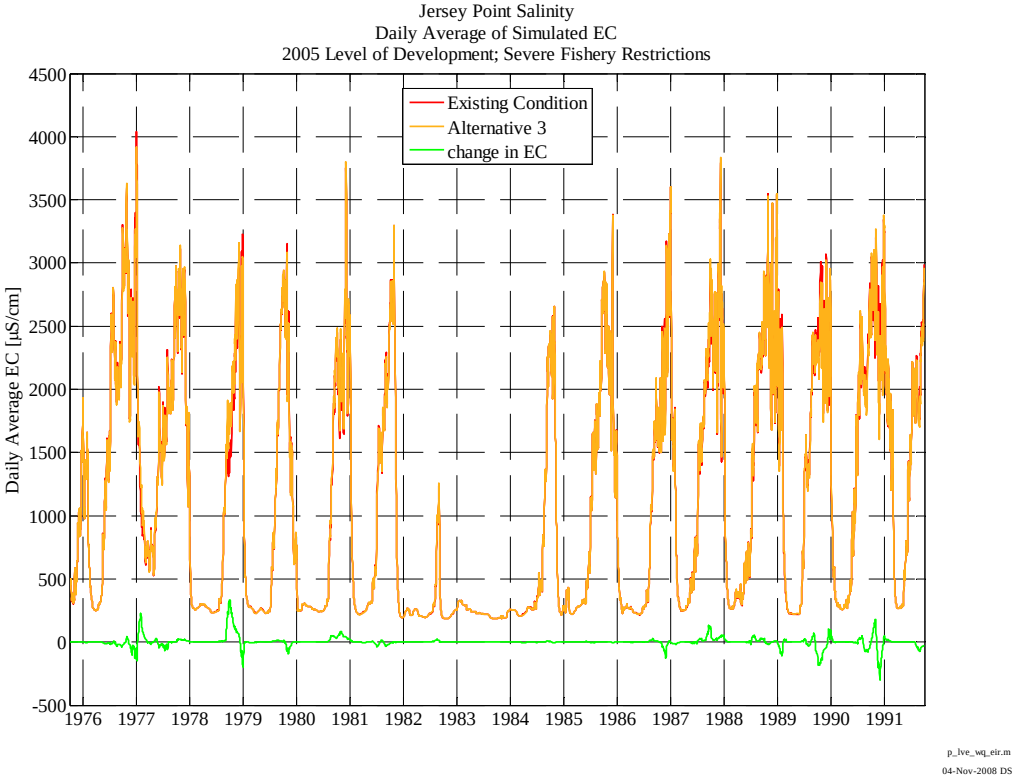
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	382	574	1,239	1,348	628	266	282	700	1,368	2,353	2,107	2,428
1977	3,076	2,435	2,786	1,849	959	681	694	1,089	1,575	1,705	1,949	2,399
1978	2,719	2,613	1,540	341	264	293	289	255	235	281	783	1,636
1979	1,994	2,582	2,440	676	277	243	245	250	238	578	1,408	2,510
1980	2,607	1,735	838	273	295	286	269	250	242	283	896	2,000
1981	2,117	2,234	2,500	843	242	222	253	312	523	1,442	1,742	2,163
1982	2,721	971	205	242	229	248	220	200	209	258	778	324
1983	187	203	245	315	298	262	243	230	226	219	200	186
1984	192	195	235	254	230	208	239	267	280	427	916	2,128
1985	2,249	798	241	319	257	246	284	320	543	1,365	1,683	2,371
1986	2,507	2,258	1,591	478	260	272	251	225	238	313	880	1,644
1987	1,718	2,046	2,833	1,804	539	257	273	408	626	1,408	1,851	2,389
1988	2,497	2,446	2,507	825	276	327	361	473	620	1,451	2,040	2,387
1989	2,740	2,414	2,341	2,020	869	255	224	223	462	1,363	1,836	2,287
1990	2,412	2,386	2,361	767	301	268	297	543	1,162	2,098	2,067	2,344
1991	2,751	2,348	2,481	2,163	1,622	488	271	473	1,146	1,902	1,896	2,405
Avg	2,054	1,765	1,649	907	472	301	293	389	606	1,090	1,440	1,975
W/AN/BN	1,847	1,508	1,013	368	265	259	251	240	238	337	837	1,490
D/C	2,216	1,965	2,143	1,326	632	334	326	505	892	1,676	1,908	2,353

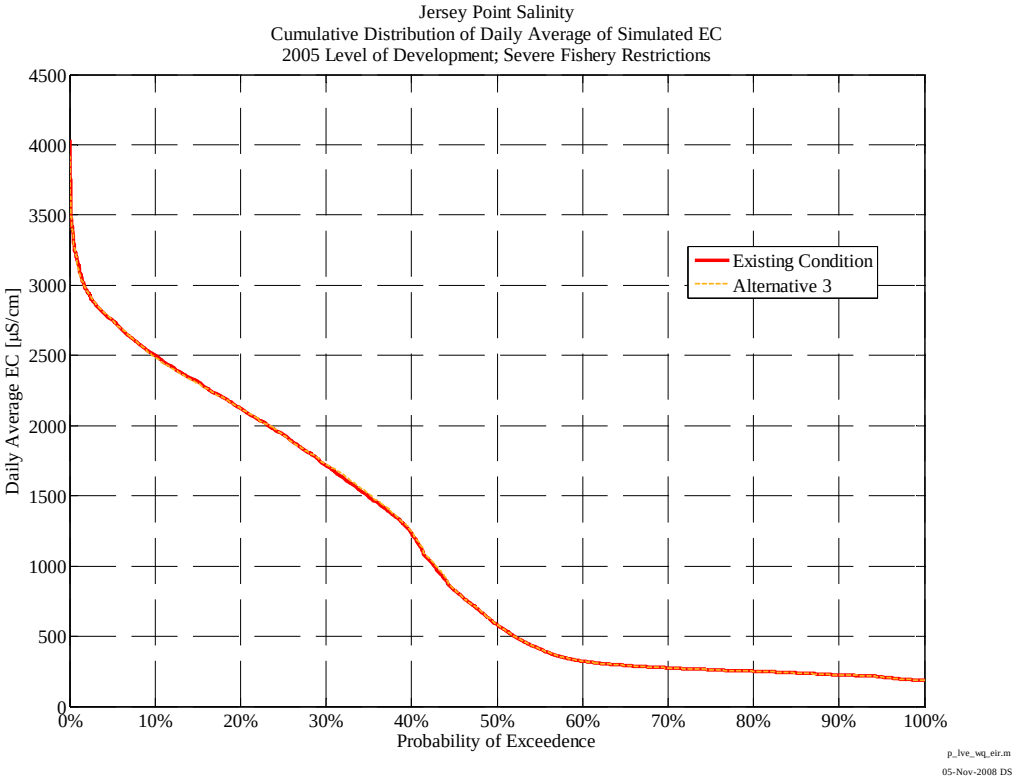
Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.3%	0.2%	0.1%	-0.1%	-0.2%	0.0%	0.1%	-0.8%	-0.7%	-0.4%	-0.8%	-1.0%
1977	0.2%	-1.3%	-2.5%	5.2%	9.7%	0.7%	-0.9%	0.7%	-1.5%	-2.4%	-0.2%	0.1%
1978	0.7%	0.6%	0.5%	0.1%	0.0%	0.0%	0.5%	0.1%	-0.5%	0.3%	0.8%	13.9%
1979	11.8%	3.5%	-2.6%	-2.3%	-0.5%	-0.9%	-0.4%	-0.4%	-0.1%	0.7%	0.8%	0.4%
1980	-0.8%	-2.6%	-0.1%	0.6%	0.3%	0.0%	0.0%	-0.3%	-0.1%	0.0%	3.1%	2.1%
1981	3.0%	2.4%	1.1%	0.8%	0.2%	-0.7%	-1.0%	0.0%	-1.2%	-1.0%	-0.2%	-1.0%
1982	-0.2%	-0.2%	0.0%	0.5%	0.2%	0.0%	0.0%	-0.1%	0.1%	1.0%	1.9%	0.8%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	-1.2%	-1.3%	-0.3%	-0.3%	0.0%	0.4%	0.2%
1985	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	-0.2%	0.0%	0.1%
1986	0.1%	0.0%	-0.1%	0.0%	-0.1%	-0.3%	-0.7%	-0.4%	-0.3%	0.3%	1.5%	0.7%
1987	0.1%	-3.1%	-0.4%	-0.5%	-1.9%	-0.4%	0.1%	-0.6%	-0.7%	1.3%	0.7%	3.9%
1988	1.2%	1.0%	1.9%	1.5%	0.4%	0.6%	0.9%	0.4%	-0.3%	2.5%	0.6%	1.0%
1989	-0.2%	-0.3%	0.3%	-2.8%	-0.2%	1.4%	1.0%	1.4%	1.0%	-0.1%	0.1%	-0.6%
1990	-6.1%	-2.7%	1.9%	1.9%	-0.2%	0.0%	-0.1%	0.3%	-0.3%	1.2%	-1.6%	-2.1%
1991	3.3%	-3.7%	-3.7%	1.0%	0.4%	0.1%	-0.1%	-0.1%	-0.1%	0.1%	-2.3%	-1.7%
Avg	0.8%	-0.4%	-0.2%	0.4%	0.5%	0.0%	-0.1%	0.0%	-0.3%	0.2%	0.3%	1.1%
W/AN/BN	1.7%	0.2%	-0.3%	-0.1%	0.0%	-0.4%	-0.3%	-0.2%	-0.2%	0.3%	1.2%	2.6%
D/C	0.2%	-0.8%	-0.2%	0.8%	0.9%	0.2%	0.0%	0.2%	-0.4%	0.1%	-0.4%	-0.1%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.38%
0.50%
-0.05%
-0.12%
-0.00%
-0.29%
0.20%
0.31%
1.05%
0.84%
-0.39%
-0.23%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

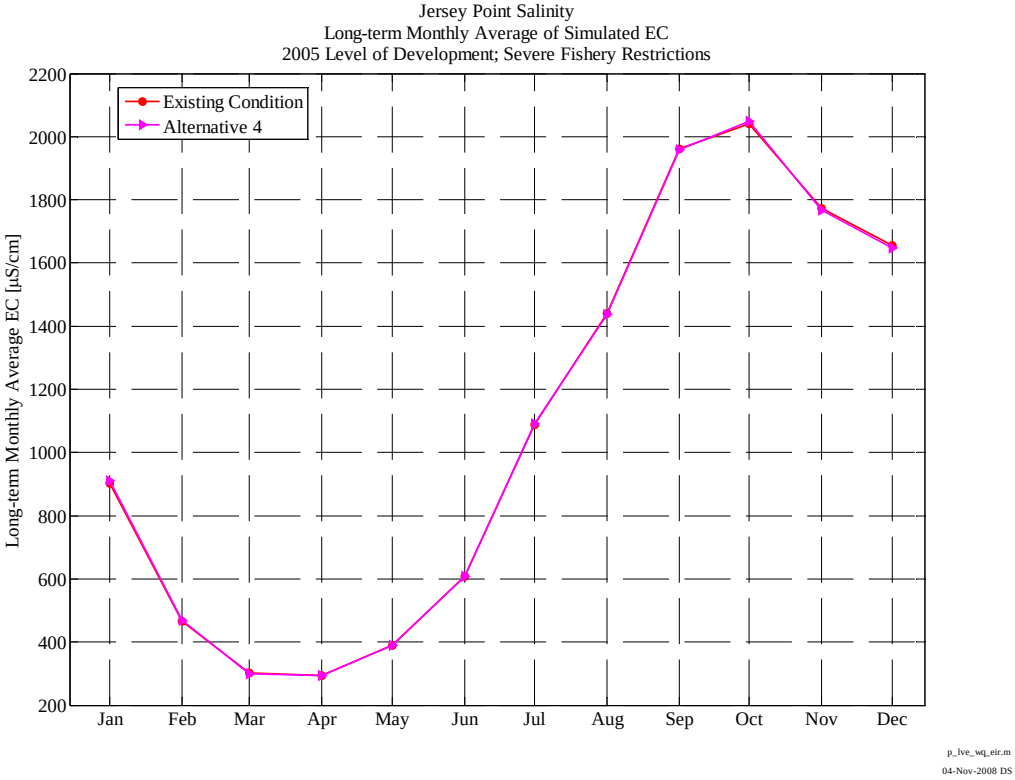
Alternative 4

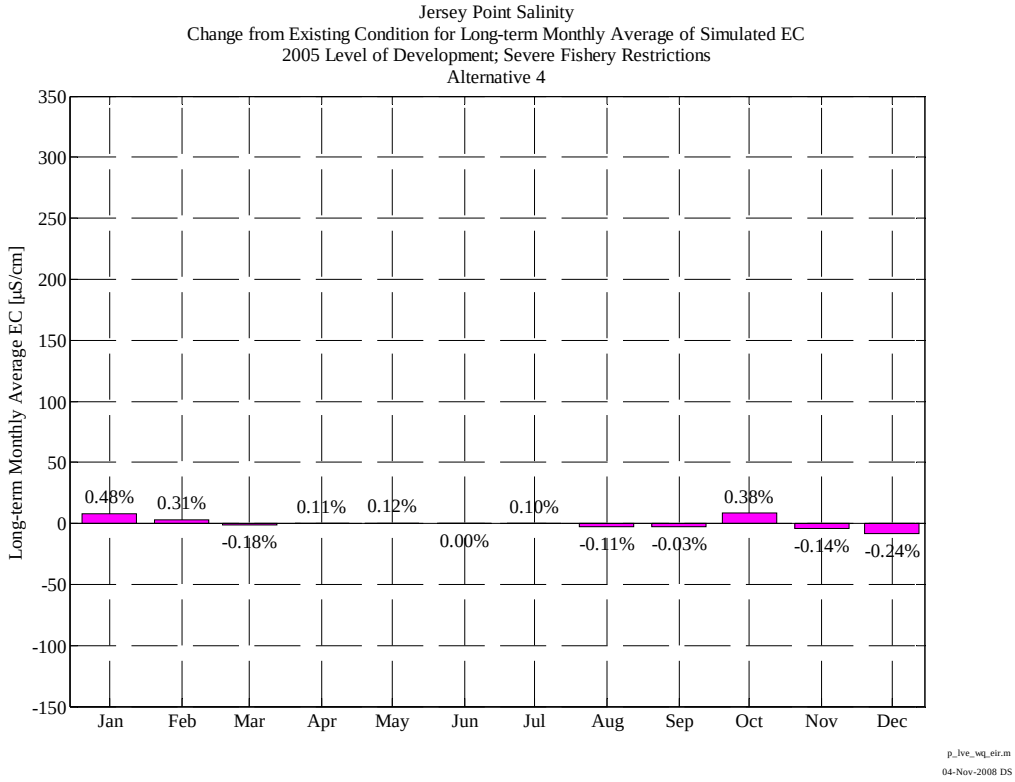
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	381	573	1,239	1,349	629	266	282	705	1,377	2,354	2,109	2,434
1977	3,072	2,442	2,776	1,884	915	649	698	1,084	1,599	1,736	1,964	2,409
1978	2,702	2,609	1,544	341	264	293	290	256	237	280	778	1,437
1979	1,785	2,494	2,504	691	279	245	246	251	238	584	1,401	2,502
1980	2,638	1,795	843	271	293	286	269	251	242	283	870	1,962
1981	2,065	2,191	2,483	841	241	224	255	312	530	1,457	1,746	2,186
1982	2,727	974	205	241	229	248	220	200	209	256	765	322
1983	187	203	245	315	298	262	243	230	226	219	200	186
1984	192	195	235	254	230	210	242	268	281	427	913	2,125
1985	2,251	799	241	319	257	246	284	320	541	1,369	1,683	2,368
1986	2,505	2,258	1,593	478	260	273	253	227	239	313	867	1,680
1987	1,758	2,133	2,841	1,824	554	258	272	410	630	1,389	1,839	2,296
1988	2,467	2,420	2,460	812	275	325	358	471	622	1,419	2,028	2,361
1989	2,744	2,410	2,349	2,037	865	254	224	222	457	1,365	1,835	2,299
1990	2,556	2,445	2,323	756	302	268	297	542	1,166	2,085	2,071	2,331
1991	2,742	2,354	2,490	2,161	1,619	488	271	473	1,147	1,899	1,920	2,428
Avg	2,048	1,769	1,648	911	469	300	294	389	609	1,090	1,437	1,958
W/AN/BN	1,819	1,504	1,024	370	265	260	252	240	239	337	828	1,459
D/C	2,226	1,974	2,133	1,331	629	331	327	504	897	1,675	1,910	2,346

Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.3%	-0.7%	-0.7%
1977	0.1%	-1.0%	-2.9%	7.2%	4.6%	-4.0%	-0.3%	0.2%	0.0%	-0.6%	0.6%	0.5%
1978	0.1%	0.5%	0.8%	0.2%	-0.1%	0.0%	1.0%	0.7%	0.1%	0.0%	0.1%	0.1%
1979	0.1%	-0.1%	-0.1%	-0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%	1.8%	0.3%	0.0%
1980	0.4%	0.8%	0.5%	-0.2%	-0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%
1981	0.4%	0.4%	0.4%	0.4%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
1982	0.1%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	2.9%
1987	2.4%	1.1%	-0.2%	0.7%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	-0.1%
1989	0.0%	-0.4%	0.7%	-2.0%	-0.6%	1.1%	0.9%	0.8%	0.1%	0.0%	0.1%	-0.1%
1990	-0.5%	-0.3%	0.3%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.6%	-1.4%	-2.6%
1991	3.0%	-3.5%	-3.3%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.1%	-1.1%	-0.7%
Avg	0.4%	-0.1%	-0.2%	0.5%	0.3%	-0.2%	0.1%	0.1%	0.0%	0.1%	-0.1%	0.0%
W/AN/BN	0.1%	0.2%	0.2%	0.0%	-0.1%	0.0%	0.2%	0.1%	0.0%	0.3%	0.1%	0.5%
D/C	0.6%	-0.4%	-0.6%	0.8%	0.6%	-0.3%	0.1%	0.1%	0.0%	0.0%	-0.3%	-0.4%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.48%
0.31%
-0.18%
0.11%
0.12%
0.00%
0.10%
-0.11%
-0.03%
0.38%
-0.14%
-0.24%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
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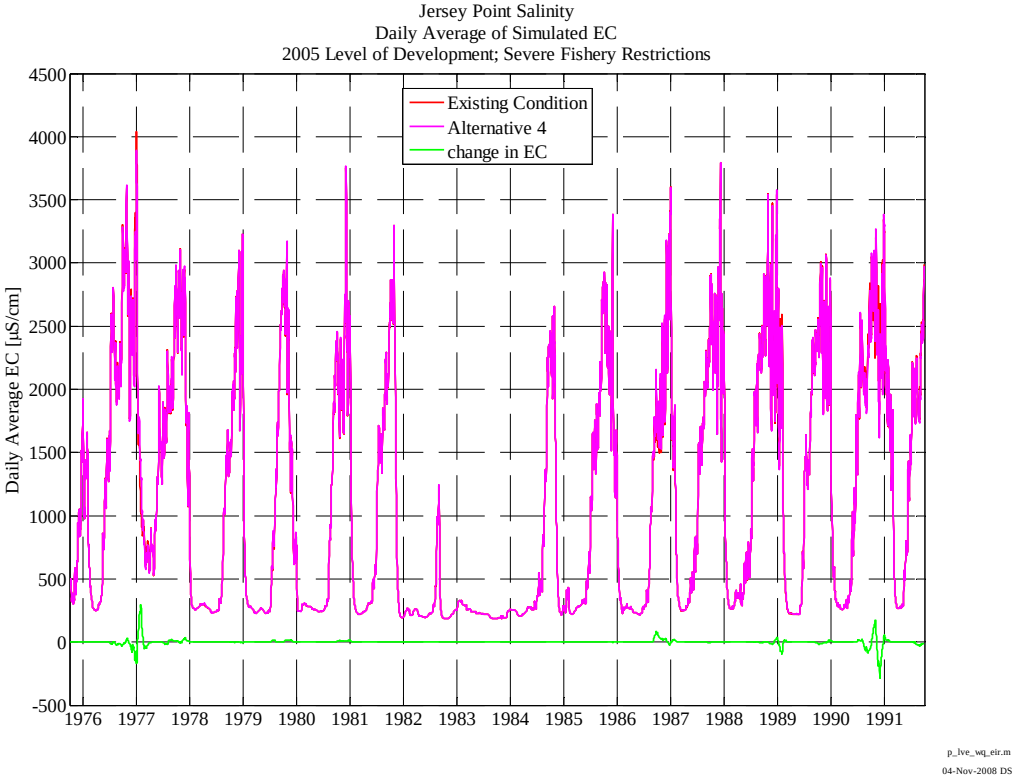
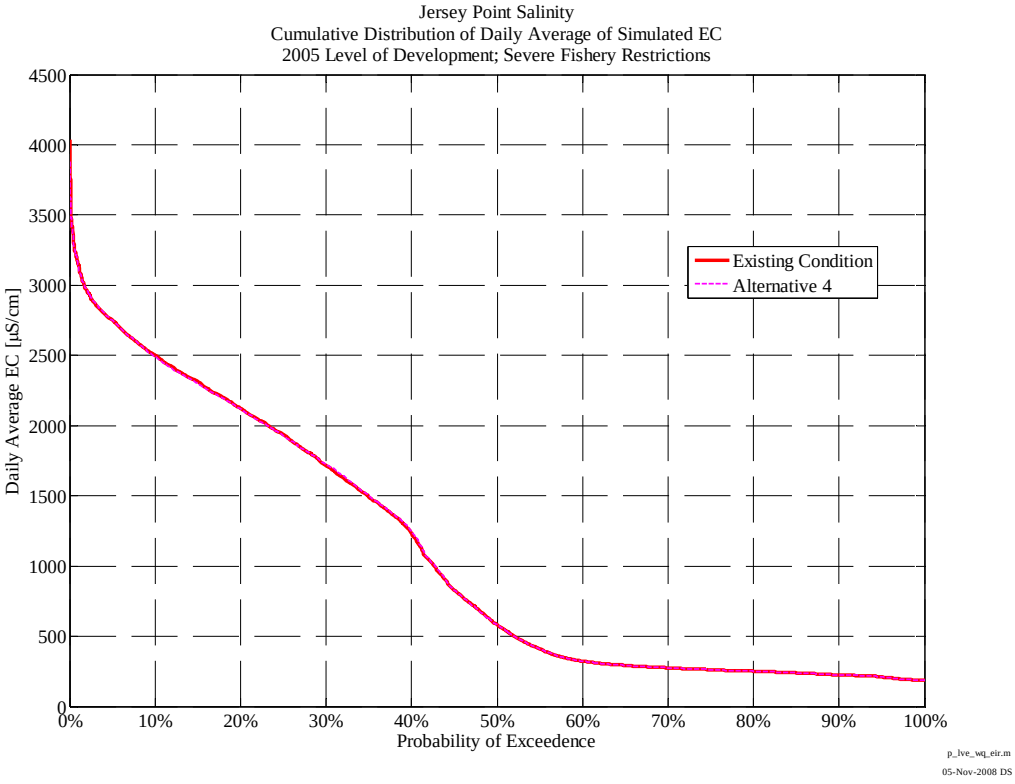
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Clifton Court Forebay

Existing Condition

Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	285	285	423	592	785	935	648	545	623	599	635	605
1977	764	726	786	933	960	985	739	631	651	594	584	634
1978	787	820	759	693	705	696	415	330	412	407	346	398
1979	450	572	695	696	435	367	400	321	425	285	360	558
1980	675	556	468	438	364	410	373	372	389	394	333	440
1981	552	561	703	728	752	811	527	441	538	406	484	574
1982	688	555	368	650	325	332	229	218	359	373	307	273
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	226	307	342	277	381	385	369	487	306	299	473
1985	569	468	369	409	661	911	590	490	562	390	469	558
1986	680	610	631	557	478	327	250	240	381	490	332	410
1987	473	531	716	820	844	862	634	529	585	409	505	599
1988	685	660	768	775	769	955	706	619	573	387	507	627
1989	747	786	773	788	964	872	683	578	485	403	497	624
1990	655	670	769	697	771	944	685	633	546	556	626	639
1991	772	789	828	938	1,034	929	752	636	534	532	584	624
Avg	579	568	609	651	654	687	520	451	487	423	443	517
W/AN/BN	537	516	516	534	417	398	335	303	385	355	313	397
D/C	611	608	682	742	838	912	663	567	566	475	544	609

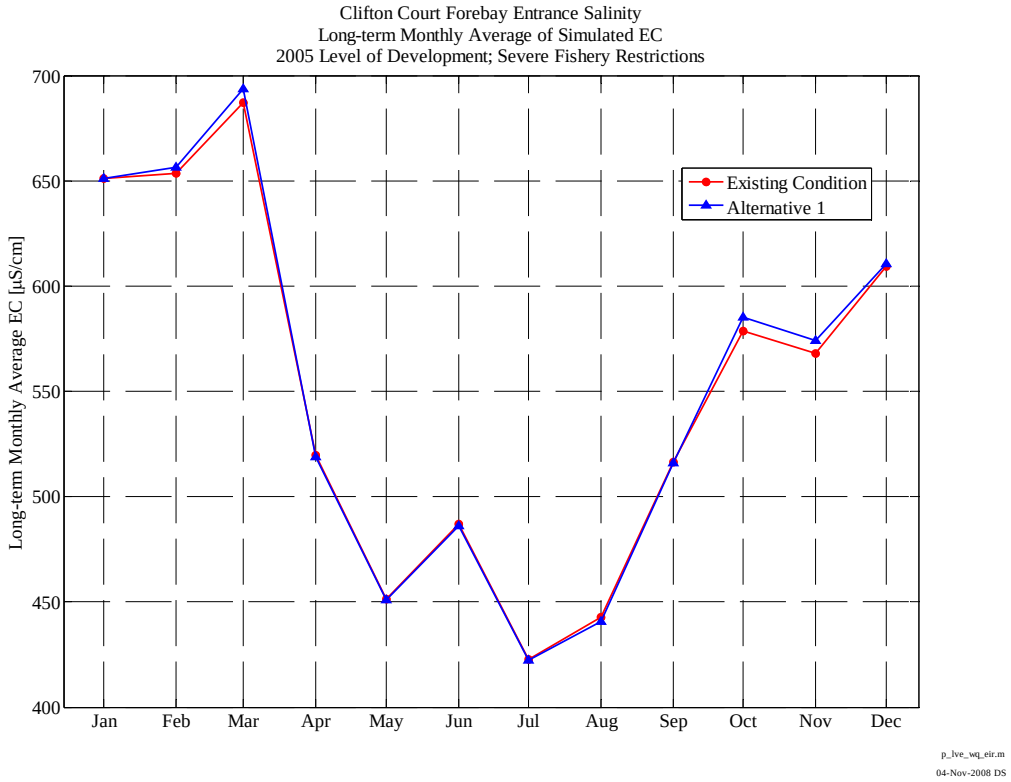
Alternative 1

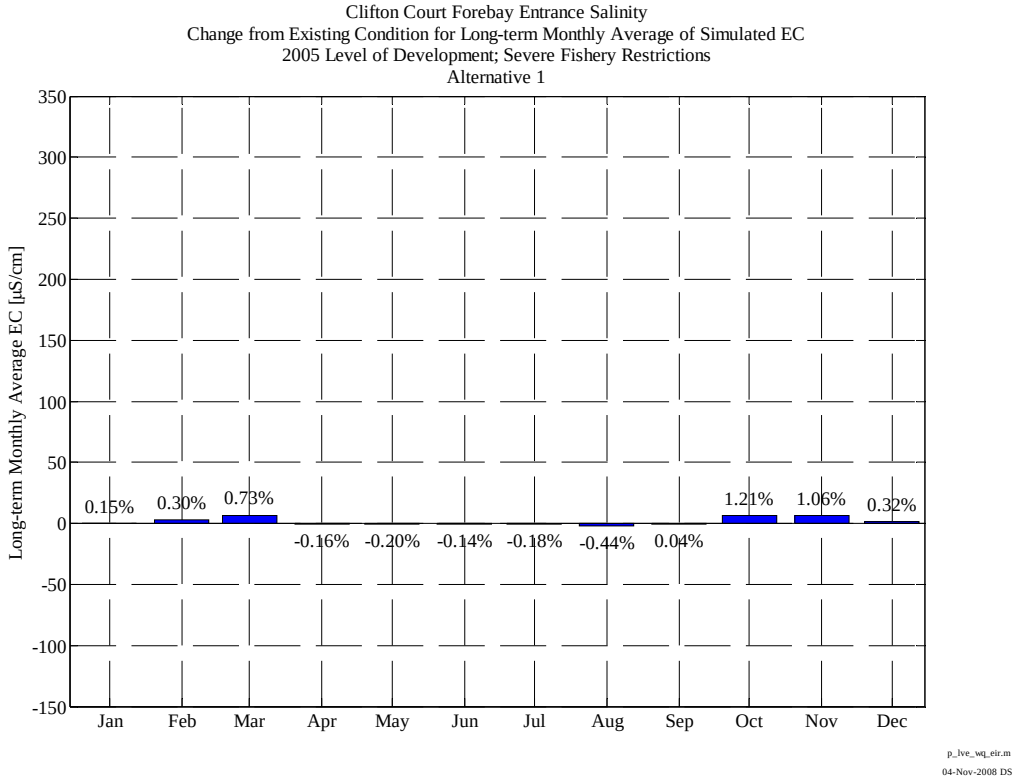
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

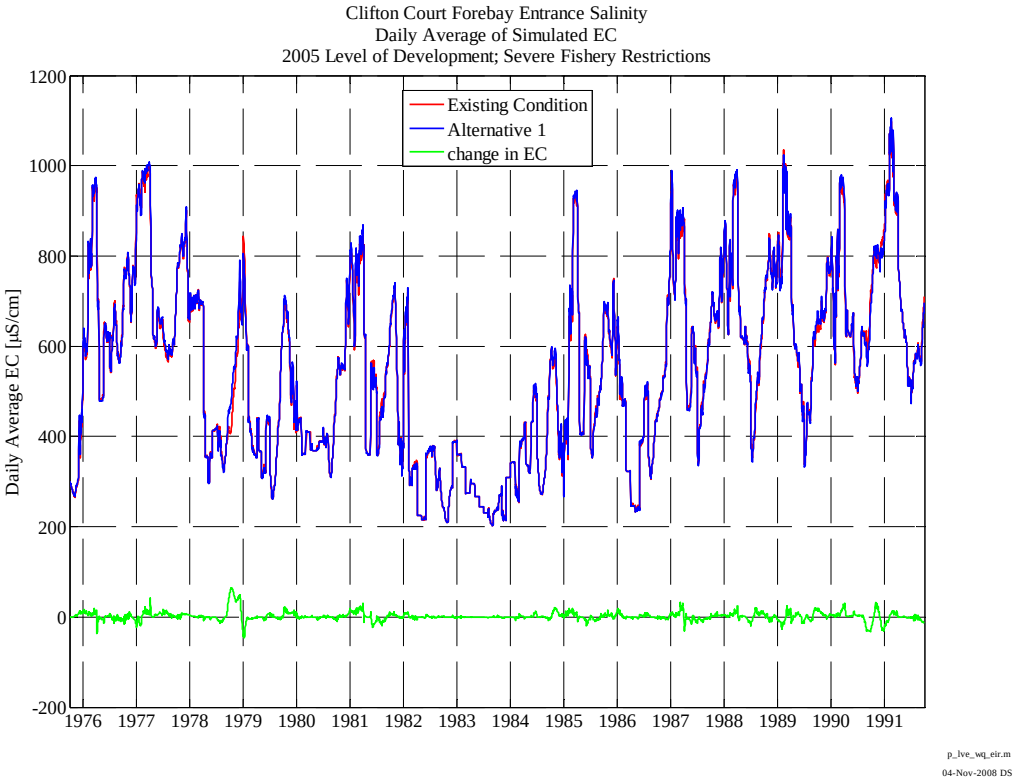
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	285	288	433	602	791	945	638	540	625	597	631	600
1977	761	729	780	924	967	996	747	636	658	605	588	635
1978	788	826	765	695	705	697	412	328	412	399	340	421
1979	508	611	705	676	431	364	400	318	428	287	358	556
1980	688	565	475	437	364	410	373	370	388	395	333	437
1981	553	562	711	740	766	830	527	439	523	399	473	577
1982	695	558	367	657	325	330	229	217	361	373	307	273
1983	220	271	384	361	333	276	296	268	245	231	216	231
1984	258	225	307	342	274	383	384	370	494	306	299	469
1985	577	482	372	415	674	919	588	487	553	388	463	559
1986	685	615	633	567	478	327	249	238	384	496	333	408
1987	471	529	715	826	849	880	626	523	580	404	499	596
1988	687	664	772	777	774	965	708	621	564	383	518	636
1989	750	781	774	775	954	882	679	585	479	402	492	639
1990	669	674	771	701	775	959	693	636	552	559	618	608
1991	767	807	807	926	1,040	938	753	637	532	530	583	614
Avg	585	574	611	651	656	694	519	451	486	422	441	516
W/AN/BN	549	524	519	534	416	398	335	301	388	355	312	399
D/C	613	613	682	743	843	924	662	567	563	474	541	607

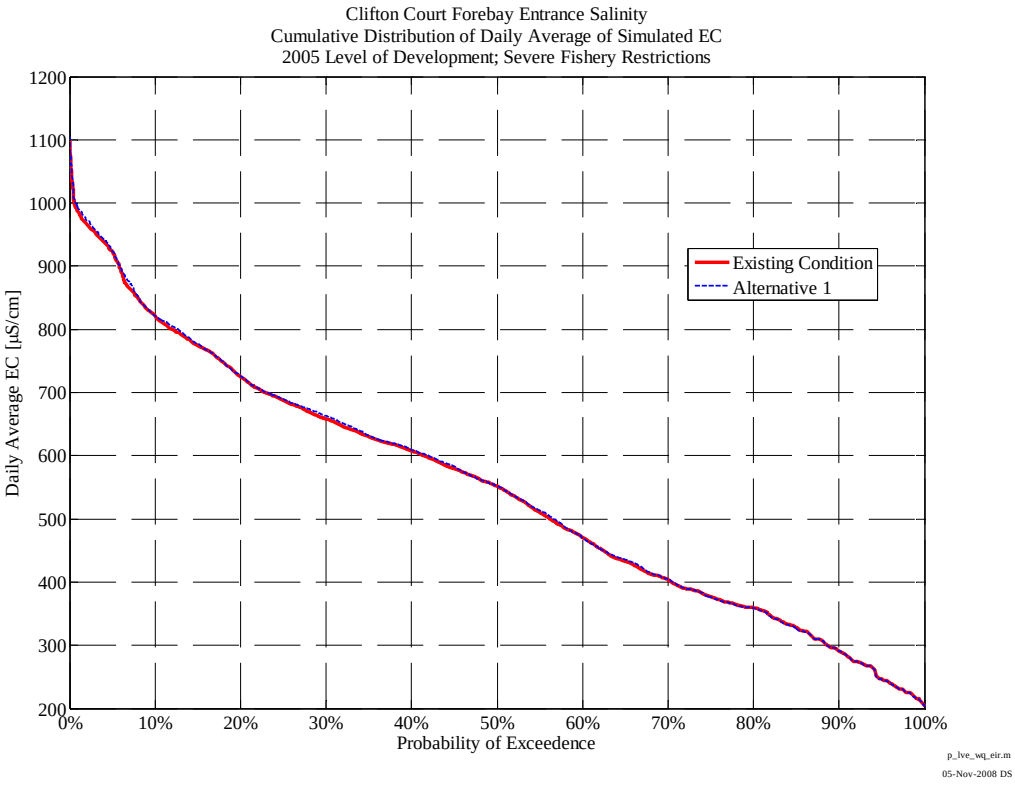
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	1.1%	2.4%	1.7%	0.8%	1.0%	-1.6%	-1.1%	0.4%	-0.3%	-0.6%	-0.8%
1977	-0.5%	0.5%	-0.8%	-1.0%	0.6%	1.0%	1.1%	0.8%	1.2%	1.8%	0.8%	0.2%
1978	0.2%	0.8%	0.8%	0.3%	0.1%	0.1%	-0.6%	-0.6%	0.0%	-1.9%	-1.7%	5.7%
1979	12.9%	6.8%	1.5%	-2.9%	-0.9%	-0.7%	-0.1%	-0.8%	0.9%	0.6%	-0.5%	-0.3%
1980	2.0%	1.5%	1.3%	-0.2%	0.1%	0.0%	0.1%	-0.5%	-0.3%	0.1%	0.0%	-0.8%
1981	0.1%	0.3%	1.1%	1.6%	1.9%	2.4%	0.0%	-0.5%	-2.8%	-1.7%	-2.1%	0.5%
1982	1.0%	0.5%	-0.4%	1.1%	0.0%	-0.6%	-0.1%	-0.2%	0.7%	0.1%	0.0%	0.2%
1983	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.2%	0.1%
1984	0.0%	-0.6%	0.0%	0.0%	-0.9%	0.6%	-0.2%	0.2%	1.5%	0.1%	0.1%	-0.8%
1985	1.4%	2.9%	0.9%	1.5%	1.9%	0.8%	-0.3%	-0.5%	-1.7%	-0.5%	-1.3%	0.1%
1986	0.7%	0.7%	0.3%	1.7%	0.0%	0.0%	-0.3%	-0.6%	0.7%	1.2%	0.5%	-0.3%
1987	-0.3%	-0.4%	-0.2%	0.7%	0.6%	2.1%	-1.3%	-1.2%	-0.8%	-1.3%	-1.2%	-0.4%
1988	0.3%	0.6%	0.5%	0.4%	0.7%	1.1%	0.2%	0.2%	-1.5%	-1.0%	2.0%	1.4%
1989	0.4%	-0.7%	0.2%	-1.6%	-1.1%	1.2%	-0.5%	1.2%	-1.2%	-0.2%	-1.1%	2.3%
1990	2.0%	0.7%	0.3%	0.5%	0.6%	1.6%	1.1%	0.3%	1.1%	0.5%	-1.3%	-4.8%
1991	-0.6%	2.3%	-2.5%	-1.3%	0.6%	0.9%	0.0%	0.0%	-0.3%	-0.4%	-0.2%	-1.6%
Avg	1.2%	1.1%	0.3%	0.1%	0.3%	0.7%	-0.2%	-0.2%	-0.1%	-0.2%	-0.4%	0.0%
W/AN/BN	2.4%	1.4%	0.5%	0.0%	-0.2%	-0.1%	-0.2%	-0.4%	0.5%	0.0%	-0.3%	0.5%
D/C	0.3%	0.8%	0.2%	0.3%	0.7%	1.4%	-0.1%	-0.1%	-0.6%	-0.3%	-0.6%	-0.3%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Existing Condition
Alternative 1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.15%
0.30%
0.73%
-0.16%
-0.20%
-0.14%
-0.18%
-0.44%
0.04%
1.21%
1.06%
0.32%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1200
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

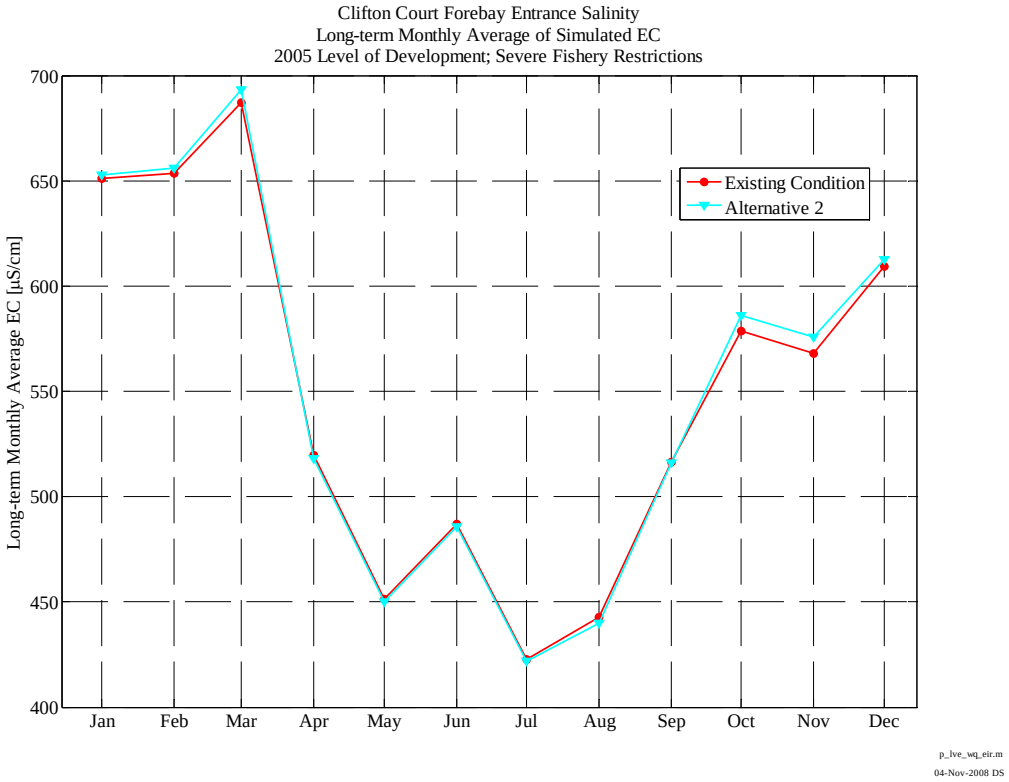
Alternative 2

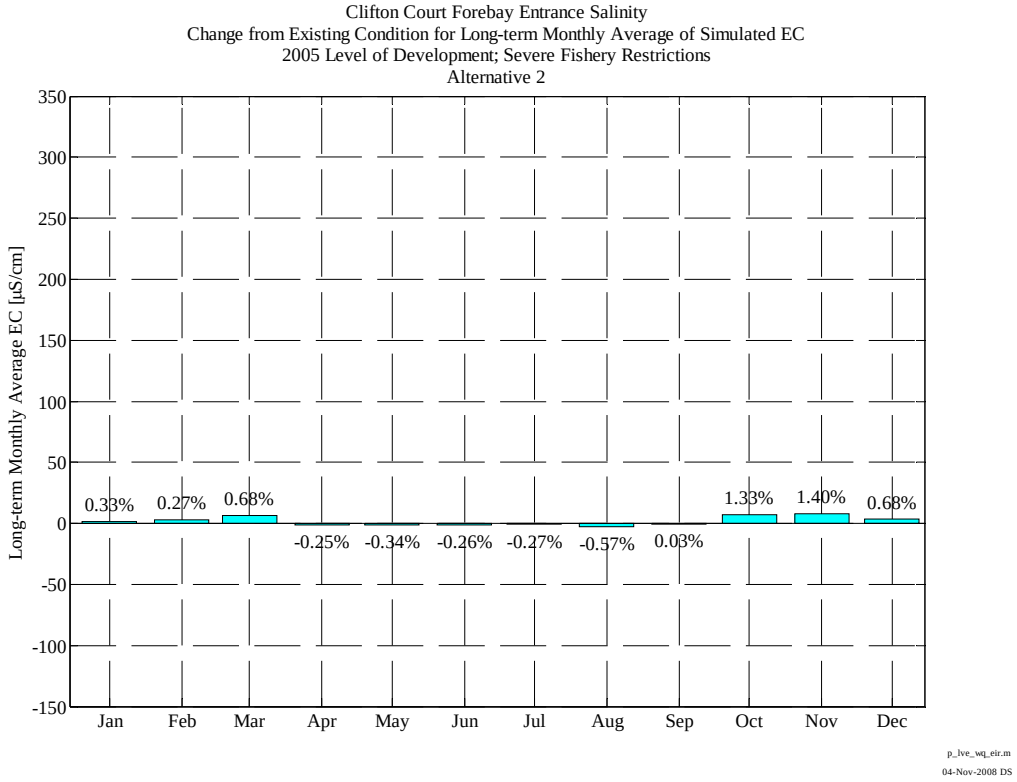
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

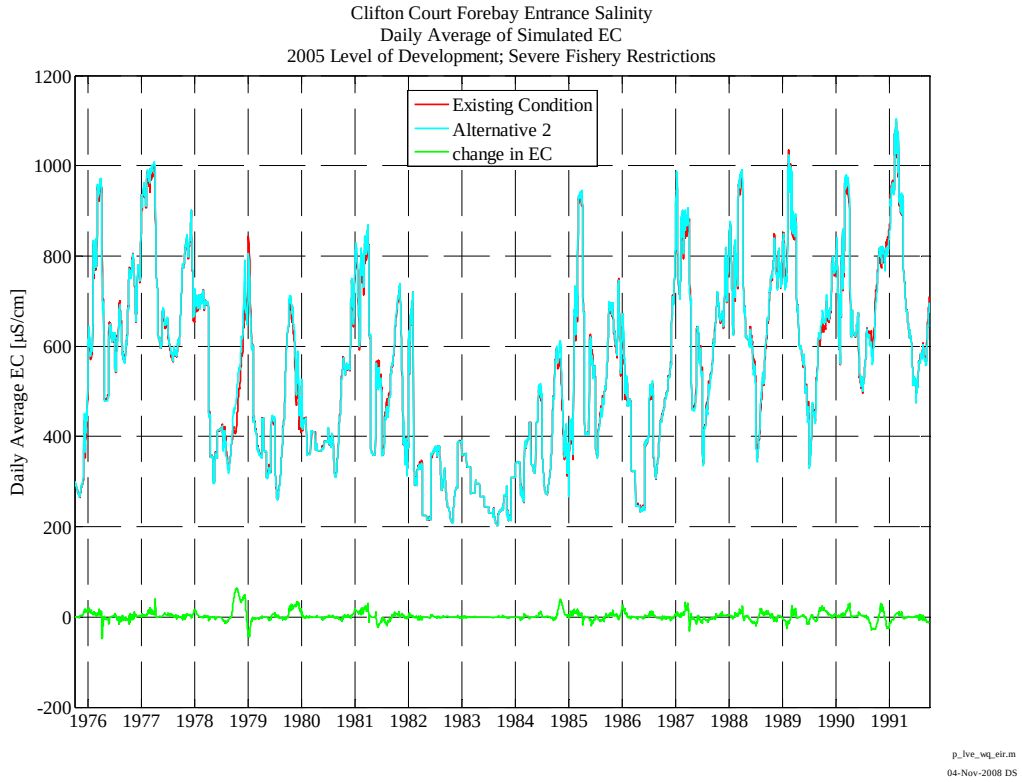
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	285	288	437	604	791	944	633	539	624	597	630	601
1977	761	729	788	937	970	996	745	632	656	599	585	634
1978	787	825	765	700	705	697	412	328	412	399	339	420
1979	507	610	705	675	431	364	400	318	428	286	357	556
1980	693	582	489	438	364	410	373	370	388	395	332	436
1981	552	562	711	740	766	830	526	439	523	398	473	577
1982	695	559	367	653	325	330	229	217	361	373	307	273
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	225	307	342	273	383	384	370	494	306	299	469
1985	584	494	373	415	672	918	586	487	552	388	463	560
1986	686	615	634	571	478	327	249	239	383	498	333	407
1987	471	529	716	825	850	880	626	523	580	404	499	596
1988	687	664	772	776	773	965	707	617	560	383	517	636
1989	750	781	774	778	955	883	682	580	476	402	492	639
1990	671	676	771	698	775	959	692	635	552	557	616	612
1991	768	805	810	929	1,038	936	750	636	534	532	582	614
Avg	586	576	613	653	656	693	518	450	486	422	440	516
W/AN/BN	549	527	522	534	416	398	335	301	387	355	312	399
D/C	614	614	684	745	843	923	661	565	562	473	540	607

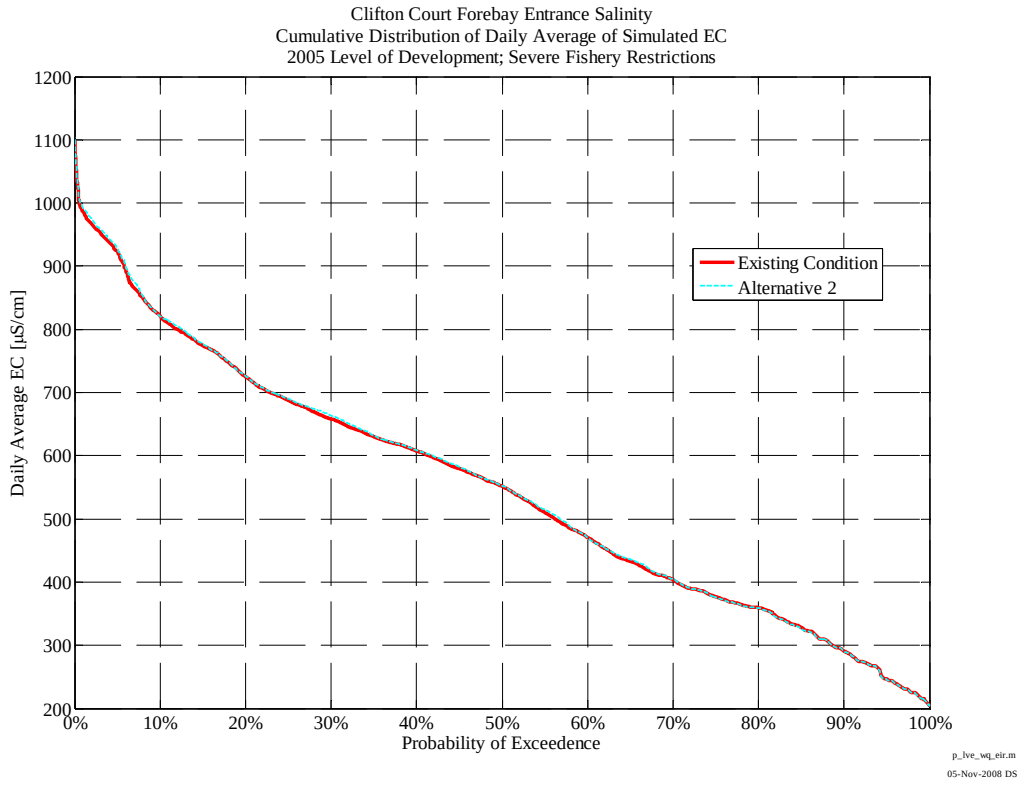
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	1.1%	3.2%	2.0%	0.8%	0.9%	-2.3%	-1.2%	0.2%	-0.4%	-0.8%	-0.7%
1977	-0.4%	0.4%	0.2%	0.4%	1.0%	1.0%	0.8%	0.3%	0.9%	0.8%	0.3%	0.0%
1978	0.0%	0.6%	0.8%	1.0%	0.0%	0.1%	-0.6%	-0.6%	0.0%	-1.9%	-2.0%	5.6%
1979	12.7%	6.7%	1.5%	-3.0%	-0.7%	-0.7%	-0.1%	-0.8%	0.9%	0.2%	-0.7%	-0.4%
1980	2.6%	4.5%	4.4%	0.0%	0.0%	0.0%	0.1%	-0.5%	-0.3%	0.1%	-0.3%	-0.9%
1981	0.0%	0.2%	1.0%	1.7%	1.8%	2.4%	-0.1%	-0.5%	-2.8%	-1.9%	-2.2%	0.5%
1982	1.0%	0.7%	-0.4%	0.5%	-0.2%	-0.7%	-0.1%	-0.2%	0.7%	0.1%	0.0%	0.2%
1983	-0.2%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.1%
1984	0.0%	-0.6%	0.0%	0.0%	-1.1%	0.6%	-0.2%	0.2%	1.5%	0.1%	0.1%	-0.8%
1985	2.5%	5.6%	1.1%	1.5%	1.6%	0.8%	-0.6%	-0.6%	-1.8%	-0.5%	-1.3%	0.2%
1986	0.8%	0.7%	0.6%	2.5%	-0.1%	0.0%	-0.3%	-0.5%	0.5%	1.6%	0.3%	-0.7%
1987	-0.4%	-0.4%	-0.1%	0.6%	0.6%	2.1%	-1.3%	-1.2%	-0.8%	-1.3%	-1.2%	-0.4%
1988	0.3%	0.6%	0.5%	0.1%	0.5%	1.0%	0.2%	-0.4%	-2.3%	-1.2%	1.9%	1.3%
1989	0.4%	-0.7%	0.1%	-1.3%	-1.0%	1.2%	-0.1%	0.3%	-1.8%	-0.2%	-1.1%	2.3%
1990	2.4%	1.0%	0.3%	0.1%	0.5%	1.6%	1.0%	0.3%	1.0%	0.2%	-1.7%	-4.2%
1991	-0.5%	2.0%	-2.2%	-1.0%	0.4%	0.7%	-0.2%	0.0%	0.0%	-0.1%	-0.3%	-1.6%
Avg	1.3%	1.4%	0.7%	0.3%	0.3%	0.7%	-0.2%	-0.3%	-0.3%	-0.3%	-0.6%	0.0%
W/AN/BN	2.4%	1.8%	1.0%	0.1%	-0.3%	-0.1%	-0.2%	-0.4%	0.5%	0.0%	-0.4%	0.4%
D/C	0.5%	1.1%	0.5%	0.5%	0.7%	1.3%	-0.3%	-0.3%	-0.8%	-0.5%	-0.7%	-0.3%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.33%
0.27%
0.68%
-0.25%
-0.34%
-0.26%
-0.27%
-0.57%
0.03%
1.33%
1.40%
0.68%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1200
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Alternative 3

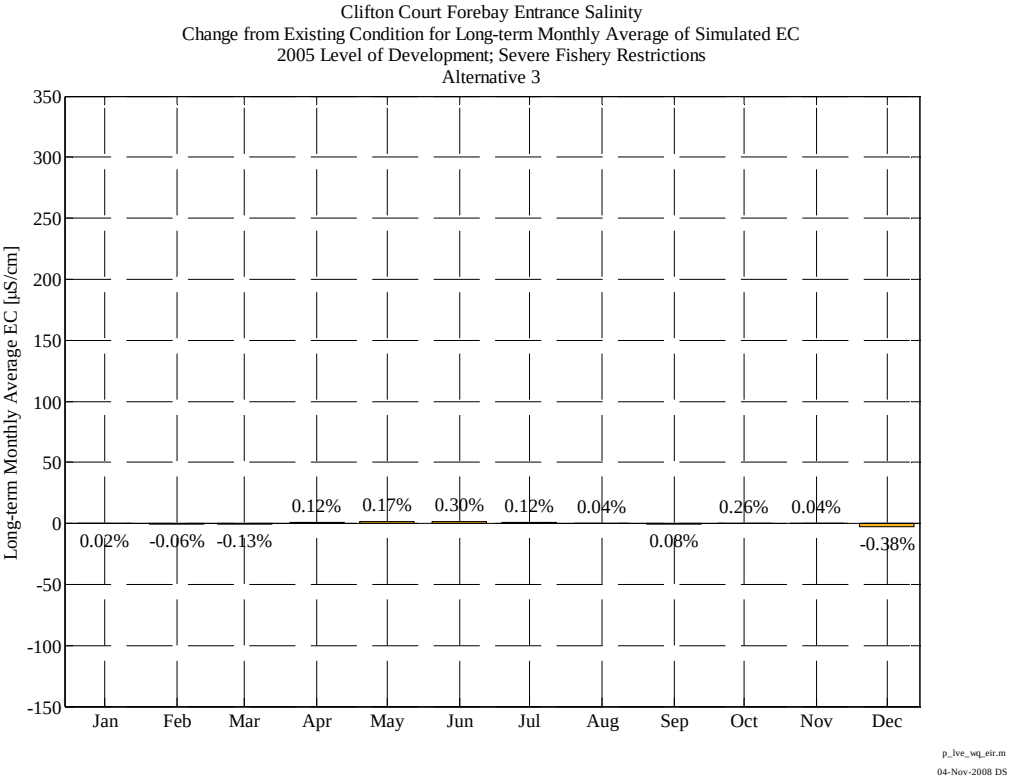
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

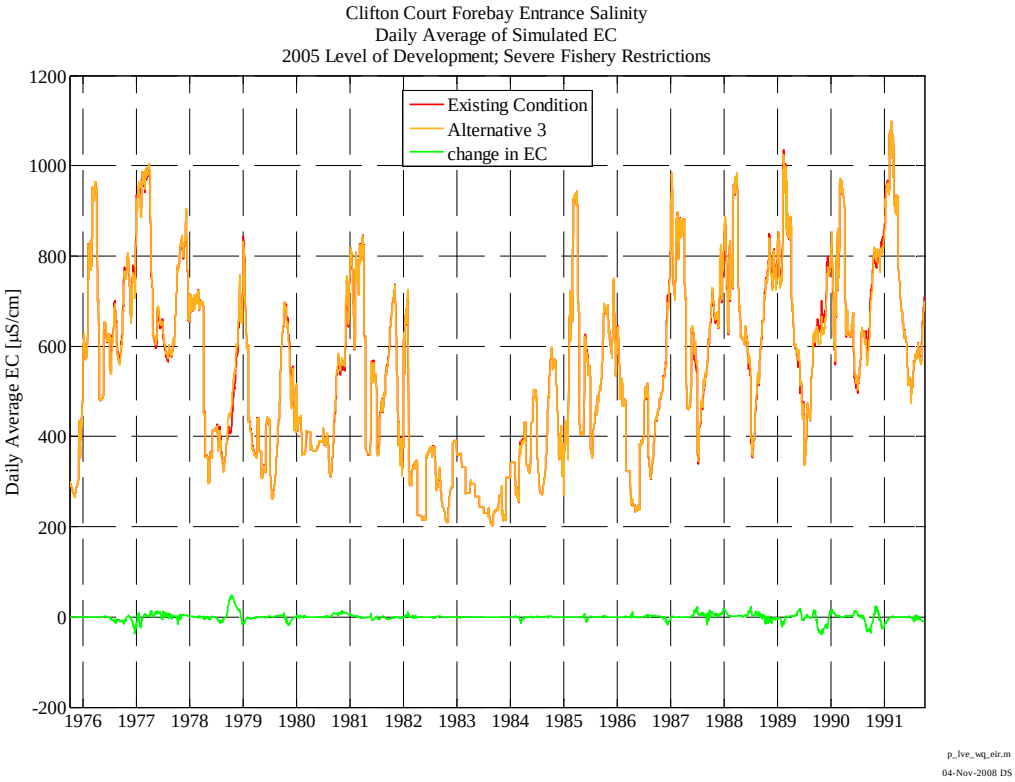
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	285	285	423	592	785	935	649	546	623	594	628	596
1977	758	725	765	925	960	988	745	639	654	600	587	635
1978	785	824	762	694	705	696	413	328	412	399	340	415
1979	492	595	694	689	432	364	400	320	425	286	361	561
1980	671	544	466	439	364	410	373	372	389	395	334	448
1981	560	571	711	731	753	810	526	441	535	403	484	570
1982	686	555	367	652	326	332	229	218	359	372	307	273
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	226	307	342	277	374	385	369	487	306	299	474
1985	569	468	369	409	661	911	590	490	558	391	469	559
1986	681	610	631	557	478	327	252	239	381	492	334	412
1987	474	528	706	820	843	862	634	530	596	417	511	601
1988	693	664	778	785	771	956	708	621	581	394	515	631
1989	742	779	769	781	954	872	685	587	487	404	497	627
1990	624	645	763	708	773	944	687	635	556	559	619	610
1991	768	800	810	929	1,033	929	752	636	534	530	583	616
Avg	579	568	607	651	653	687	520	453	489	423	443	516
W/AN/BN	542	518	516	533	416	397	335	302	385	354	313	402
D/C	608	607	677	742	837	912	664	570	569	477	544	605

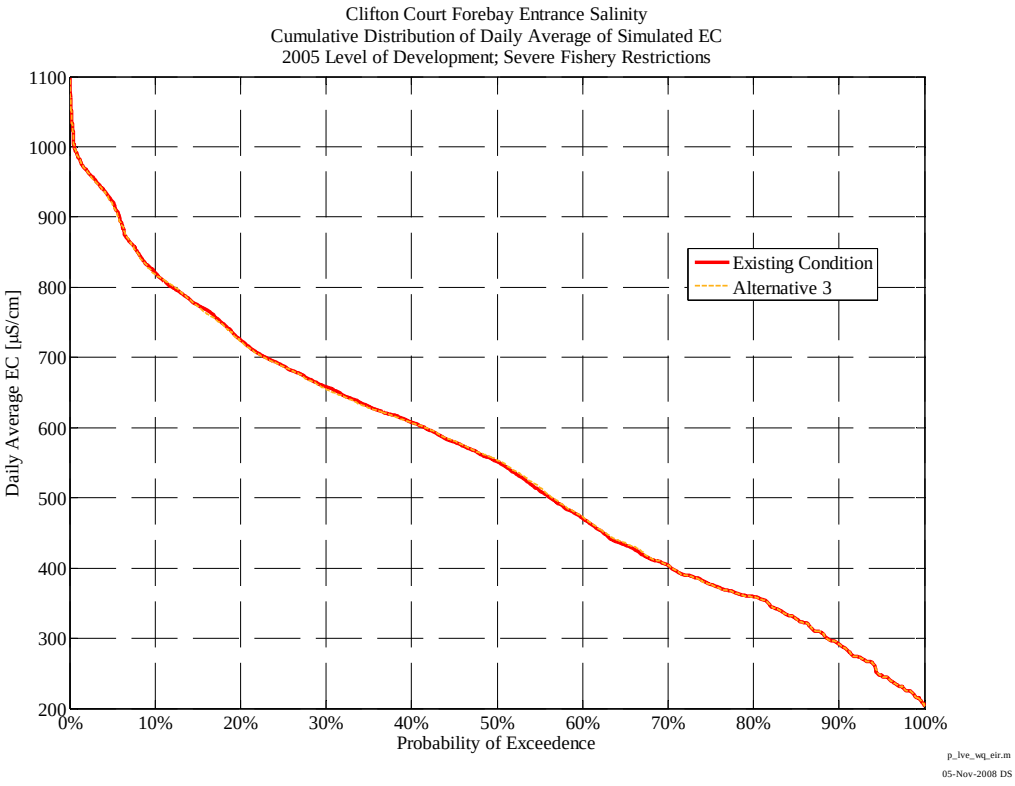
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-1.1%	-1.4%
1977	-0.9%	-0.1%	-2.8%	-0.9%	0.0%	0.3%	0.8%	1.4%	0.6%	1.0%	0.6%	0.2%
1978	-0.2%	0.6%	0.4%	0.1%	0.0%	0.1%	-0.4%	-0.5%	0.0%	-1.9%	-1.5%	4.3%
1979	9.3%	3.9%	-0.1%	-1.0%	-0.6%	-0.7%	0.0%	-0.1%	0.0%	0.1%	0.5%	0.5%
1980	-0.6%	-2.3%	-0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	1.8%
1981	1.5%	1.8%	1.0%	0.5%	0.1%	-0.1%	-0.2%	-0.1%	-0.6%	-0.8%	0.0%	-0.8%
1982	-0.4%	-0.2%	-0.5%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.2%	0.3%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-1.7%	0.0%	0.0%	-0.1%	0.2%	0.1%	0.2%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	0.1%	-0.1%	0.1%
1986	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	-0.2%	0.0%	0.5%	0.6%	0.6%
1987	0.2%	-0.5%	-1.4%	0.0%	-0.1%	-0.1%	0.0%	0.2%	1.9%	1.8%	1.2%	0.4%
1988	1.1%	0.6%	1.3%	1.4%	0.2%	0.1%	0.3%	0.3%	1.5%	1.6%	1.4%	0.5%
1989	-0.7%	-0.9%	-0.5%	-0.8%	-1.1%	0.1%	0.3%	1.6%	0.4%	0.2%	-0.1%	0.4%
1990	-4.8%	-3.6%	-0.7%	1.5%	0.3%	0.0%	0.3%	0.3%	1.8%	0.5%	-1.1%	-4.5%
1991	-0.6%	1.4%	-2.2%	-1.0%	-0.1%	0.0%	-0.1%	-0.1%	0.1%	-0.4%	-0.2%	-1.3%
Avg	0.3%	0.0%	-0.4%	0.0%	-0.1%	-0.1%	0.1%	0.2%	0.3%	0.1%	0.0%	0.1%
W/AN/BN	1.2%	0.3%	-0.1%	0.0%	-0.1%	-0.3%	0.1%	-0.1%	0.0%	-0.2%	0.0%	1.1%
D/C	-0.4%	-0.1%	-0.6%	0.1%	-0.1%	0.0%	0.2%	0.4%	0.5%	0.3%	0.1%	-0.7%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.02%
-0.06%
-0.13%
0.12%
0.17%
0.30%
0.12%
0.04%
0.08%
0.26%
0.04%
-0.38%
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

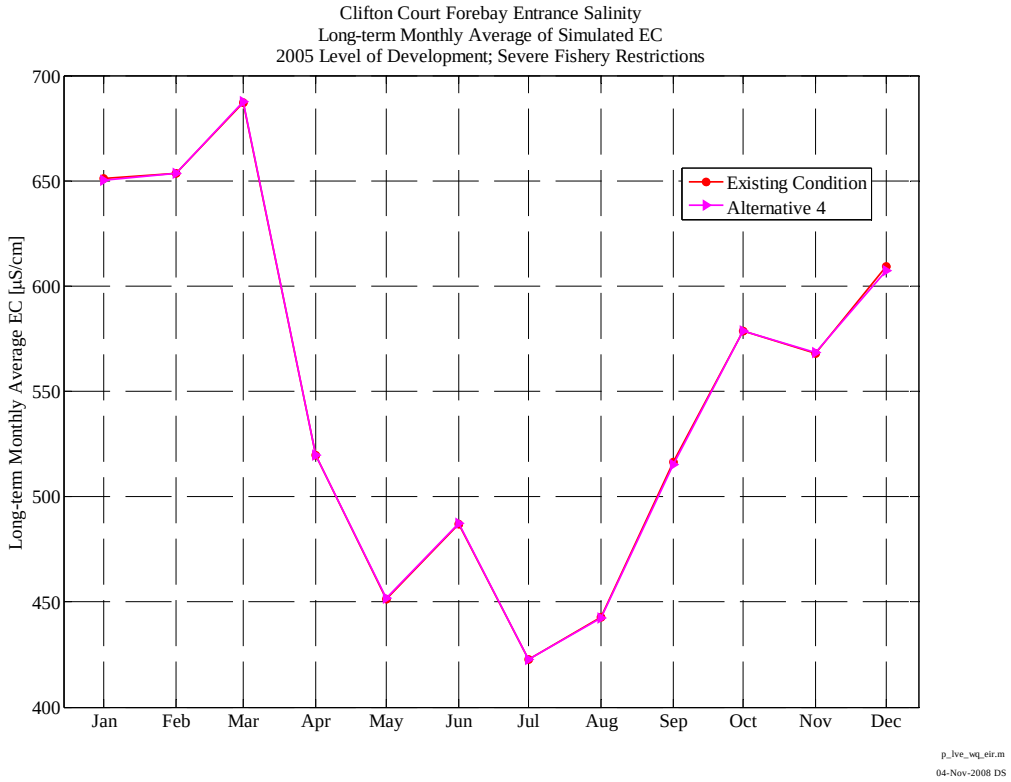
Alternative 4

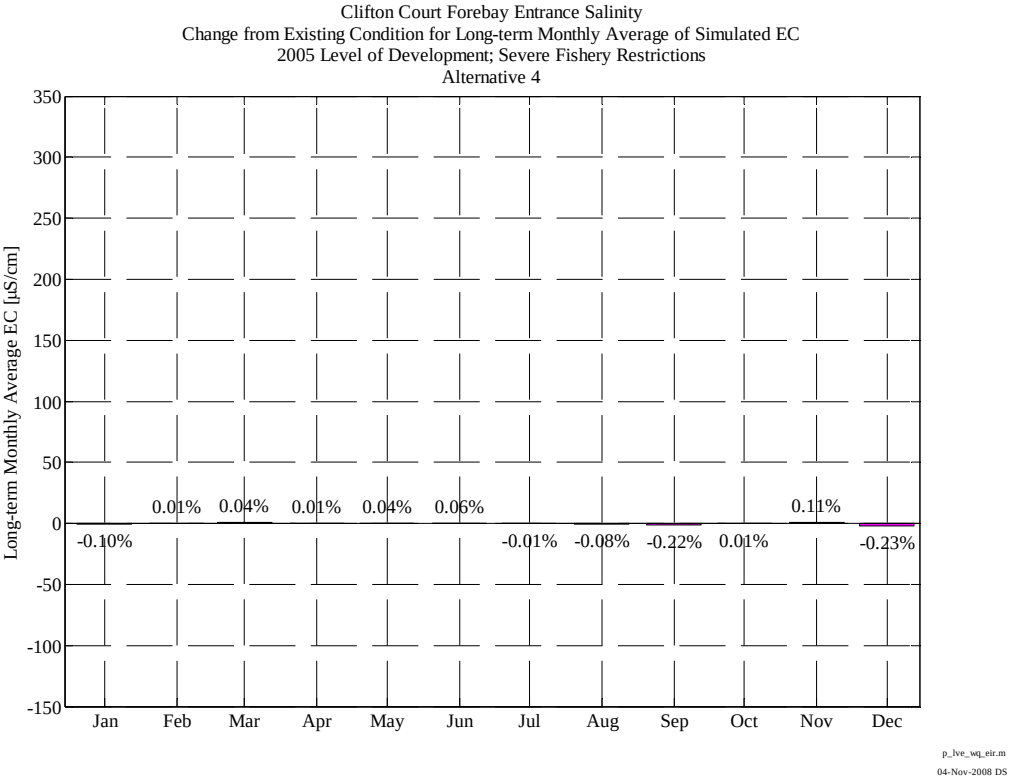
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

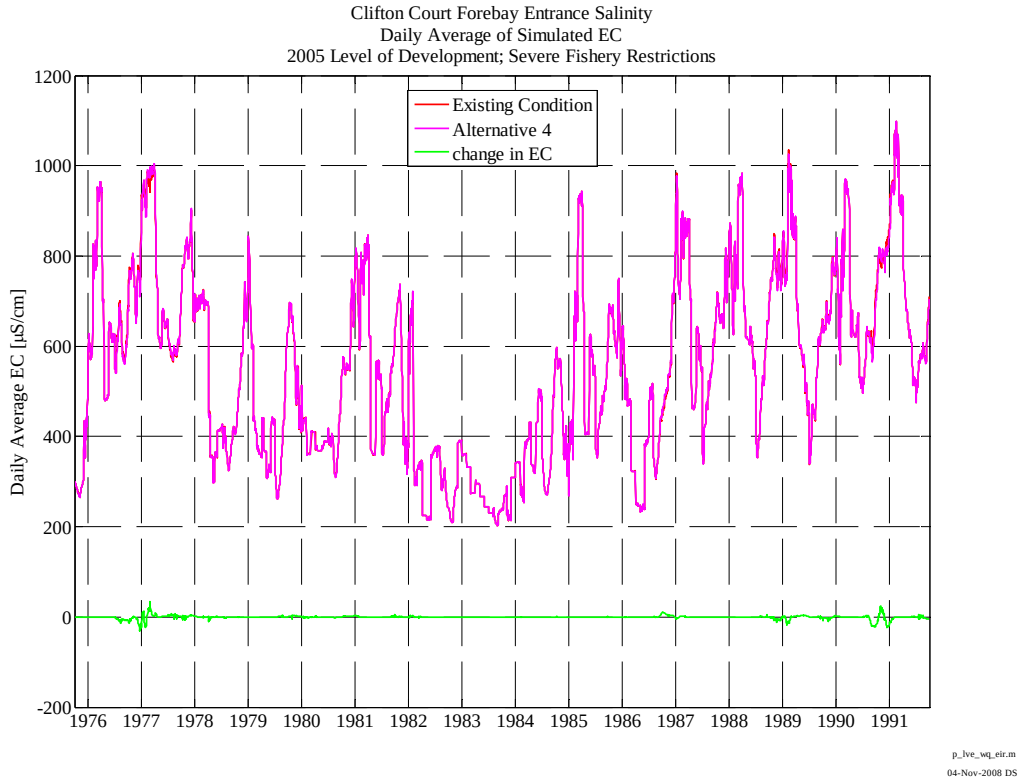
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	285	285	423	592	785	935	649	545	623	595	629	598
1977	758	725	769	928	970	992	743	631	652	598	586	636
1978	785	821	762	694	705	696	412	330	412	406	345	398
1979	450	572	695	696	435	367	400	321	425	285	361	558
1980	676	559	470	437	363	410	373	372	389	394	331	440
1981	553	562	705	730	752	810	527	441	538	406	484	575
1982	689	556	368	651	325	332	229	218	359	373	307	273
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	226	307	342	277	381	385	369	487	305	299	473
1985	569	468	369	409	661	911	590	490	562	390	470	559
1986	680	610	631	558	478	327	250	240	381	490	332	413
1987	482	535	718	818	845	863	635	529	585	409	505	598
1988	685	660	768	774	769	955	706	619	573	387	508	627
1989	746	780	768	784	955	872	685	582	488	403	498	624
1990	652	666	769	699	771	944	685	633	546	557	622	619
1991	769	800	812	931	1,033	929	752	637	534	532	583	620
Avg	579	569	607	650	654	687	520	452	487	423	442	515
W/AN/BN	537	516	517	534	416	398	335	303	385	355	313	398
D/C	611	609	678	741	838	912	663	568	567	475	543	606

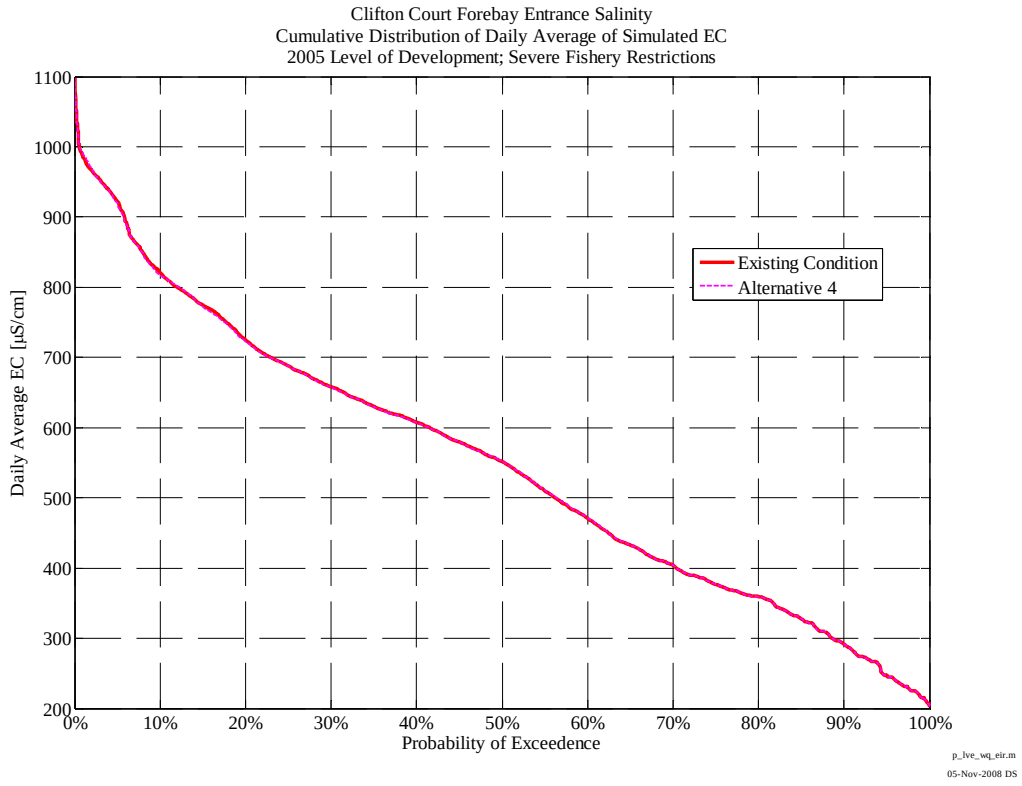
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.6%	-1.0%	-1.1%
1977	-0.8%	-0.1%	-2.3%	-0.6%	1.0%	0.6%	0.6%	0.1%	0.2%	0.6%	0.5%	0.4%
1978	-0.2%	0.1%	0.4%	0.1%	0.0%	0.0%	-0.8%	0.0%	0.0%	-0.3%	-0.2%	0.0%
1979	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%
1980	0.2%	0.5%	0.3%	-0.2%	-0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.4%	-0.1%
1981	0.1%	0.3%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%
1982	0.1%	0.1%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.9%
1987	1.9%	0.8%	0.2%	-0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1988	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%
1989	-0.2%	-0.7%	-0.6%	-0.4%	-0.9%	0.1%	0.3%	0.6%	0.5%	0.1%	0.1%	0.0%
1990	-0.4%	-0.6%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	-0.6%	-3.1%
1991	-0.5%	1.3%	-2.0%	-0.8%	-0.1%	0.0%	0.0%	0.0%	0.1%	-0.1%	-0.1%	-0.6%
Avg	0.0%	0.1%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.1%	-0.2%
W/AN/BN	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.1%
D/C	0.0%	0.1%	-0.5%	-0.2%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	-0.1%	-0.5%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
-0.10%
0.01%
0.04%
0.01%
0.04%
0.06%
-0.01%
-0.08%
-0.22%
0.01%
0.11%
-0.23%
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Jones Pumping Plant

Existing Condition

Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	324	337	500	632	814	988	692	555	663	613	643	618
1977	764	735	792	923	985	1,016	776	638	672	597	590	647
1978	783	812	775	718	730	711	409	335	421	450	379	423
1979	472	573	711	705	428	364	412	329	447	342	395	566
1980	656	566	541	448	400	414	382	383	397	433	368	462
1981	549	559	712	738	779	872	566	456	590	433	506	592
1982	689	578	464	686	328	354	235	226	370	405	327	275
1983	218	283	389	423	362	307	310	275	260	241	210	246
1984	290	225	326	346	270	389	410	390	513	352	345	485
1985	546	486	451	483	694	933	632	503	612	421	495	575
1986	676	617	661	603	517	350	260	247	392	519	371	432
1987	473	521	716	817	872	921	675	539	641	434	528	615
1988	692	674	779	791	821	997	745	634	635	393	525	641
1989	747	780	779	810	999	945	720	597	564	415	515	636
1990	666	686	775	726	824	1,014	743	652	603	559	632	648
1991	768	784	830	954	1,076	973	771	651	579	541	596	635
Avg	582	576	637	675	681	722	546	463	522	447	464	531
W/AN/BN	541	522	552	561	434	413	345	312	400	392	342	413
D/C	614	618	704	764	874	962	702	581	618	490	559	623

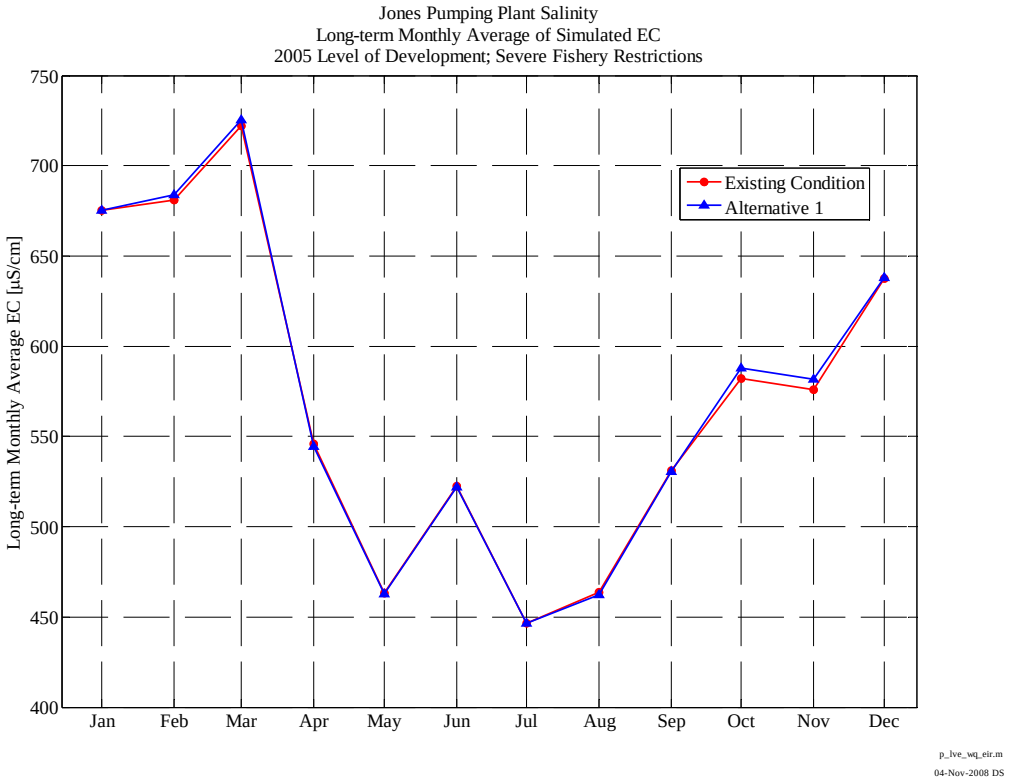
Alternative 1

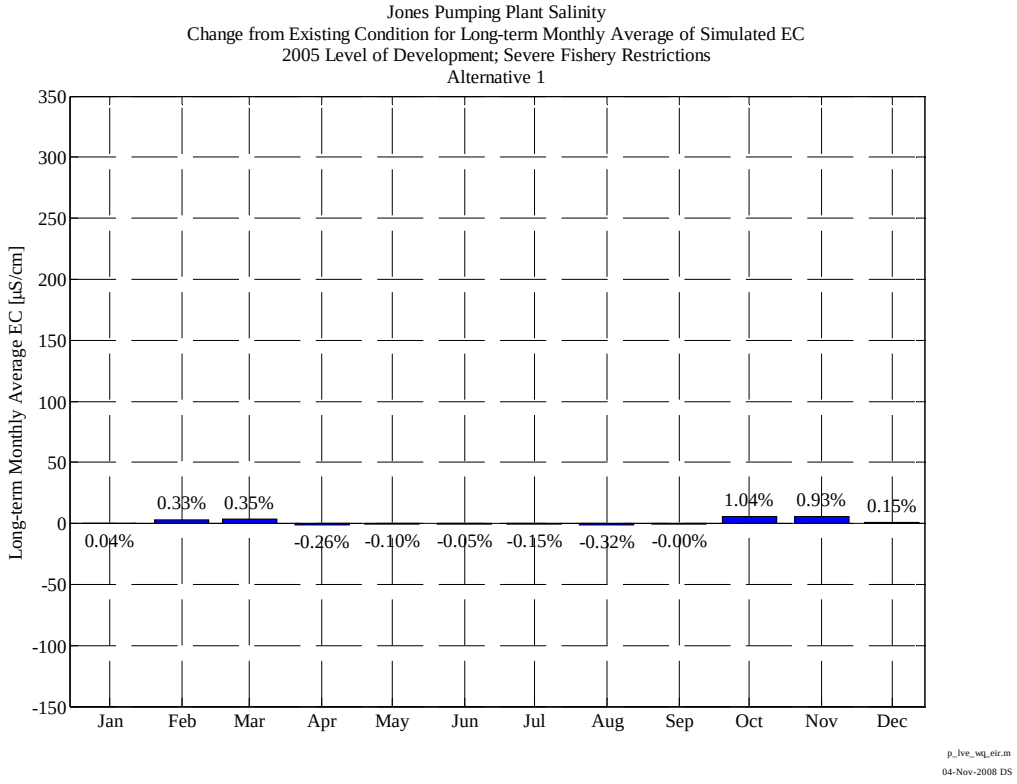
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

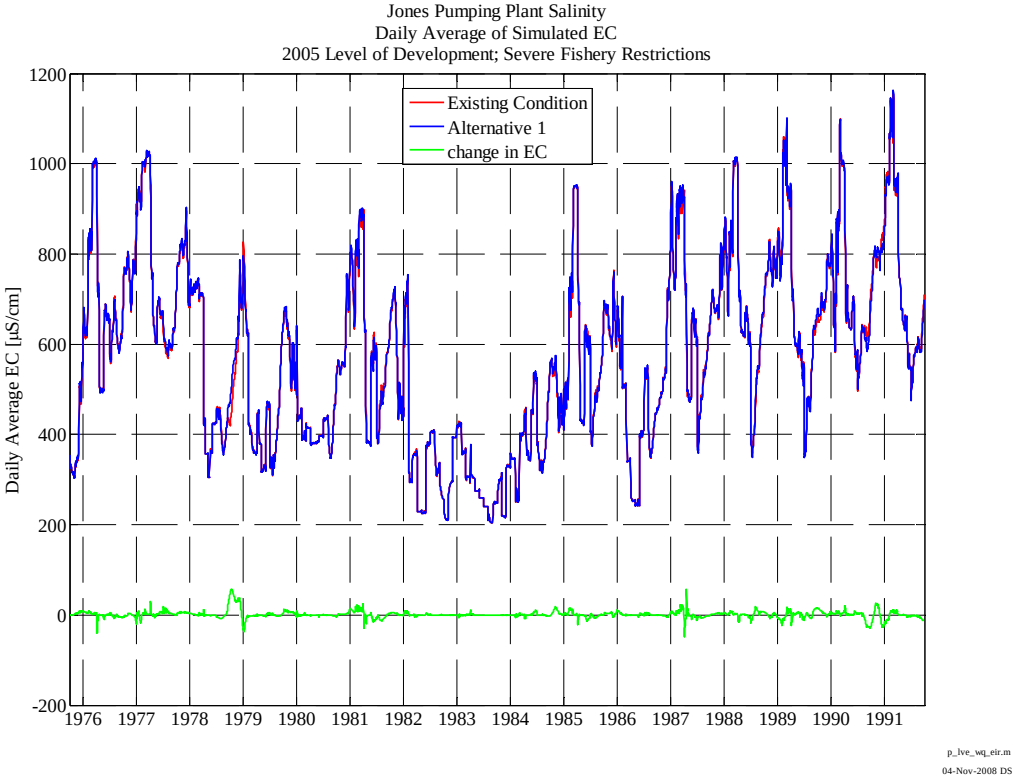
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	324	339	507	638	820	990	681	553	663	612	640	613
1977	761	739	786	920	986	1,018	782	638	677	608	595	648
1978	787	818	780	720	731	712	409	334	421	445	374	441
1979	523	605	719	688	426	363	411	328	449	343	394	566
1980	666	573	543	448	401	413	382	382	397	433	367	459
1981	549	561	717	747	795	886	561	456	580	426	497	593
1982	694	580	463	692	327	353	235	226	371	405	327	276
1983	218	283	389	422	362	308	311	275	260	241	210	246
1984	290	225	326	346	268	390	406	390	519	351	345	483
1985	553	497	453	485	706	934	628	502	604	419	490	575
1986	680	620	662	609	516	350	260	247	394	522	372	431
1987	472	520	715	822	878	935	672	536	639	429	522	612
1988	693	677	782	793	826	998	740	635	631	390	535	648
1989	750	776	780	799	992	953	715	600	562	415	510	649
1990	678	690	776	729	830	1,018	748	653	607	562	624	622
1991	763	803	811	942	1,081	981	771	651	576	540	594	626
Avg	588	582	638	675	684	725	545	463	522	446	462	530
W/AN/BN	551	529	555	561	433	413	345	312	402	391	341	414
D/C	616	622	703	764	879	968	700	580	615	489	556	621

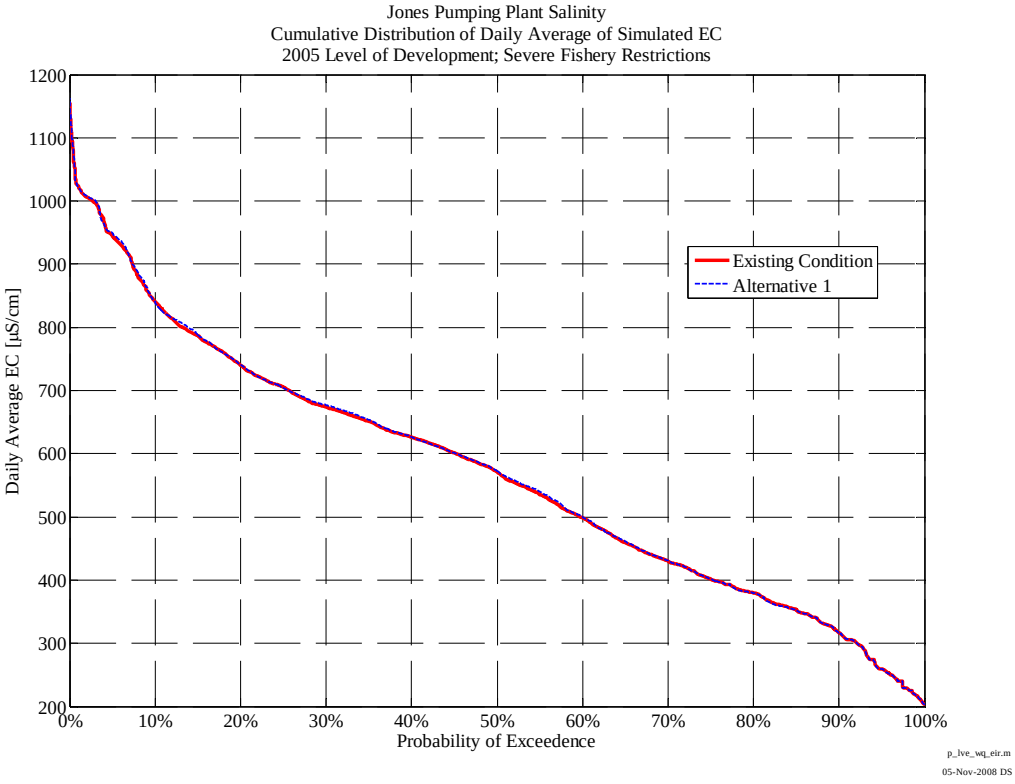
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.7%	1.4%	1.0%	0.7%	0.3%	-1.6%	-0.5%	0.0%	-0.1%	-0.4%	-0.8%
1977	-0.3%	0.4%	-0.7%	-0.3%	0.1%	0.2%	0.7%	0.0%	0.8%	1.7%	0.8%	0.1%
1978	0.6%	0.8%	0.7%	0.3%	0.1%	0.2%	0.1%	-0.2%	0.0%	-1.2%	-1.2%	4.2%
1979	10.8%	5.6%	1.0%	-2.3%	-0.6%	-0.5%	-0.1%	-0.3%	0.5%	0.4%	-0.4%	-0.1%
1980	1.5%	1.2%	0.5%	-0.1%	0.2%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	-0.1%	-0.5%
1981	0.1%	0.3%	0.8%	1.3%	2.1%	1.5%	-1.0%	-0.1%	-1.8%	-1.4%	-1.7%	0.2%
1982	0.8%	0.4%	-0.1%	0.9%	0.0%	-0.2%	0.0%	-0.1%	0.4%	0.0%	0.0%	0.1%
1983	0.0%	0.1%	0.0%	-0.2%	-0.2%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	-0.1%	-0.1%	0.0%	0.0%	-0.5%	0.4%	-0.8%	0.0%	1.3%	-0.1%	-0.1%	-0.5%
1985	1.2%	2.2%	0.4%	0.5%	1.8%	0.2%	-0.6%	-0.2%	-1.3%	-0.5%	-0.9%	0.1%
1986	0.6%	0.6%	0.1%	1.0%	0.0%	0.0%	-0.1%	-0.2%	0.5%	0.4%	0.3%	-0.2%
1987	-0.2%	-0.3%	-0.1%	0.7%	0.7%	1.5%	-0.5%	-0.6%	-0.4%	-1.1%	-1.0%	-0.4%
1988	0.2%	0.5%	0.4%	0.3%	0.7%	0.1%	-0.7%	0.1%	-0.6%	-0.9%	2.0%	1.1%
1989	0.4%	-0.5%	0.1%	-1.4%	-0.8%	0.8%	-0.6%	0.6%	-0.3%	-0.1%	-0.8%	2.1%
1990	1.8%	0.6%	0.2%	0.4%	0.7%	0.3%	0.7%	0.1%	0.7%	0.6%	-1.2%	-4.1%
1991	-0.6%	2.4%	-2.2%	-1.3%	0.5%	0.8%	0.1%	0.0%	-0.4%	-0.3%	-0.4%	-1.4%
Avg	1.0%	0.9%	0.1%	0.0%	0.3%	0.4%	-0.3%	-0.1%	-0.1%	-0.2%	-0.3%	0.0%
W/AN/BN	2.0%	1.2%	0.3%	-0.1%	-0.2%	0.0%	-0.1%	-0.1%	0.4%	-0.1%	-0.2%	0.4%
D/C	0.3%	0.7%	0.0%	0.1%	0.7%	0.6%	-0.4%	-0.1%	-0.4%	-0.2%	-0.4%	-0.3%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
750
700
650
600
550
500
450
400
Existing Condition
Alternative 1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.04%
0.33%
0.35%
-0.26%
-0.10%
-0.05%
-0.15%
-0.32%
-0.00%
1.04%
0.93%
0.15%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1200
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

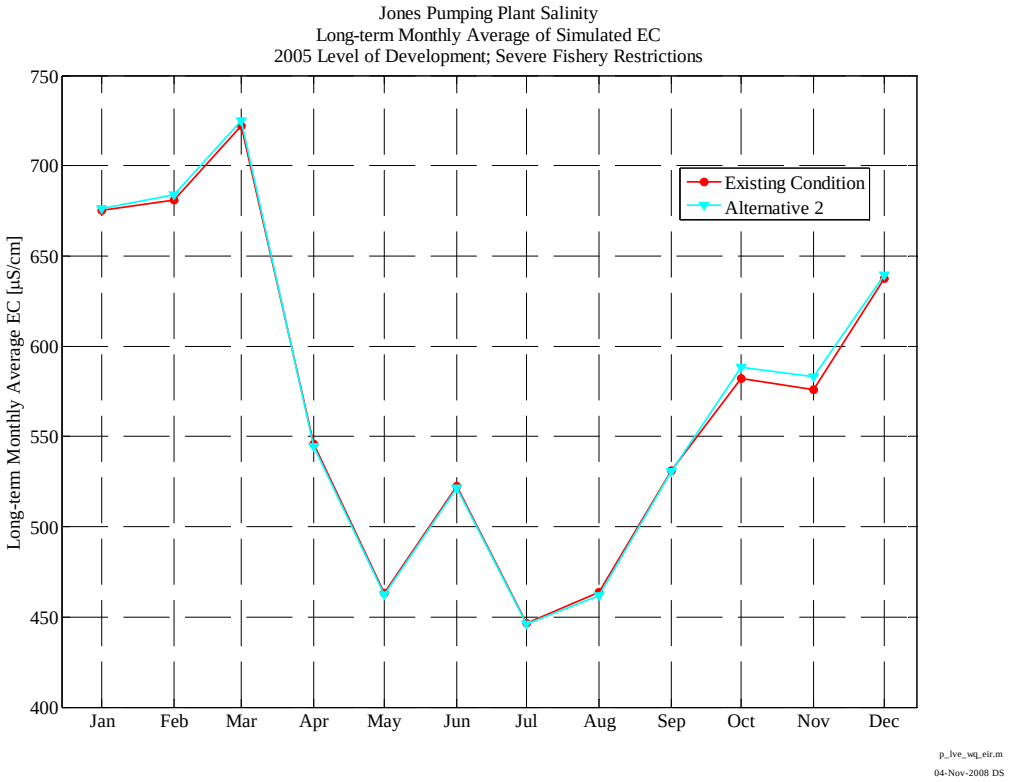
Alternative 2

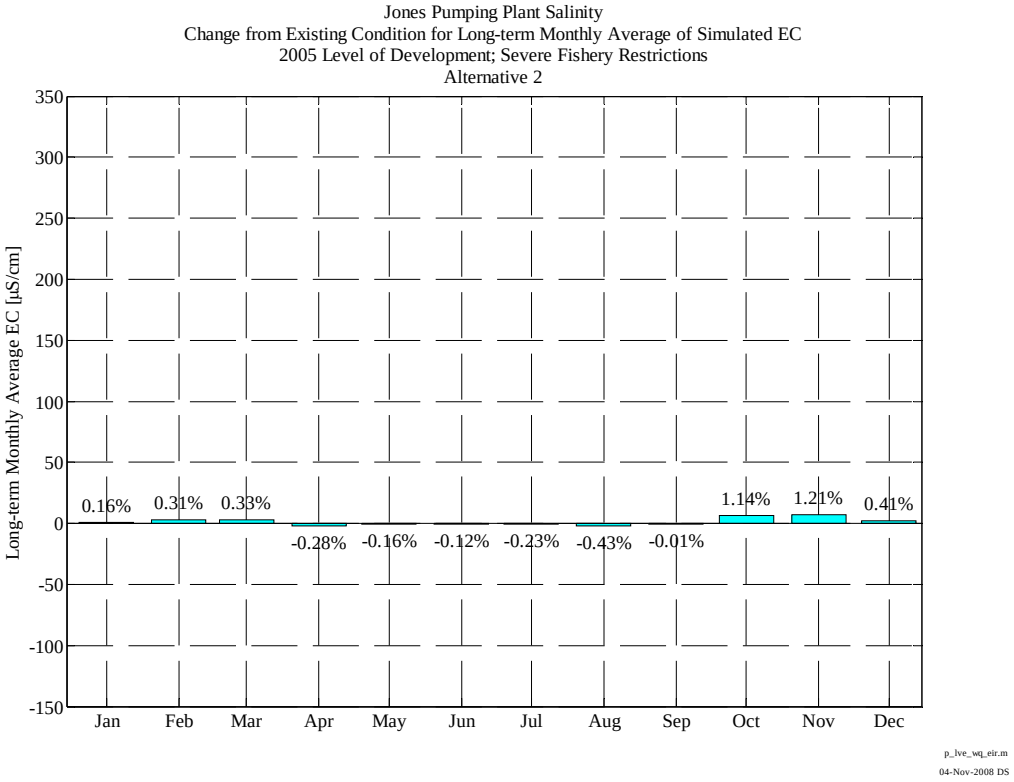
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

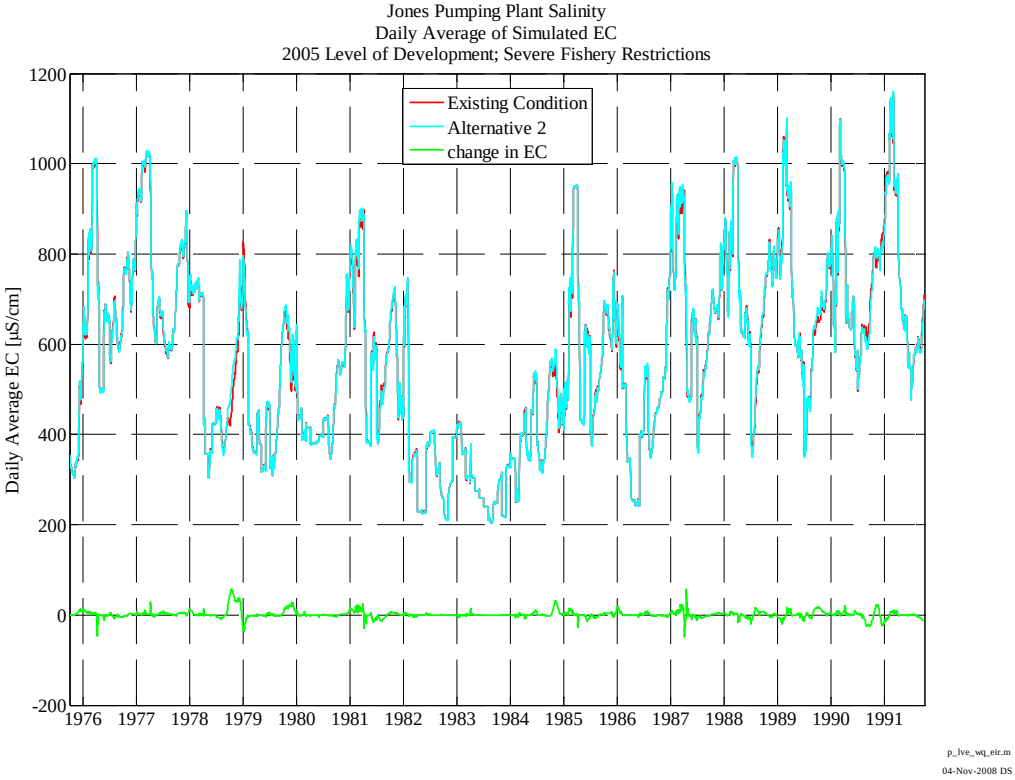
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	324	339	509	640	820	990	679	552	663	612	639	614
1977	762	738	793	927	987	1,018	781	638	676	602	592	646
1978	786	817	780	724	730	712	409	334	421	445	374	440
1979	522	604	719	688	426	363	411	328	449	343	393	566
1980	669	587	555	448	401	413	382	382	397	433	367	459
1981	549	561	717	748	795	886	561	456	580	426	497	593
1982	694	581	463	689	327	352	235	226	371	405	327	276
1983	218	283	389	422	362	308	311	275	260	241	210	246
1984	290	225	326	346	268	390	406	390	519	351	345	483
1985	557	507	453	486	705	934	627	502	604	419	490	576
1986	681	620	663	613	517	350	260	247	393	524	372	430
1987	472	520	716	822	878	935	672	536	639	429	522	612
1988	694	677	782	792	825	998	740	633	628	389	535	648
1989	750	777	780	801	993	953	720	598	560	414	510	649
1990	681	692	777	726	830	1,017	748	653	607	560	622	624
1991	764	801	813	945	1,080	980	770	651	578	541	594	626
Avg	588	583	640	676	684	725	544	462	521	446	462	530
W/AN/BN	552	531	556	561	433	413	345	312	402	392	341	414
D/C	617	624	704	765	879	968	700	580	615	488	556	621

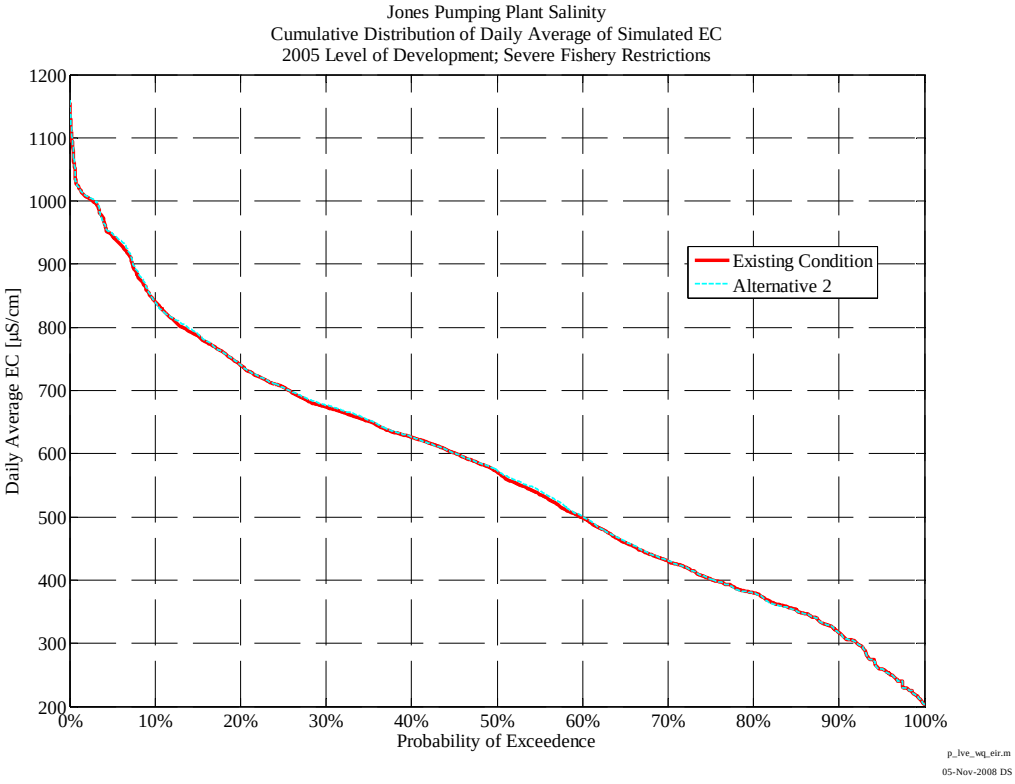
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.8%	1.9%	1.2%	0.7%	0.2%	-2.0%	-0.6%	-0.1%	-0.1%	-0.5%	-0.6%
1977	-0.3%	0.4%	0.1%	0.4%	0.2%	0.2%	0.6%	-0.1%	0.6%	0.8%	0.3%	-0.1%
1978	0.4%	0.6%	0.6%	0.9%	0.0%	0.2%	0.1%	-0.2%	0.0%	-1.2%	-1.4%	4.1%
1979	10.7%	5.5%	1.0%	-2.4%	-0.5%	-0.5%	-0.1%	-0.3%	0.5%	0.1%	-0.5%	-0.1%
1980	2.0%	3.7%	2.6%	0.0%	0.2%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	-0.3%	-0.6%
1981	0.1%	0.2%	0.8%	1.3%	2.0%	1.5%	-1.0%	-0.1%	-1.8%	-1.5%	-1.8%	0.2%
1982	0.8%	0.6%	-0.1%	0.4%	-0.1%	-0.3%	0.0%	-0.1%	0.4%	0.0%	0.0%	0.1%
1983	-0.1%	0.0%	0.0%	-0.2%	-0.2%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	-0.1%	-0.1%	0.0%	0.0%	-0.6%	0.4%	-0.9%	0.0%	1.3%	-0.1%	-0.1%	-0.5%
1985	2.1%	4.2%	0.5%	0.6%	1.6%	0.1%	-0.8%	-0.2%	-1.4%	-0.5%	-0.9%	0.1%
1986	0.6%	0.6%	0.4%	1.6%	0.0%	0.0%	-0.1%	-0.2%	0.3%	0.9%	0.2%	-0.4%
1987	-0.3%	-0.3%	-0.1%	0.6%	0.8%	1.5%	-0.5%	-0.6%	-0.4%	-1.1%	-1.0%	-0.4%
1988	0.2%	0.5%	0.4%	0.1%	0.6%	0.1%	-0.7%	-0.3%	-1.1%	-1.0%	1.9%	1.1%
1989	0.4%	-0.5%	0.1%	-1.1%	-0.7%	0.8%	0.0%	0.1%	-0.7%	-0.2%	-0.9%	2.1%
1990	2.2%	0.9%	0.3%	0.0%	0.7%	0.3%	0.7%	0.1%	0.6%	0.2%	-1.5%	-3.6%
1991	-0.5%	2.2%	-1.9%	-0.9%	0.4%	0.6%	-0.1%	0.0%	-0.1%	0.1%	-0.4%	-1.5%
Avg	1.1%	1.2%	0.4%	0.2%	0.3%	0.3%	-0.3%	-0.2%	-0.1%	-0.2%	-0.4%	0.0%
W/AN/BN	2.1%	1.6%	0.6%	0.0%	-0.2%	0.0%	-0.1%	-0.1%	0.3%	0.0%	-0.3%	0.4%
D/C	0.4%	0.9%	0.2%	0.2%	0.7%	0.6%	-0.4%	-0.2%	-0.5%	-0.4%	-0.5%	-0.3%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
750
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.16%
0.31%
0.33%
-0.28%
-0.16%
-0.12%
-0.23%
-0.43%
-0.01%
1.14%
1.21%
0.41%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1200
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

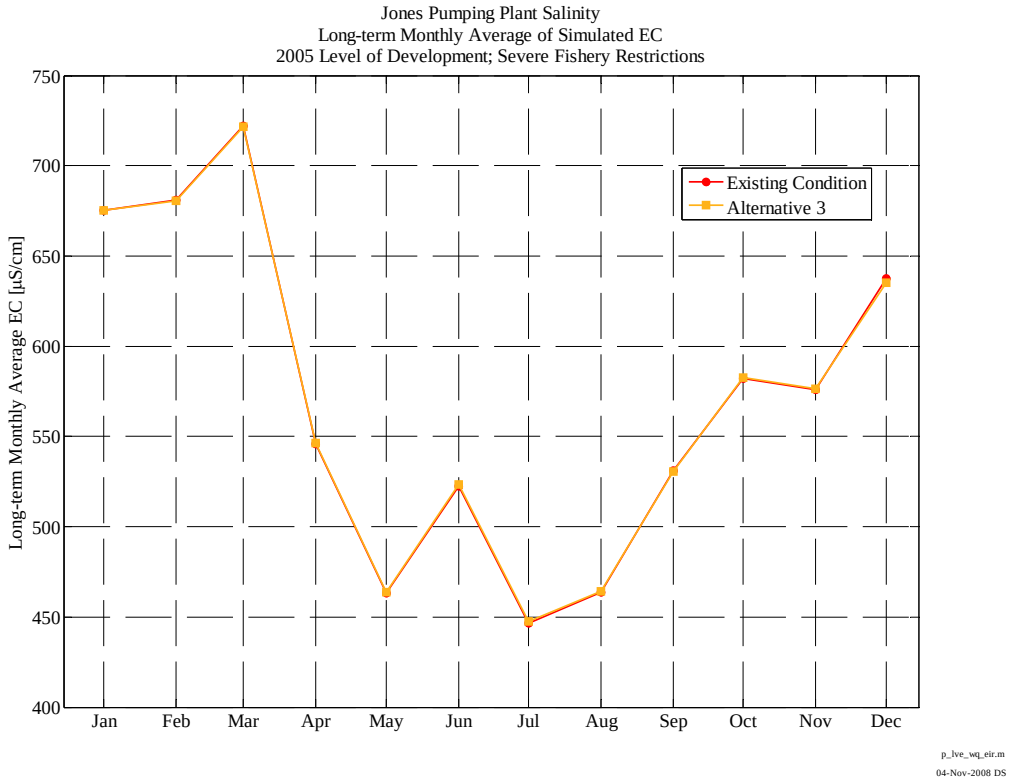
Alternative 3

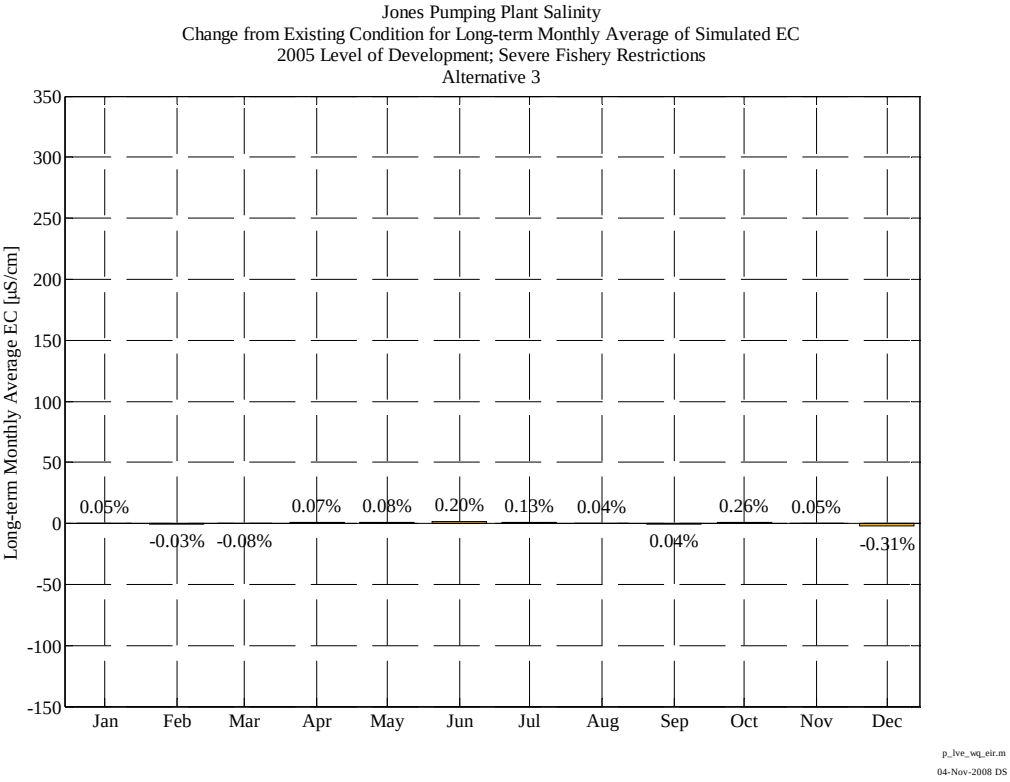
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

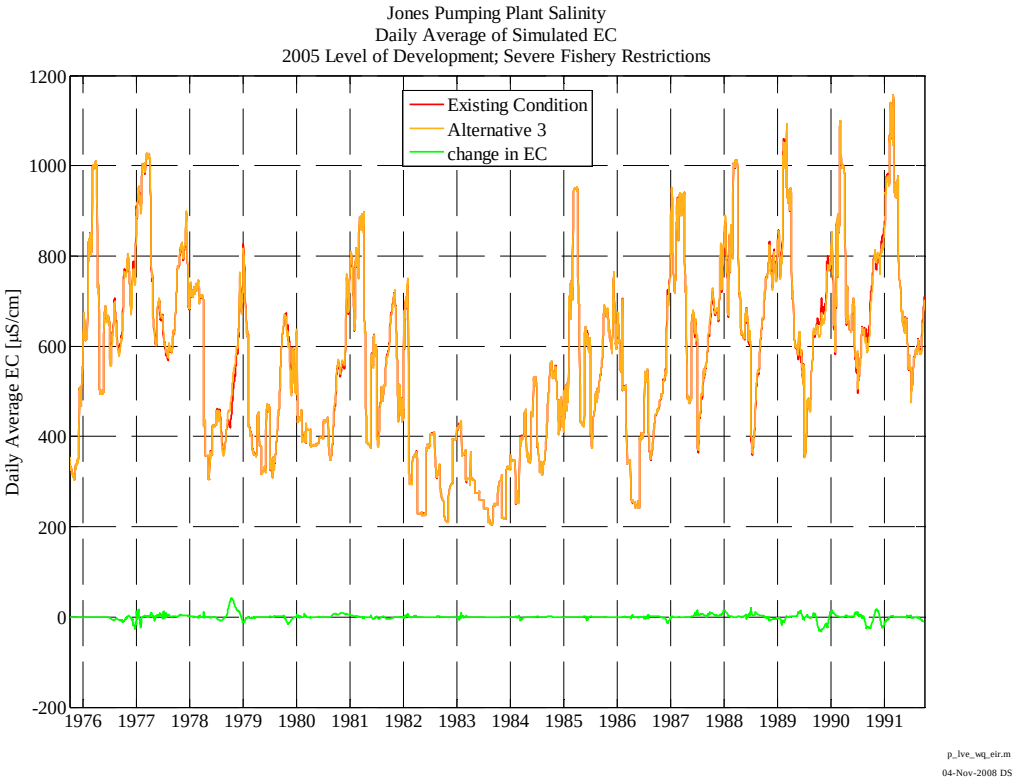
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	324	337	500	632	814	988	692	556	664	608	638	611
1977	759	736	775	922	984	1,017	780	639	675	602	593	648
1978	785	816	778	718	730	711	409	334	421	445	375	436
1979	509	591	711	699	427	363	412	329	447	343	397	568
1980	652	555	539	449	401	414	382	383	397	434	368	468
1981	555	568	717	741	780	872	566	456	588	430	506	588
1982	686	577	463	688	328	354	235	226	370	404	327	276
1983	219	283	389	422	363	307	310	275	260	241	210	245
1984	290	225	326	346	270	384	410	390	512	352	345	486
1985	546	486	451	483	694	933	632	504	609	422	494	575
1986	677	617	661	603	516	350	260	247	392	519	373	433
1987	474	520	708	817	871	921	675	539	646	441	533	620
1988	699	677	787	801	822	997	746	636	638	400	532	644
1989	746	774	775	804	991	946	721	602	568	416	514	637
1990	638	664	768	735	827	1,014	744	653	609	562	625	624
1991	763	796	813	947	1,076	973	770	651	581	540	594	628
Avg	583	576	635	675	681	722	547	464	524	447	464	531
W/AN/BN	545	523	552	561	434	412	345	312	400	391	342	416
D/C	612	617	699	765	873	962	703	582	620	491	559	620

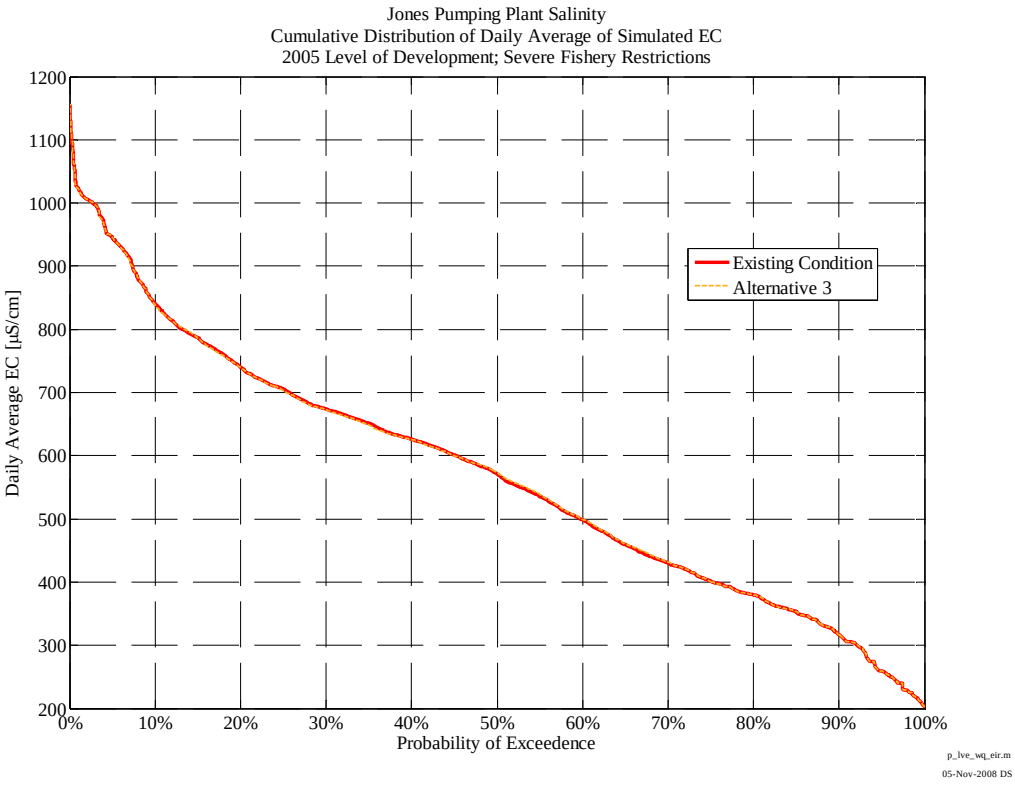
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.8%	-1.2%
1977	-0.6%	0.0%	-2.1%	-0.2%	-0.1%	0.1%	0.5%	0.1%	0.6%	0.8%	0.5%	0.2%
1978	0.3%	0.5%	0.3%	0.1%	0.0%	0.1%	0.1%	-0.1%	0.0%	-1.1%	-1.1%	3.2%
1979	7.9%	3.2%	0.0%	-0.8%	-0.4%	-0.4%	0.0%	-0.1%	0.0%	0.1%	0.4%	0.4%
1980	-0.7%	-1.9%	-0.3%	0.1%	0.2%	0.1%	-0.1%	0.0%	0.0%	0.1%	0.2%	1.3%
1981	1.2%	1.5%	0.8%	0.4%	0.1%	0.0%	-0.1%	0.0%	-0.4%	-0.7%	0.0%	-0.6%
1982	-0.3%	-0.1%	-0.2%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.1%	-1.2%	0.0%	0.0%	-0.2%	0.2%	0.1%	0.2%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.5%	0.1%	-0.1%	0.1%
1986	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.2%	0.0%	0.0%	-0.2%	0.5%	0.4%
1987	0.2%	-0.3%	-1.2%	0.0%	-0.1%	0.0%	0.0%	0.1%	0.8%	1.5%	1.0%	0.9%
1988	1.0%	0.5%	1.0%	1.2%	0.2%	0.0%	0.1%	0.3%	0.6%	1.7%	1.3%	0.5%
1989	-0.1%	-0.8%	-0.5%	-0.7%	-0.9%	0.0%	0.1%	0.9%	0.9%	0.2%	-0.1%	0.1%
1990	-4.2%	-3.2%	-0.8%	1.3%	0.3%	0.0%	0.2%	0.1%	1.0%	0.6%	-1.0%	-3.7%
1991	-0.6%	1.4%	-2.0%	-0.7%	0.0%	0.0%	0.0%	-0.1%	0.3%	-0.3%	-0.3%	-1.1%
Avg	0.3%	0.0%	-0.3%	0.1%	0.0%	-0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%
W/AN/BN	1.0%	0.2%	0.0%	-0.1%	0.0%	-0.2%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.8%
D/C	-0.3%	-0.1%	-0.5%	0.1%	-0.1%	0.0%	0.1%	0.2%	0.4%	0.3%	0.1%	-0.5%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
750
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.05%
-0.03%
-0.08%
0.07%
0.08%
0.20%
0.13%
0.04%
0.04%
0.26%
0.05%
-0.31%
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1200
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

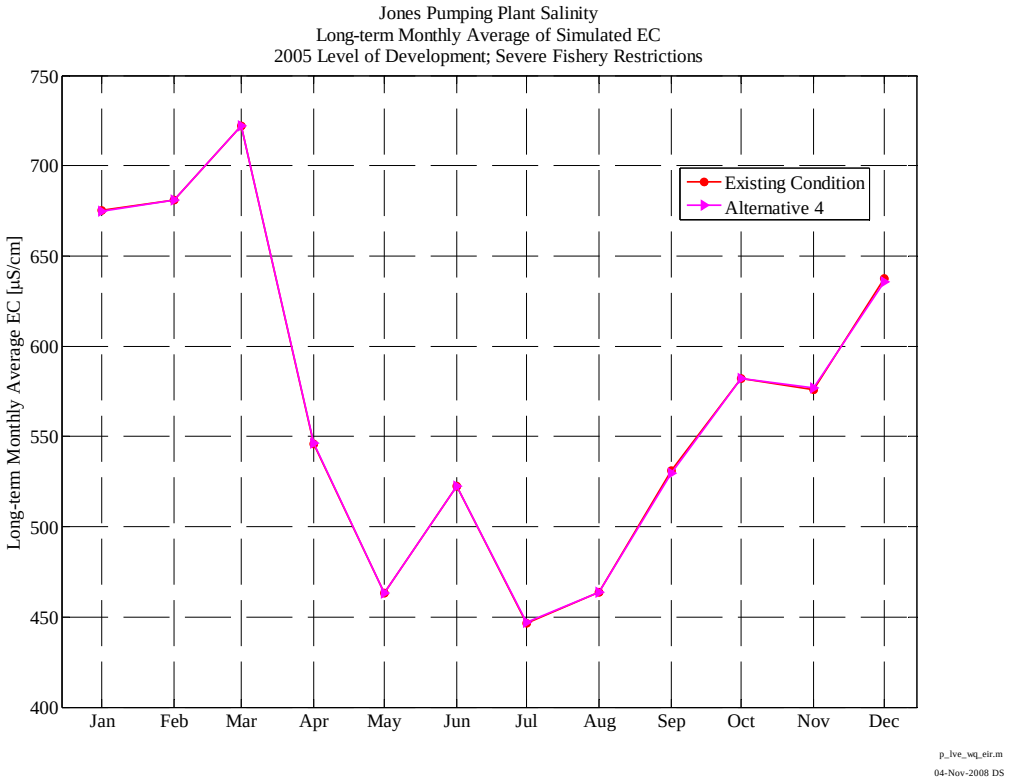
Alternative 4

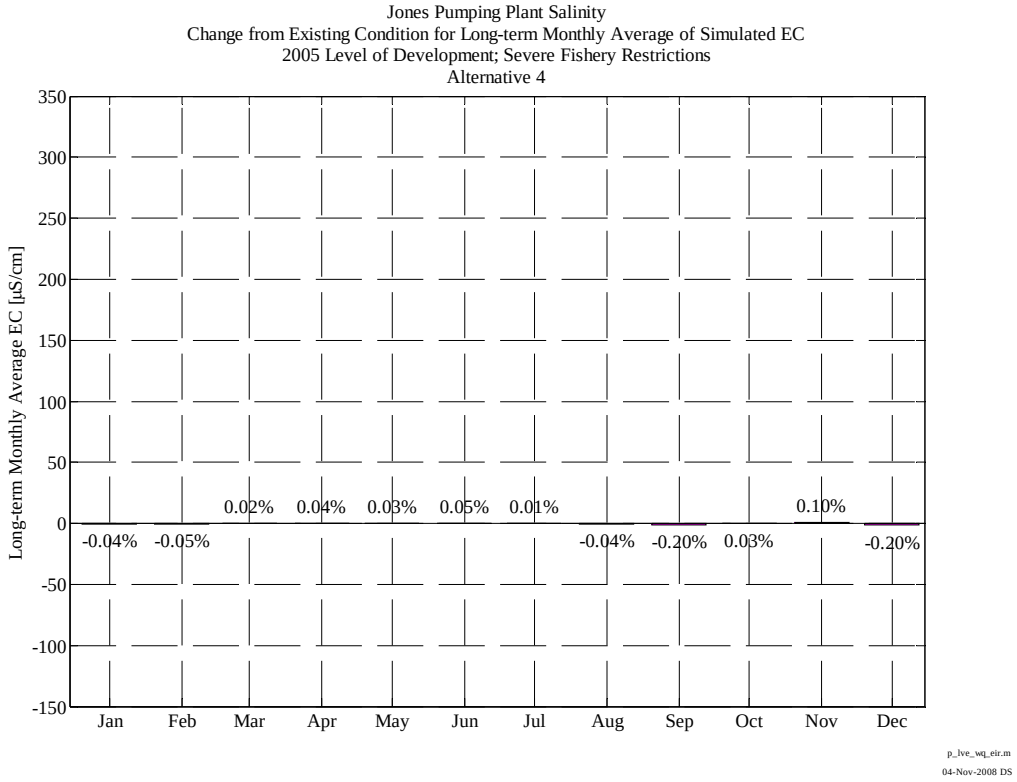
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

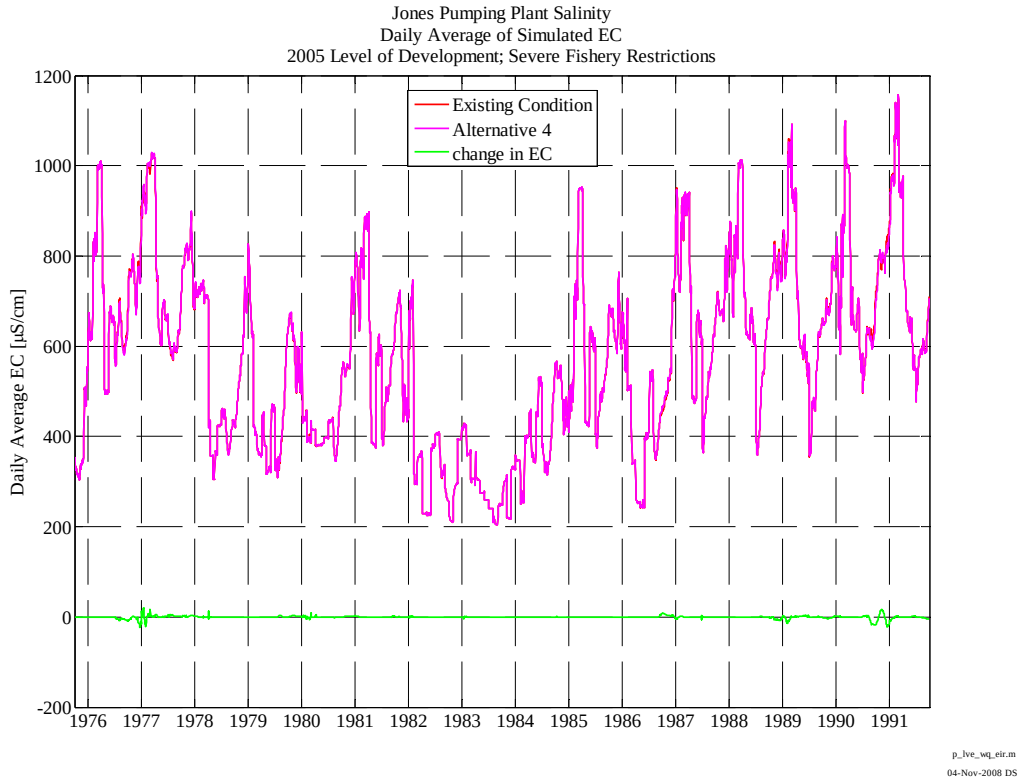
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	324	337	500	632	814	988	692	555	663	609	638	612
1977	759	735	779	924	986	1,018	779	639	672	601	593	649
1978	785	813	778	718	730	711	408	335	421	450	378	423
1979	472	573	711	705	428	364	412	329	447	342	397	566
1980	657	568	542	448	399	414	383	383	397	433	367	462
1981	549	561	713	739	779	872	566	456	590	432	506	593
1982	689	578	464	687	328	354	235	226	370	405	327	275
1983	218	283	389	423	362	307	310	275	260	241	210	246
1984	290	225	326	346	270	389	410	390	513	352	345	485
1985	546	486	451	483	694	933	632	503	612	422	495	575
1986	676	616	661	603	517	350	260	247	392	519	371	435
1987	480	525	717	815	872	922	675	539	641	434	528	614
1988	692	674	779	791	821	997	745	634	635	393	526	640
1989	746	775	774	808	992	946	721	599	566	415	515	636
1990	664	683	774	727	824	1,014	743	652	603	560	628	631
1991	764	795	815	948	1,076	974	771	651	580	541	595	632
Avg	582	577	636	675	681	722	546	463	523	447	464	530
W/AN/BN	541	522	553	561	433	413	345	312	400	392	342	413
D/C	614	619	700	763	873	963	703	581	618	490	558	620

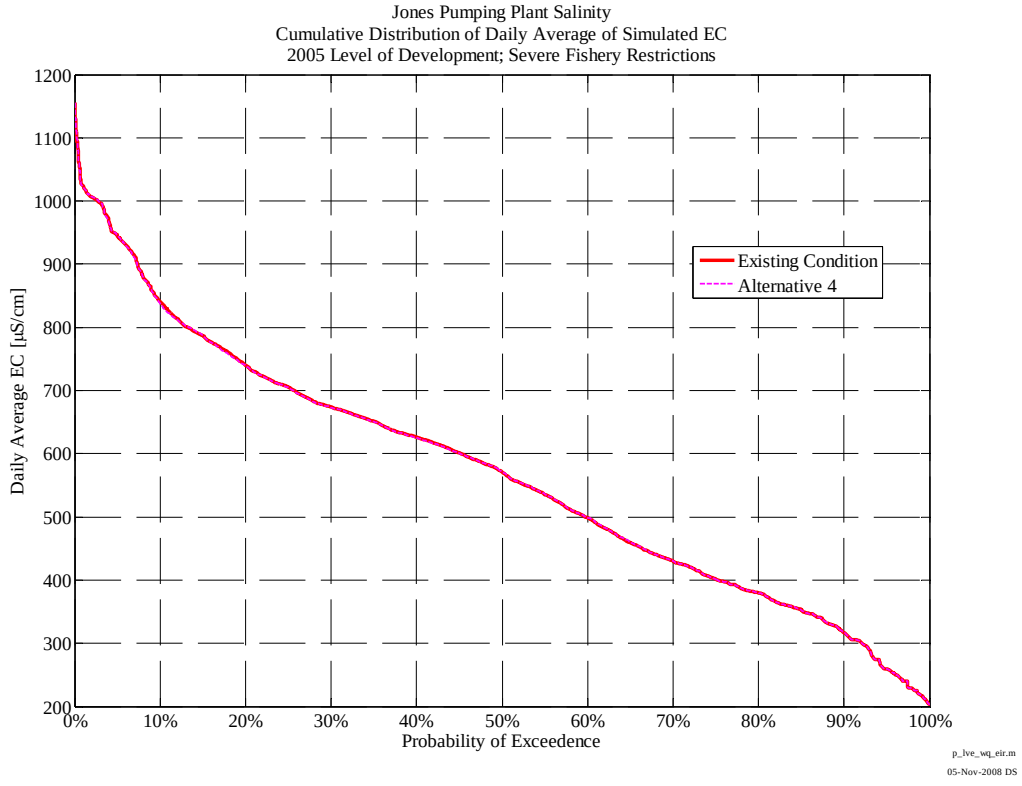
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.8%	-1.0%
1977	-0.6%	0.0%	-1.6%	0.0%	0.1%	0.2%	0.4%	0.0%	0.1%	0.6%	0.4%	0.3%
1978	0.2%	0.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%
1980	0.2%	0.4%	0.2%	-0.1%	-0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	-0.2%	-0.1%
1981	0.1%	0.2%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1982	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.7%
1987	1.5%	0.6%	0.2%	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%
1989	-0.2%	-0.7%	-0.7%	-0.3%	-0.7%	0.0%	0.1%	0.4%	0.4%	0.1%	0.1%	0.0%
1990	-0.3%	-0.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	-0.5%	-2.6%
1991	-0.5%	1.4%	-1.8%	-0.6%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	-0.2%	-0.6%
Avg	0.0%	0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%
W/AN/BN	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
D/C	0.0%	0.1%	-0.4%	-0.1%	-0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	-0.1%	-0.4%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
750
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
-0.04%
-0.05%
0.02%
0.04%
0.03%
0.05%
0.01%
-0.04%
-0.20%
0.03%
0.10%
-0.20%
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1200
1100
1000
900
800
700
600
500
400
300
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

City of Stockton Intake

Existing Condition

City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, μS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	267	265	281	386	477	560	568	480	391	414	402	385
1977	472	458	529	610	601	618	540	521	434	387	377	397
1978	471	510	448	473	609	595	410	324	381	365	288	295
1979	321	389	463	501	424	338	361	319	302	232	263	364
1980	421	368	296	374	351	381	363	355	364	385	273	304
1981	375	390	470	507	460	580	556	381	309	297	337	381
1982	442	375	228	419	298	322	233	217	323	362	265	246
1983	214	269	343	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	335	376	334	324	235	237	324
1985	374	353	236	261	440	625	599	426	319	288	326	371
1986	435	414	402	339	388	308	255	242	345	334	263	298
1987	348	372	499	547	517	605	574	463	326	300	353	396
1988	439	440	518	519	432	522	526	463	337	289	361	410
1989	473	489	495	524	545	497	447	374	279	301	356	408
1990	415	445	499	387	374	507	436	428	359	388	409	410
1991	480	510	532	587	601	632	545	428	343	379	385	402
Avg	389	392	408	445	444	481	442	376	337	325	319	351
W/AN/BN	368	364	353	398	381	365	325	294	327	307	256	294
D/C	405	413	451	481	494	572	532	440	344	338	367	396

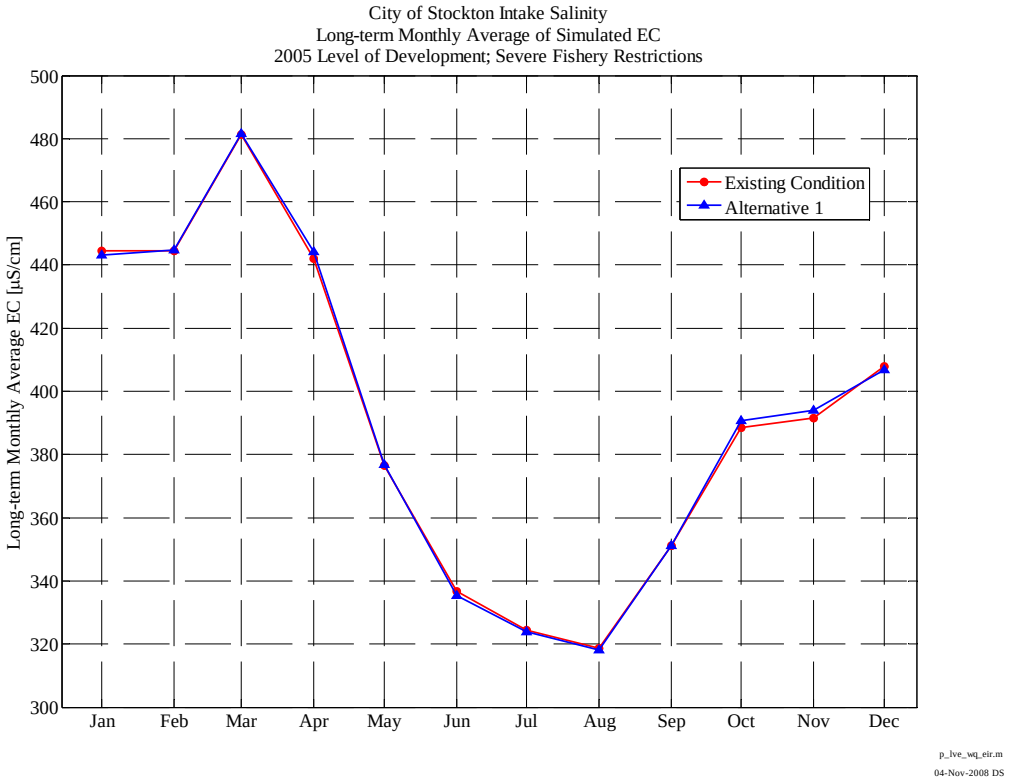
Alternative 1

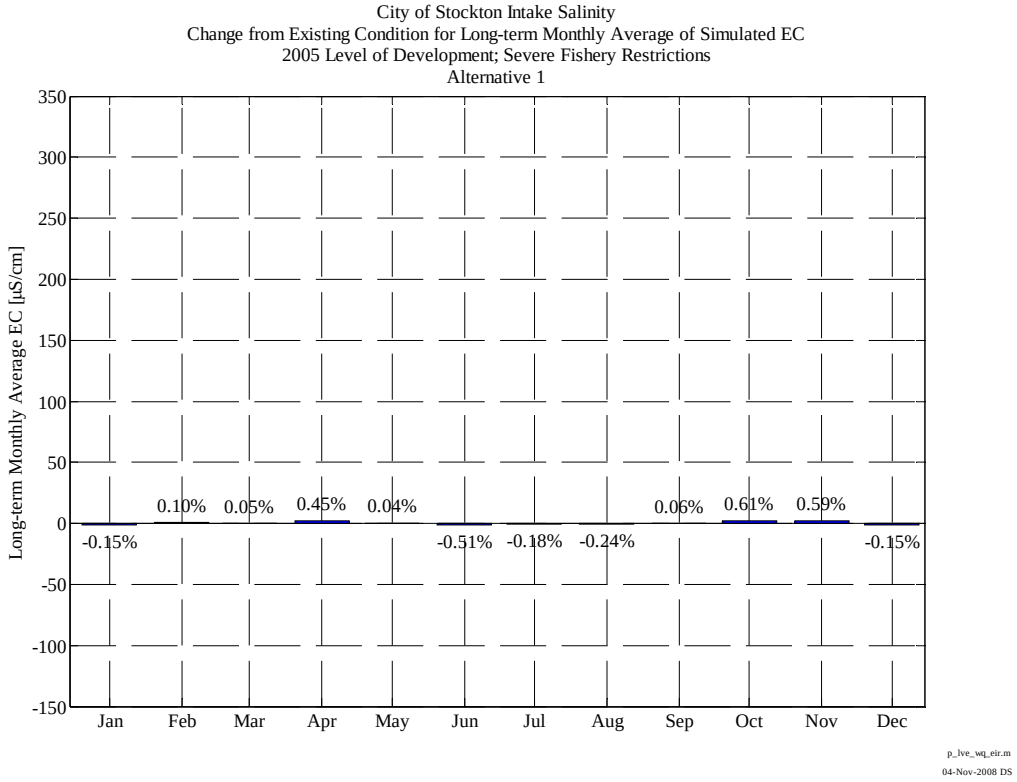
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

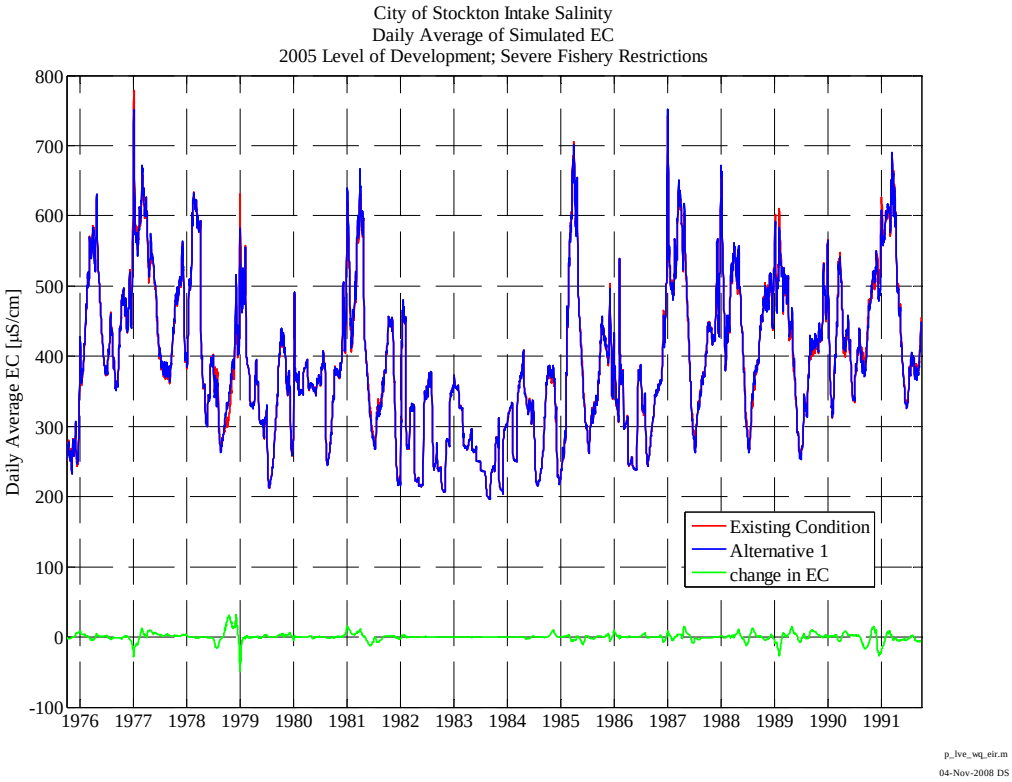
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	264	265	287	390	478	557	569	481	392	414	400	384
1977	471	458	520	597	603	622	548	527	439	389	379	398
1978	473	512	451	473	609	594	410	323	380	354	283	304
1979	347	405	461	492	424	338	362	318	304	232	263	366
1980	424	371	298	374	351	380	364	354	364	385	272	303
1981	376	390	475	517	464	588	559	375	299	293	332	382
1982	443	376	226	421	298	322	233	217	323	362	265	246
1983	214	269	343	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	335	376	332	324	235	237	324
1985	377	359	237	262	441	620	597	421	316	287	324	372
1986	435	415	402	342	388	308	256	242	346	337	263	298
1987	348	372	497	549	516	608	581	469	321	297	351	394
1988	438	439	518	519	433	523	532	465	329	291	368	411
1989	471	486	495	511	536	499	455	380	275	301	356	417
1990	420	446	500	388	376	503	441	433	361	390	405	395
1991	479	520	510	578	606	632	541	424	339	378	383	396
Avg	391	394	407	443	445	482	444	377	335	324	318	351
W/AN/BN	372	367	353	397	381	365	326	293	328	306	256	296
D/C	405	415	449	479	495	573	536	442	341	338	367	394

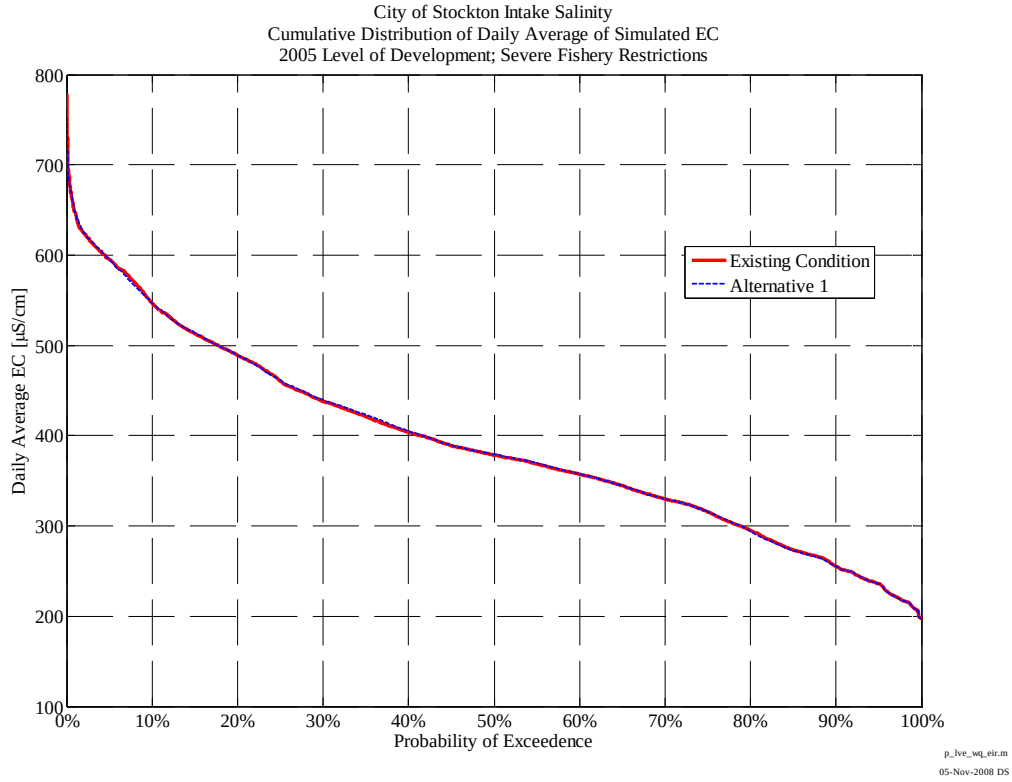
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.8%	0.0%	2.1%	1.1%	0.3%	-0.5%	0.1%	0.3%	0.2%	-0.1%	-0.4%	-0.3%
1977	-0.2%	0.2%	-1.8%	-2.1%	0.5%	0.7%	1.5%	1.2%	1.0%	0.5%	0.7%	0.5%
1978	0.4%	0.3%	0.7%	0.2%	0.0%	-0.1%	0.0%	-0.1%	-0.2%	-3.1%	-1.8%	3.0%
1979	8.1%	4.1%	-0.4%	-1.8%	0.0%	-0.1%	0.1%	-0.3%	0.5%	0.3%	-0.1%	0.5%
1980	0.7%	0.7%	0.7%	0.1%	0.0%	0.0%	0.2%	-0.3%	0.1%	0.0%	-0.2%	-0.2%
1981	0.0%	0.1%	1.1%	2.0%	0.9%	1.3%	0.7%	-1.5%	-3.1%	-1.4%	-1.4%	0.3%
1982	0.2%	0.1%	-0.8%	0.4%	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.6%	0.0%	0.2%	0.2%	-0.1%
1985	0.9%	1.7%	0.1%	0.2%	0.4%	-0.7%	-0.3%	-1.2%	-0.9%	-0.3%	-0.5%	0.3%
1986	0.1%	0.4%	0.1%	1.0%	0.0%	-0.1%	0.2%	-0.1%	0.1%	1.0%	0.0%	0.1%
1987	0.0%	0.0%	-0.4%	0.3%	-0.3%	0.5%	1.2%	1.3%	-1.5%	-0.8%	-0.7%	-0.3%
1988	-0.3%	-0.1%	0.0%	0.0%	0.2%	0.1%	1.1%	0.4%	-2.5%	0.5%	1.9%	0.2%
1989	-0.4%	-0.5%	0.1%	-2.4%	-1.7%	0.5%	1.8%	1.7%	-1.5%	0.1%	-0.1%	2.1%
1990	1.3%	0.2%	0.2%	0.1%	0.4%	-0.8%	1.0%	1.1%	0.6%	0.4%	-1.1%	-3.6%
1991	-0.2%	2.0%	-4.1%	-1.6%	0.9%	0.1%	-0.6%	-1.0%	-1.1%	-0.2%	-0.5%	-1.5%
Avg	0.6%	0.6%	-0.1%	-0.2%	0.1%	0.0%	0.4%	0.0%	-0.5%	-0.2%	-0.2%	0.1%
W/AN/BN	1.3%	0.8%	0.0%	0.0%	0.0%	-0.1%	0.1%	-0.2%	0.1%	-0.2%	-0.3%	0.5%
D/C	0.0%	0.4%	-0.3%	-0.3%	0.2%	0.1%	0.7%	0.3%	-1.0%	-0.1%	-0.2%	-0.3%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
480
460
440
420
400
380
360
340
320
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.15%
0.10%
0.05%
0.45%
0.04%
-0.51%
-0.18%
-0.24%
0.06%
0.61%
0.59%
-0.15%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
Existing Condition
Alternative 1
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
Existing Condition
Alternative 1
p_lve_wq_eir.m
05-Nov-2008 DS

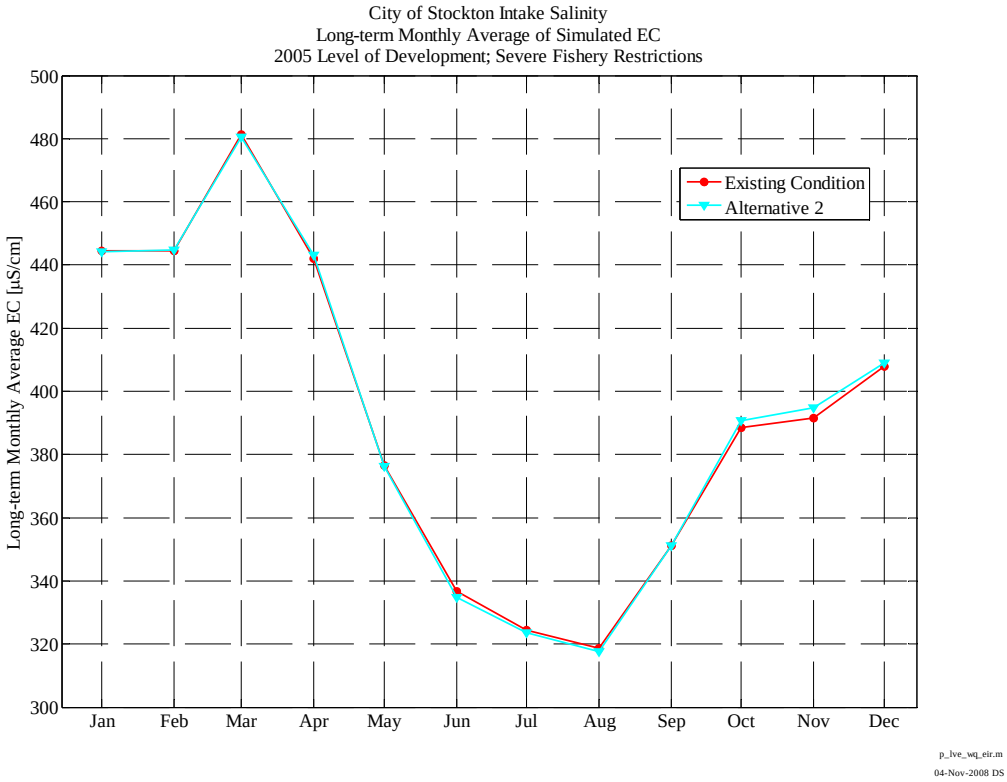
Alternative 2

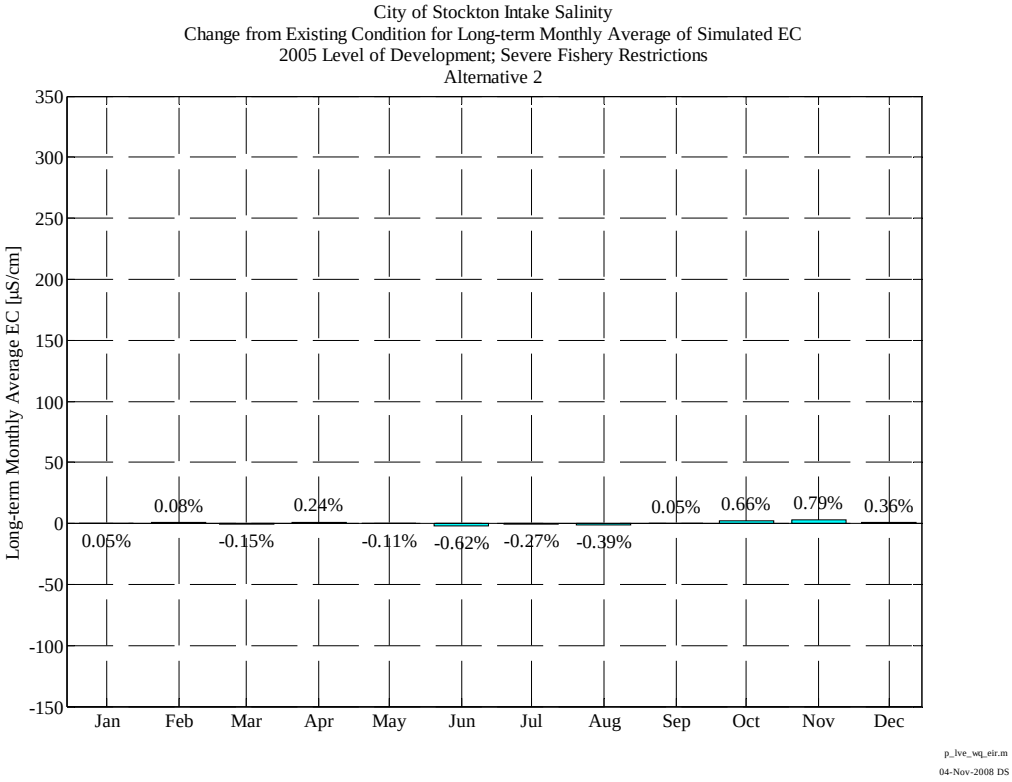
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

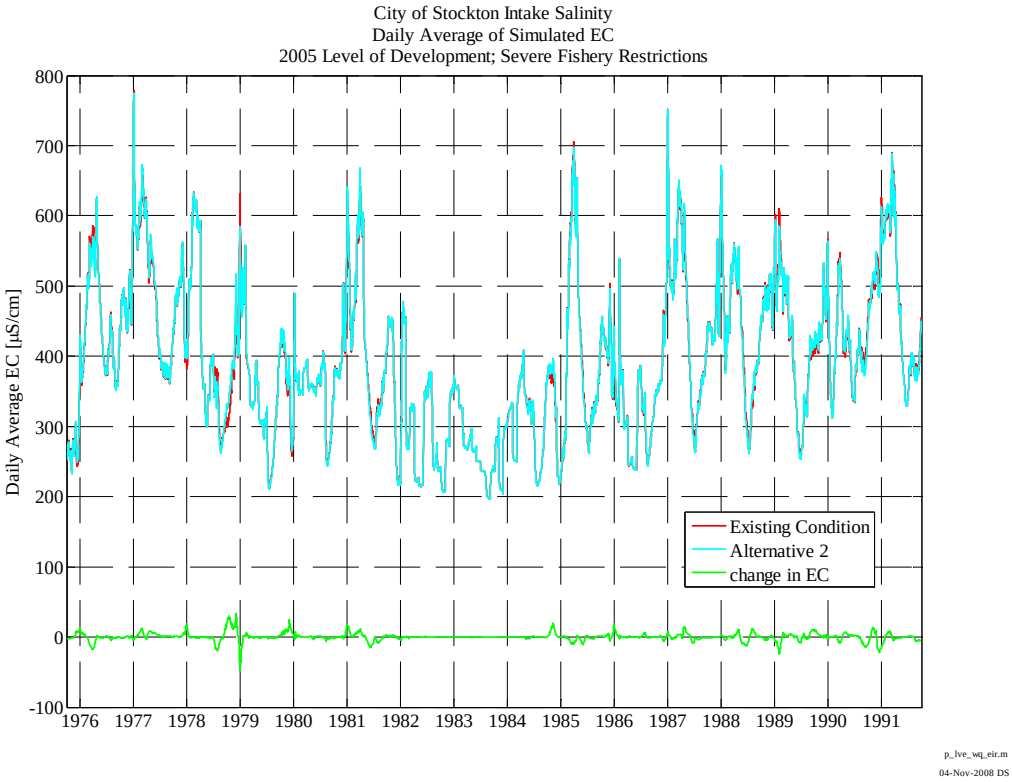
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	265	264	289	392	476	546	562	479	391	413	400	385
1977	471	458	529	609	608	621	546	527	437	388	378	398
1978	472	511	456	475	609	594	410	323	380	352	281	303
1979	345	404	461	491	426	338	361	318	302	230	262	365
1980	426	379	307	375	351	380	363	353	365	384	270	302
1981	375	390	475	516	462	588	559	376	297	293	332	382
1982	443	377	226	418	298	322	233	217	323	362	265	246
1983	214	269	343	357	328	275	280	269	252	237	207	229
1984	269	222	290	322	266	335	376	332	324	235	237	324
1985	380	364	237	262	438	616	596	421	316	287	324	373
1986	436	416	404	345	388	308	256	242	345	337	263	297
1987	348	372	497	548	516	608	581	469	321	297	351	394
1988	438	439	518	518	431	523	532	460	326	290	368	411
1989	471	487	496	514	537	499	451	375	274	301	356	417
1990	422	447	499	387	375	501	440	432	361	390	404	397
1991	479	518	514	581	607	632	542	427	343	380	383	398
Avg	391	395	409	444	445	480	443	376	335	324	318	351
W/AN/BN	372	368	355	398	381	365	326	293	327	306	255	295
D/C	405	415	451	481	495	570	534	441	341	338	366	395

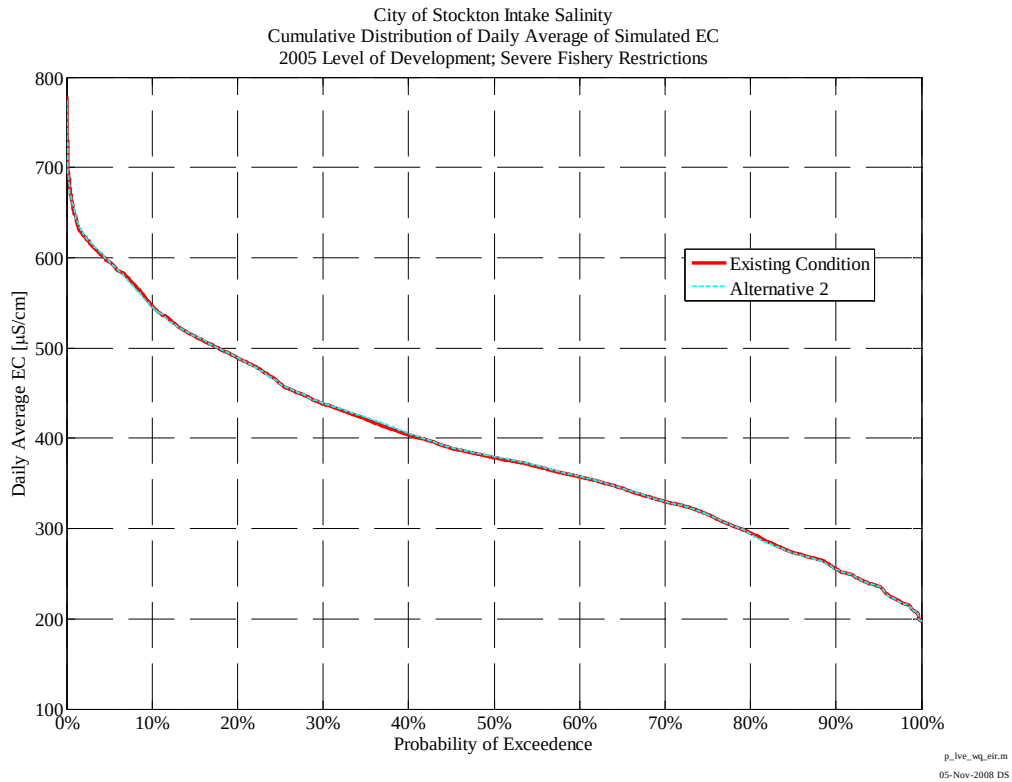
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.7%	-0.2%	3.0%	1.5%	0.0%	-2.4%	-1.2%	-0.1%	0.1%	-0.2%	-0.4%	-0.1%
1977	-0.2%	0.2%	-0.1%	0.0%	1.3%	0.4%	1.1%	1.1%	0.7%	0.2%	0.4%	0.2%
1978	0.2%	0.2%	1.8%	0.6%	-0.1%	-0.1%	0.0%	-0.2%	-0.2%	-3.5%	-2.5%	2.7%
1979	7.6%	4.0%	-0.5%	-2.0%	0.7%	-0.1%	-0.1%	-0.4%	0.1%	-0.6%	-0.4%	0.3%
1980	1.1%	2.9%	3.7%	0.3%	0.2%	0.0%	0.1%	-0.5%	0.2%	-0.1%	-1.0%	-0.5%
1981	-0.2%	0.0%	1.1%	1.7%	0.5%	1.3%	0.6%	-1.4%	-3.9%	-1.4%	-1.4%	0.4%
1982	0.2%	0.4%	-0.8%	-0.2%	-0.1%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%
1983	-0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.6%	0.0%	0.2%	0.2%	-0.1%
1985	1.7%	3.3%	0.1%	0.2%	-0.4%	-1.3%	-0.5%	-1.2%	-0.9%	-0.3%	-0.4%	0.4%
1986	0.2%	0.4%	0.7%	1.7%	0.0%	-0.1%	0.2%	-0.1%	-0.1%	1.0%	0.0%	-0.2%
1987	-0.1%	0.0%	-0.4%	0.3%	-0.2%	0.5%	1.2%	1.3%	-1.5%	-0.8%	-0.7%	-0.3%
1988	-0.3%	-0.1%	0.0%	-0.1%	-0.3%	0.0%	1.1%	-0.7%	-3.2%	0.4%	1.9%	0.1%
1989	-0.4%	-0.5%	0.1%	-1.9%	-1.5%	0.5%	0.8%	0.3%	-1.9%	0.1%	-0.2%	2.1%
1990	1.6%	0.4%	0.1%	-0.1%	0.3%	-1.1%	0.8%	1.0%	0.5%	0.4%	-1.2%	-3.1%
1991	-0.2%	1.7%	-3.3%	-1.1%	1.0%	0.0%	-0.4%	-0.3%	0.1%	0.3%	-0.6%	-1.2%
Avg	0.7%	0.8%	0.4%	0.0%	0.1%	-0.2%	0.2%	-0.1%	-0.6%	-0.3%	-0.4%	0.0%
W/AN/BN	1.3%	1.1%	0.7%	0.0%	0.1%	-0.1%	0.1%	-0.3%	0.0%	-0.4%	-0.5%	0.3%
D/C	0.1%	0.5%	0.1%	0.1%	0.1%	-0.2%	0.4%	0.0%	-1.1%	-0.1%	-0.3%	-0.2%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
480
460
440
420
400
380
360
340
320
300
Existing Condition
Alternative 2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.05%
0.08%
-0.15%
0.24%
-0.11%
-0.62%
-0.27%
-0.39%
0.05%
0.66%
0.79%
0.36%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
Existing Condition
Alternative 2
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
Existing Condition
Alternative 2
p_lve_wq_eir.m
05-Nov-2008 DS

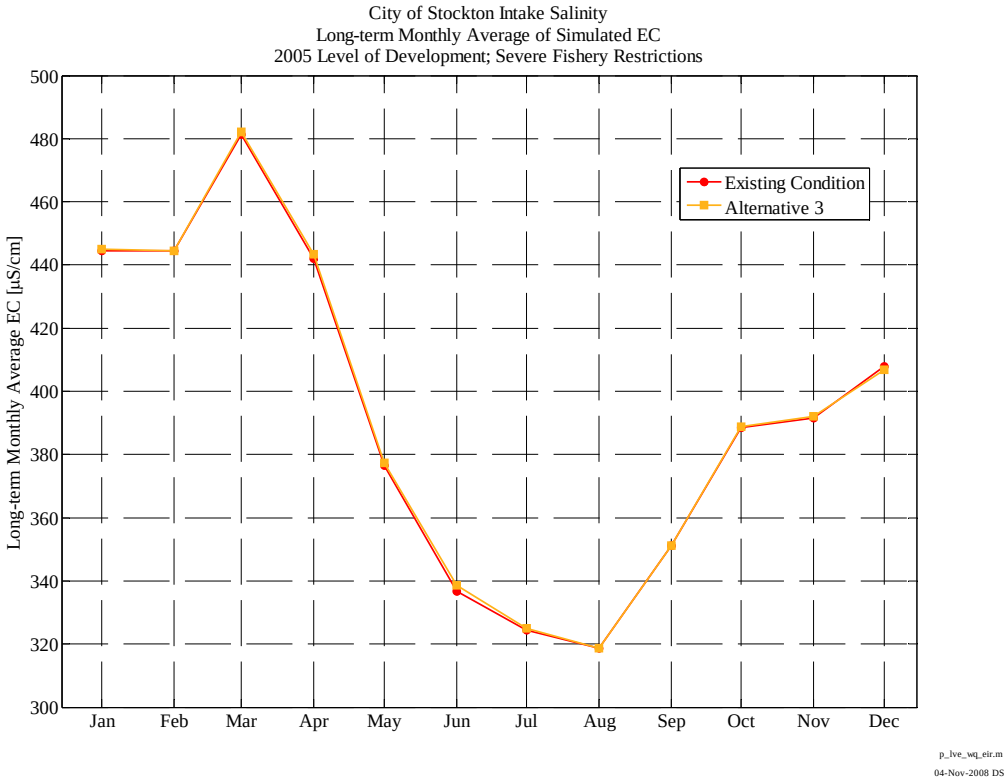
Alternative 3

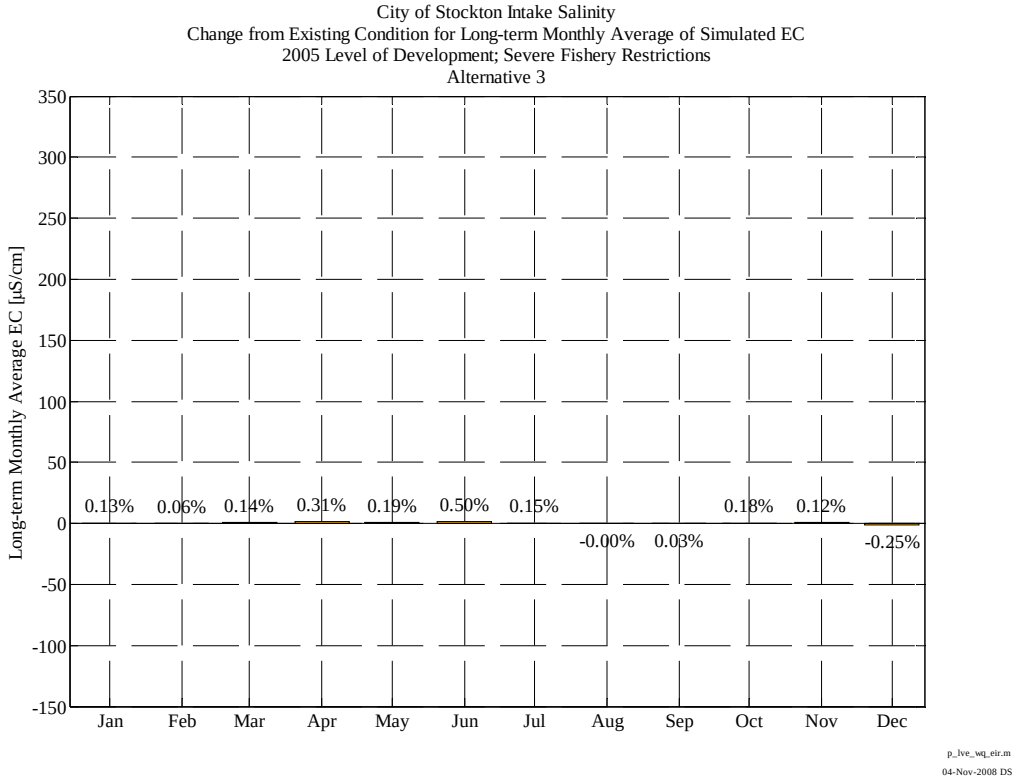
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

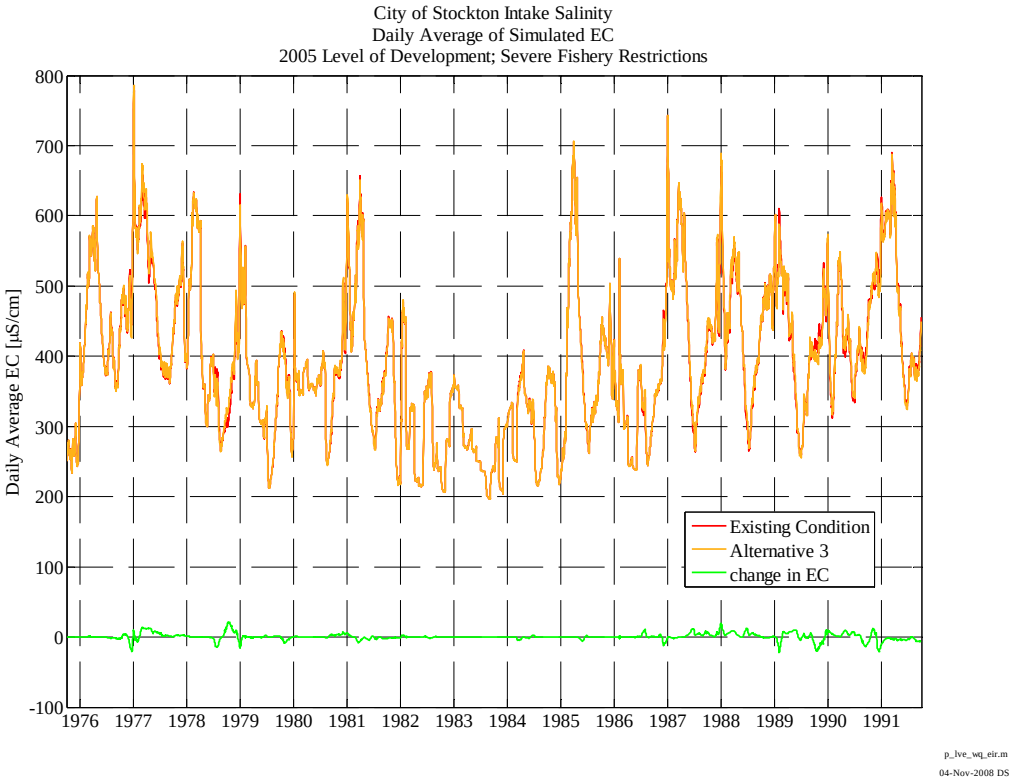
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	267	265	281	386	477	560	569	480	391	413	400	383
1977	473	459	519	608	606	631	552	529	440	389	379	397
1978	473	513	450	473	609	595	410	324	380	355	284	302
1979	340	398	460	498	424	338	361	318	303	232	264	365
1980	418	363	295	375	351	380	363	354	364	385	272	307
1981	378	393	475	510	460	574	553	378	308	295	336	378
1982	441	375	227	421	298	322	233	217	323	361	265	246
1983	214	269	343	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	332	375	333	326	235	237	325
1985	374	352	236	261	440	625	599	422	319	288	326	372
1986	435	414	401	339	388	308	255	242	346	340	264	299
1987	348	373	492	547	516	604	574	465	335	304	357	401
1988	443	441	527	527	437	530	531	464	346	293	365	412
1989	472	488	495	518	538	502	454	383	279	302	357	407
1990	398	435	501	394	377	508	443	433	366	392	407	398
1991	479	517	516	581	599	629	541	425	339	377	382	396
Avg	389	392	407	445	445	482	443	377	339	325	319	351
W/AN/BN	370	365	352	398	381	364	325	294	328	307	256	296
D/C	404	414	449	482	494	574	535	442	347	339	368	394

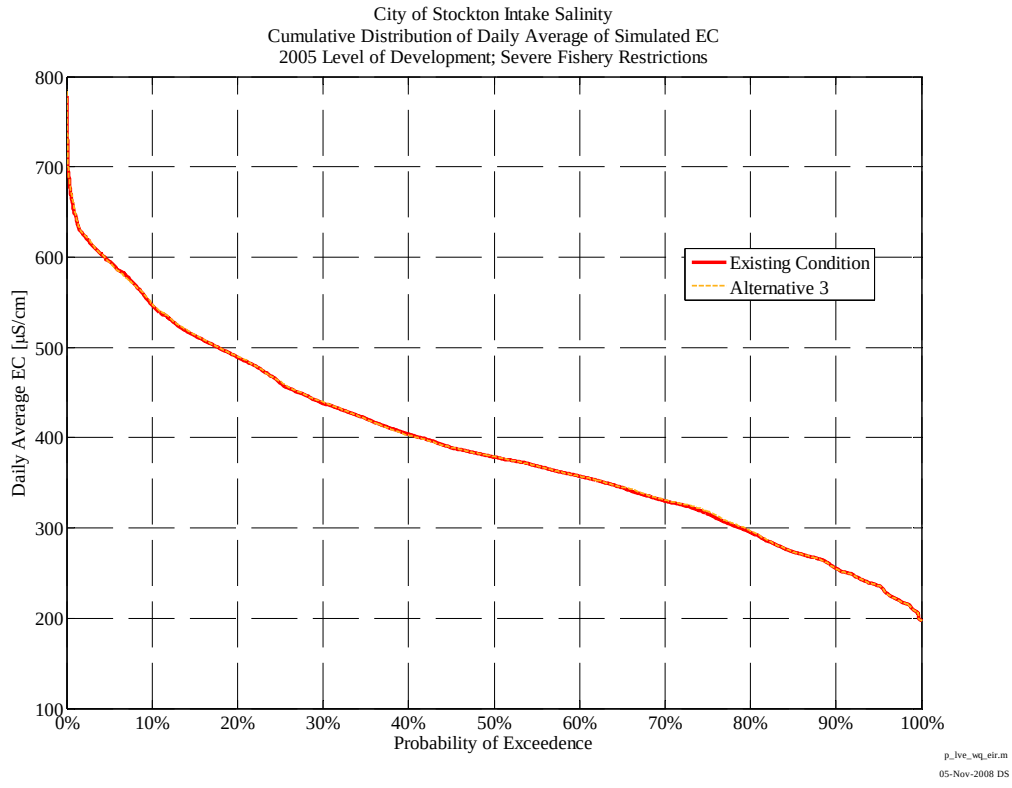
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	-0.3%	-0.3%	-0.5%
1977	0.2%	0.4%	-2.0%	-0.2%	0.8%	2.0%	2.3%	1.5%	1.4%	0.6%	0.5%	0.2%
1978	0.4%	0.5%	0.5%	0.2%	0.0%	0.0%	0.1%	0.0%	-0.2%	-2.8%	-1.4%	2.3%
1979	6.0%	2.3%	-0.5%	-0.5%	0.1%	-0.1%	0.0%	-0.1%	0.4%	0.2%	0.3%	0.4%
1980	-0.8%	-1.5%	-0.4%	0.3%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.1%	-0.2%	1.0%
1981	0.7%	0.9%	1.1%	0.6%	0.1%	-1.1%	-0.5%	-0.7%	-0.2%	-0.7%	-0.2%	-0.7%
1982	-0.3%	-0.2%	-0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.4%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-1.0%	-0.2%	-0.3%	0.4%	0.2%	0.0%	0.1%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.1%	0.1%	-0.1%	0.1%
1986	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.2%	0.2%	1.9%	0.4%	0.2%
1987	0.1%	0.2%	-1.5%	0.0%	-0.3%	-0.1%	0.0%	0.6%	2.9%	1.4%	1.0%	1.4%
1988	0.8%	0.3%	1.8%	1.7%	1.0%	1.5%	0.9%	0.1%	2.6%	1.5%	1.1%	0.4%
1989	-0.1%	-0.2%	0.1%	-1.0%	-1.3%	1.1%	1.5%	2.6%	-0.2%	0.3%	0.1%	-0.2%
1990	-4.1%	-2.2%	0.5%	1.8%	0.7%	0.2%	1.5%	1.3%	1.8%	0.8%	-0.5%	-2.8%
1991	-0.1%	1.4%	-3.1%	-1.0%	-0.3%	-0.4%	-0.6%	-0.9%	-1.2%	-0.5%	-0.8%	-1.6%
Avg	0.2%	0.1%	-0.3%	0.1%	0.1%	0.1%	0.3%	0.2%	0.5%	0.1%	0.0%	0.0%
W/AN/BN	0.7%	0.1%	-0.1%	0.1%	0.0%	-0.2%	0.0%	-0.1%	0.1%	-0.1%	-0.1%	0.6%
D/C	-0.3%	0.1%	-0.3%	0.2%	0.1%	0.4%	0.6%	0.4%	0.8%	0.4%	0.1%	-0.4%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
480
460
440
420
400
380
360
340
320
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.13%
0.06%
0.14%
0.31%
0.19%
0.50%
0.15%
-0.00%
0.03%
0.18%
0.12%
-0.25%
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
Existing Condition
Alternative 3
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
Existing Condition
Alternative 3
p_lve_wq_eir.m
05-Nov-2008 DS

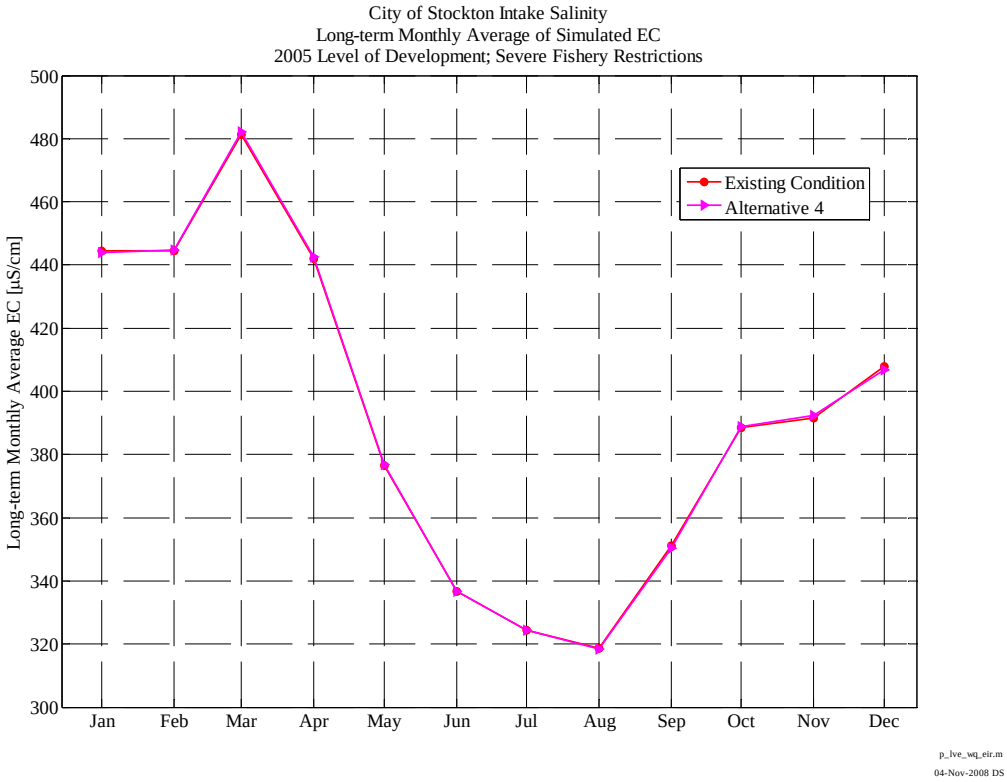
Alternative 4

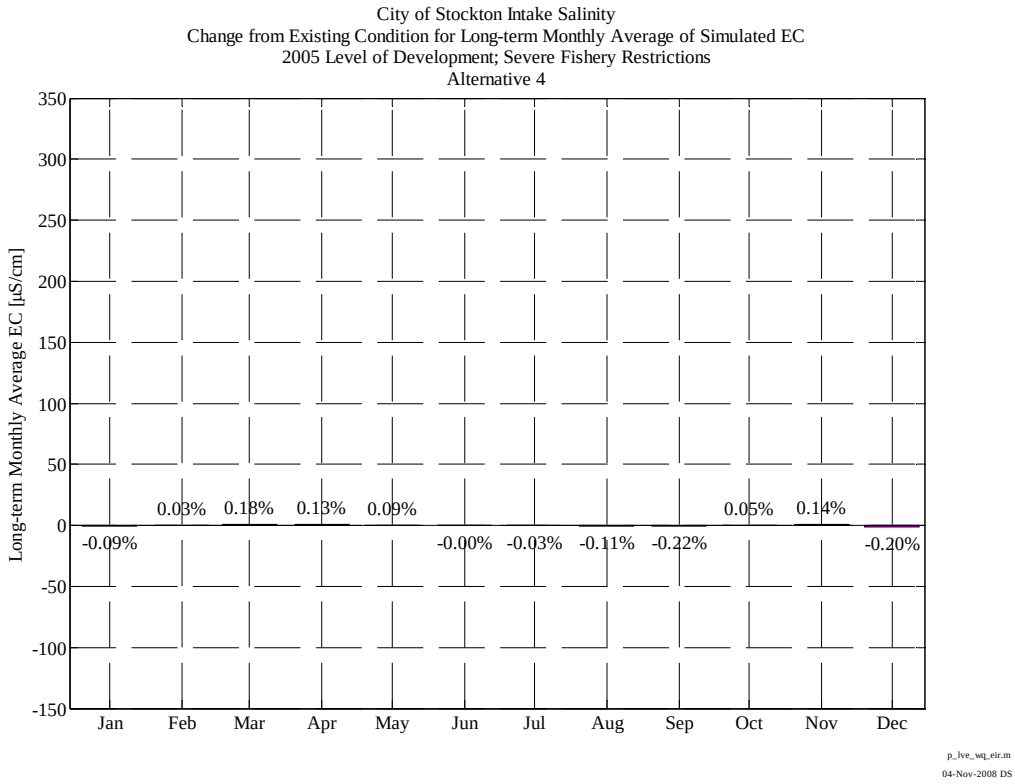
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

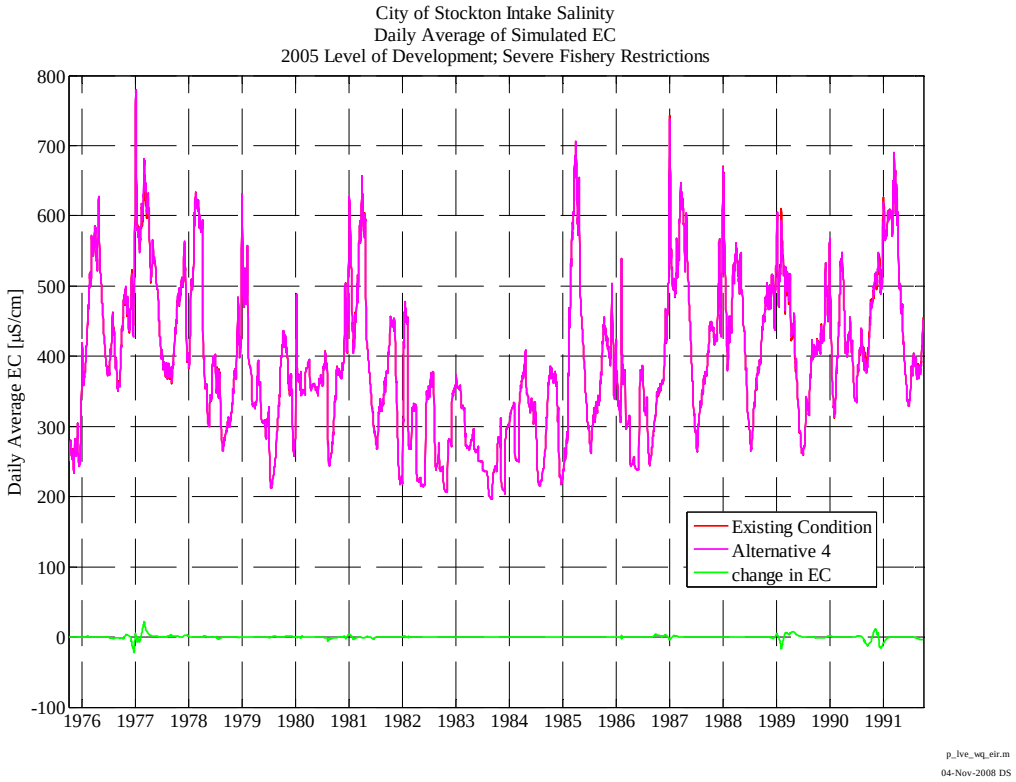
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	267	265	281	386	477	560	569	480	391	413	400	384
1977	473	459	518	607	610	629	543	523	435	387	378	398
1978	473	511	450	473	609	595	410	324	381	364	288	296
1979	321	389	463	501	424	338	361	319	302	232	264	364
1980	422	369	297	373	351	380	363	355	364	384	270	303
1981	375	390	471	508	458	580	555	381	307	297	337	381
1982	442	375	228	420	298	322	233	217	323	362	265	246
1983	214	269	343	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	335	376	334	324	235	237	324
1985	374	353	236	261	440	625	599	426	319	288	326	371
1986	435	414	402	339	388	308	255	242	345	334	263	299
1987	351	373	500	546	518	605	574	463	326	300	353	395
1988	439	440	518	518	432	522	526	463	337	289	362	410
1989	473	488	495	522	540	502	454	377	280	301	356	408
1990	414	444	499	388	374	507	436	428	359	389	406	399
1991	479	517	519	583	601	632	545	428	343	378	384	399
Avg	389	392	407	444	445	482	443	377	337	324	318	350
W/AN/BN	368	364	353	398	381	365	326	294	327	307	256	294
D/C	405	414	449	480	494	574	533	441	344	338	367	394

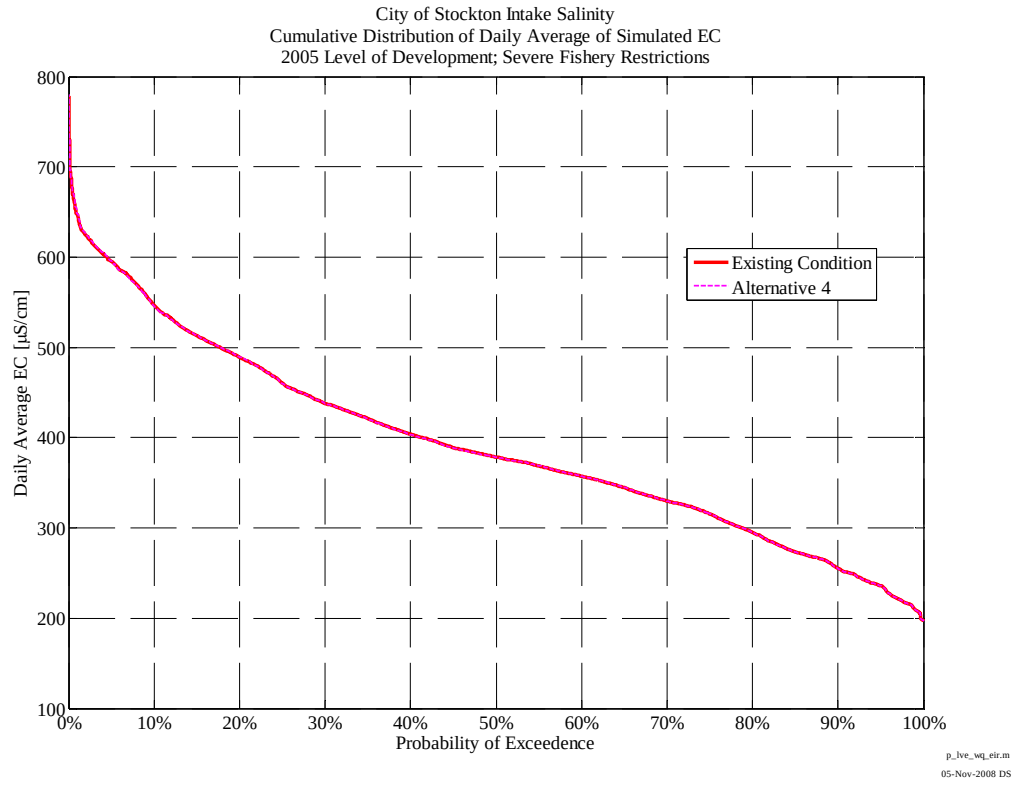
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	-0.2%	-0.3%	-0.4%
1977	0.1%	0.4%	-2.1%	-0.5%	1.6%	1.7%	0.5%	0.2%	0.1%	0.1%	0.4%	0.4%
1978	0.2%	0.1%	0.5%	0.1%	0.0%	0.0%	0.2%	0.1%	0.0%	-0.4%	-0.2%	0.0%
1979	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.3%	0.0%
1980	0.1%	0.3%	0.3%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	-0.1%	-1.0%	-0.4%
1981	-0.1%	0.0%	0.3%	0.2%	-0.4%	0.0%	-0.2%	0.1%	-0.6%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4%
1987	0.8%	0.3%	0.1%	-0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%
1989	0.0%	-0.1%	0.0%	-0.4%	-1.0%	1.1%	1.5%	1.1%	0.4%	0.0%	0.1%	0.0%
1990	-0.3%	-0.2%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	-0.7%	-2.6%
1991	-0.1%	1.4%	-2.4%	-0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.9%
Avg	0.1%	0.1%	-0.2%	-0.1%	0.0%	0.2%	0.1%	0.1%	0.0%	0.0%	-0.1%	-0.2%
W/AN/BN	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%
D/C	0.0%	0.2%	-0.4%	-0.2%	0.1%	0.3%	0.2%	0.2%	0.0%	0.0%	-0.1%	-0.4%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
480
460
440
420
400
380
360
340
320
300
Existing Condition
Alternative 4
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.09%
0.03%
0.18%
0.13%
0.09%
-0.00%
-0.03%
-0.11%
-0.22%
0.05%
0.14%
-0.20%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
Existing Condition
Alternative 4
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
Existing Condition
Alternative 4
p_lve_wq_eir.m
05-Nov-2008 DS

San Joaquin River at Antioch

Existing Condition

San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	892	1,336	2,329	2,614	1,245	320	437	1,629	2,960	4,414	4,181	4,963
1977	6,025	5,090	5,376	3,409	1,875	1,483	1,662	2,458	3,333	3,731	4,203	4,941
1978	5,370	5,132	3,130	431	263	290	283	255	247	522	1,914	3,106
1979	3,857	4,962	4,539	1,105	279	245	245	265	342	1,294	2,931	4,818
1980	5,150	3,518	1,475	292	294	286	268	258	265	518	2,047	4,000
1981	4,431	4,635	4,390	1,123	247	220	264	459	1,243	2,613	3,194	4,426
1982	5,438	1,425	210	242	232	248	222	202	208	409	1,794	584
1983	201	202	242	315	301	263	245	231	226	220	215	195
1984	243	198	231	252	231	209	241	305	513	1,013	2,174	4,240
1985	4,483	1,234	306	591	340	242	324	494	1,291	2,691	3,266	4,728
1986	5,010	4,336	2,755	735	257	274	254	243	330	647	2,073	3,445
1987	3,847	4,493	5,156	3,309	883	261	371	905	1,516	2,476	3,323	4,517
1988	5,141	5,017	4,284	1,076	381	654	757	1,131	1,465	3,065	4,149	4,807
1989	5,567	4,931	4,660	3,835	1,372	261	219	243	1,039	2,309	3,128	4,421
1990	5,065	4,928	4,596	1,403	509	432	594	1,318	2,601	4,228	4,362	4,947
1991	5,420	4,952	5,125	4,232	3,453	747	344	1,106	2,563	4,004	4,112	5,028
Avg	4,134	3,524	3,050	1,560	760	402	421	719	1,259	2,135	2,942	3,948
W/AN/BN	3,610	2,825	1,797	482	265	259	251	251	304	661	1,878	2,913
D/C	4,541	4,069	4,025	2,399	1,145	513	552	1,083	2,001	3,281	3,769	4,753

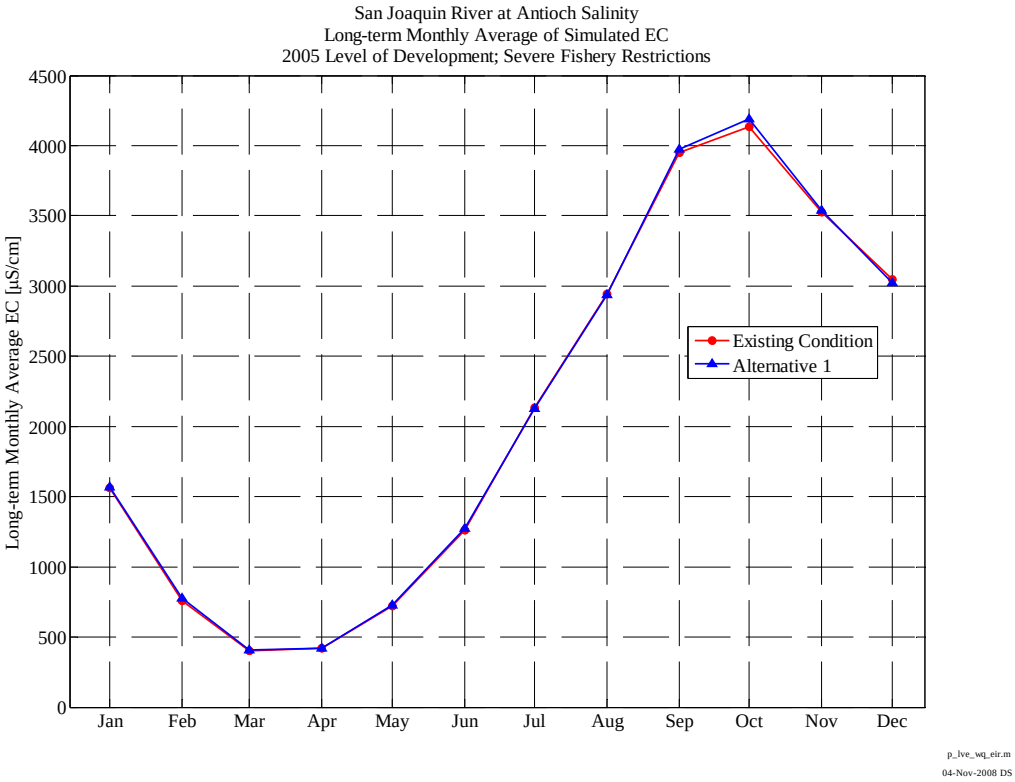
Alternative 1

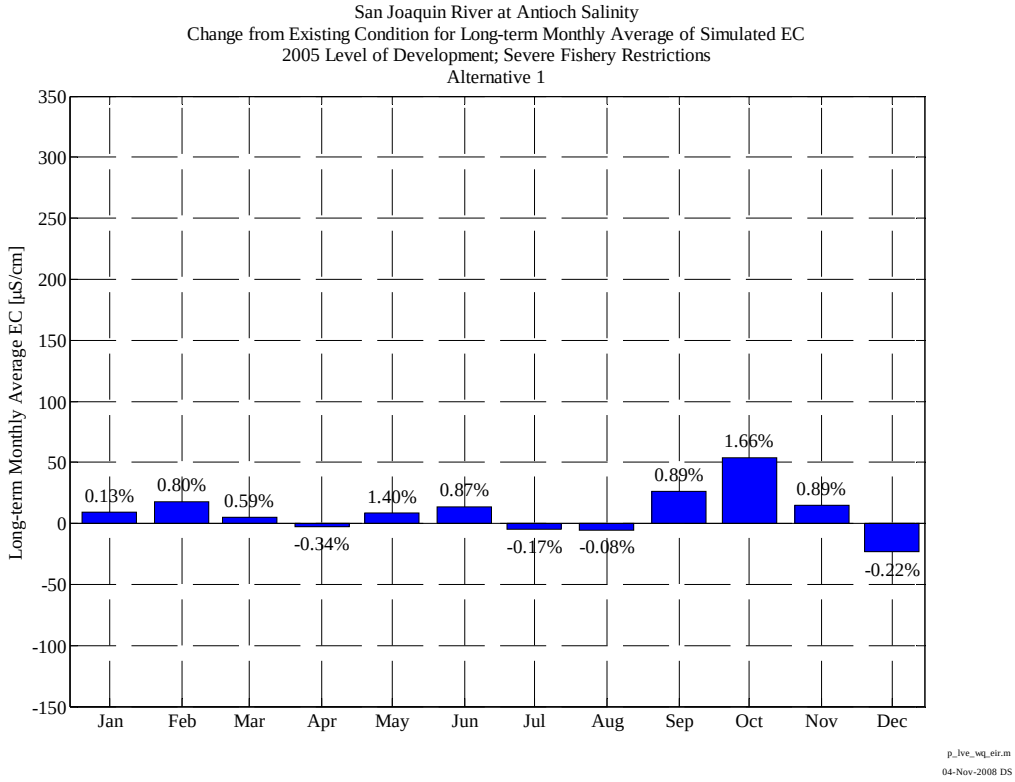
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

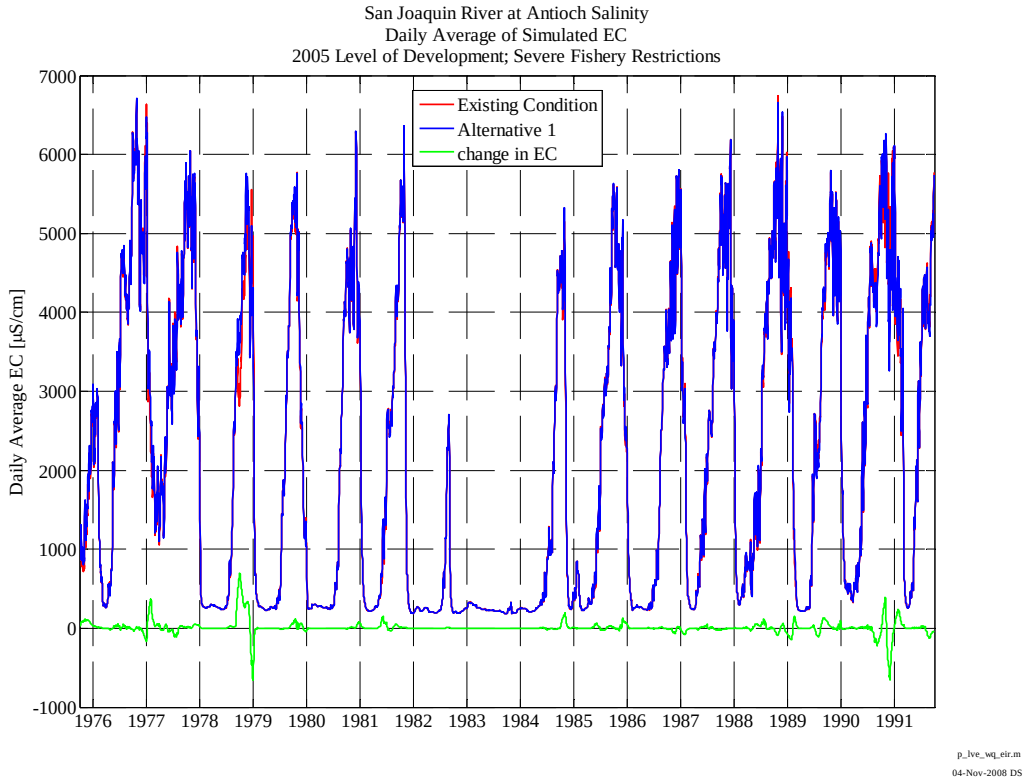
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	962	1,437	2,392	2,636	1,255	322	430	1,632	2,990	4,433	4,199	4,961
1977	6,016	5,085	5,280	3,603	1,999	1,528	1,642	2,468	3,303	3,649	4,216	4,957
1978	5,381	5,161	3,169	435	262	288	283	254	247	539	1,934	3,530
1979	4,311	5,267	4,264	1,021	277	242	244	266	339	1,287	2,932	4,856
1980	5,227	3,556	1,460	289	294	285	268	259	263	515	2,046	3,999
1981	4,434	4,643	4,444	1,144	249	221	265	504	1,333	2,597	3,204	4,462
1982	5,447	1,431	210	243	232	248	222	201	208	409	1,800	587
1983	202	202	241	314	301	263	245	230	225	220	214	195
1984	243	198	231	252	231	209	241	310	511	1,001	2,165	4,236
1985	4,603	1,290	311	595	341	241	321	519	1,322	2,673	3,273	4,752
1986	5,005	4,358	2,828	746	257	272	255	245	328	642	2,083	3,445
1987	3,837	4,445	5,162	3,254	859	259	366	911	1,542	2,481	3,320	4,500
1988	5,125	5,012	4,284	1,080	382	662	746	1,155	1,506	3,129	4,155	4,808
1989	5,504	4,937	4,636	3,714	1,445	269	220	246	1,053	2,250	3,137	4,535
1990	5,102	4,928	4,622	1,399	506	443	591	1,326	2,613	4,230	4,259	4,797
1991	5,606	4,682	4,890	4,389	3,558	760	344	1,110	2,566	4,023	4,037	4,965
Avg	4,188	3,540	3,027	1,570	778	407	418	727	1,272	2,130	2,936	3,974
W/AN/BN	3,688	2,882	1,772	471	265	258	251	252	303	659	1,882	2,978
D/C	4,577	4,051	4,002	2,424	1,177	523	547	1,097	2,026	3,274	3,755	4,748

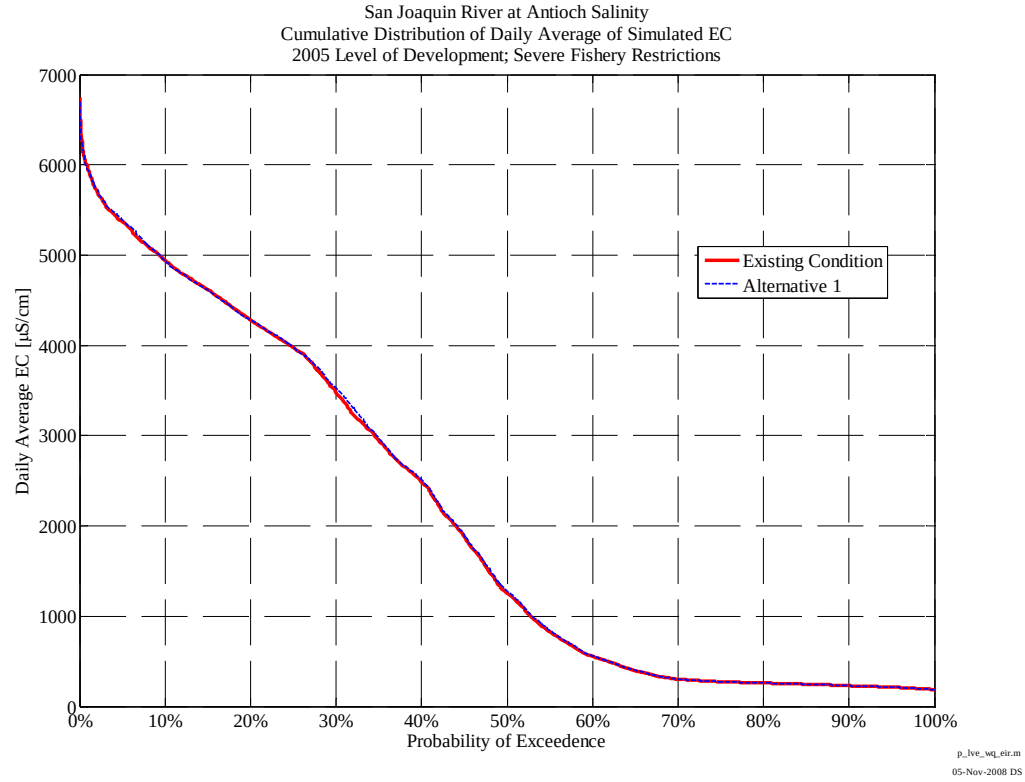
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	7.8%	7.5%	2.7%	0.9%	0.8%	0.7%	-1.6%	0.2%	1.0%	0.4%	0.4%	-0.1%
1977	-0.2%	-0.1%	-1.8%	5.7%	6.6%	3.0%	-1.2%	0.4%	-0.9%	-2.2%	0.3%	0.3%
1978	0.2%	0.6%	1.3%	0.8%	-0.1%	-0.5%	0.2%	-0.1%	-0.2%	3.3%	1.1%	13.7%
1979	11.8%	6.1%	-6.1%	-7.6%	-0.7%	-0.9%	-0.3%	0.4%	-0.7%	-0.6%	0.0%	0.8%
1980	1.5%	1.1%	-1.0%	-1.1%	0.2%	-0.1%	0.0%	0.1%	-0.6%	-0.5%	-0.1%	0.0%
1981	0.1%	0.2%	1.2%	1.9%	0.5%	0.5%	0.6%	9.8%	7.2%	-0.6%	0.3%	0.8%
1982	0.2%	0.4%	0.3%	0.4%	0.3%	-0.1%	0.0%	-0.4%	0.0%	0.0%	0.3%	0.5%
1983	0.3%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.2%	-0.3%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	-0.1%	1.7%	-0.3%	-1.2%	-0.4%	-0.1%
1985	2.7%	4.5%	1.6%	0.7%	0.2%	-0.5%	-1.0%	5.1%	2.4%	-0.7%	0.2%	0.5%
1986	-0.1%	0.5%	2.7%	1.5%	0.0%	-0.7%	0.5%	0.9%	-0.5%	-0.9%	0.5%	0.0%
1987	-0.3%	-1.1%	0.1%	-1.7%	-2.8%	-0.5%	-1.2%	0.7%	1.7%	0.2%	-0.1%	-0.4%
1988	-0.3%	-0.1%	0.0%	0.3%	0.1%	1.2%	-1.4%	2.1%	2.8%	2.1%	0.1%	0.0%
1989	-1.1%	0.1%	-0.5%	-3.2%	5.4%	3.3%	0.5%	1.1%	1.3%	-2.5%	0.3%	2.6%
1990	0.7%	0.0%	0.6%	-0.3%	-0.5%	2.6%	-0.6%	0.6%	0.5%	0.1%	-2.4%	-3.0%
1991	3.4%	-5.5%	-4.6%	3.7%	3.0%	1.6%	0.0%	0.4%	0.1%	0.5%	-1.8%	-1.3%
Avg	1.7%	0.9%	-0.2%	0.1%	0.8%	0.6%	-0.3%	1.4%	0.9%	-0.2%	-0.1%	0.9%
W/AN/BN	2.0%	1.2%	-0.4%	-0.9%	-0.1%	-0.3%	0.1%	0.3%	-0.3%	0.0%	0.2%	2.1%
D/C	1.4%	0.6%	-0.1%	0.9%	1.5%	1.3%	-0.7%	2.3%	1.8%	-0.3%	-0.3%	-0.1%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.13%
0.80%
0.59%
-0.34%
1.40%
0.87%
-0.17%
-0.08%
0.89%
1.66%
0.89%
-0.22%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

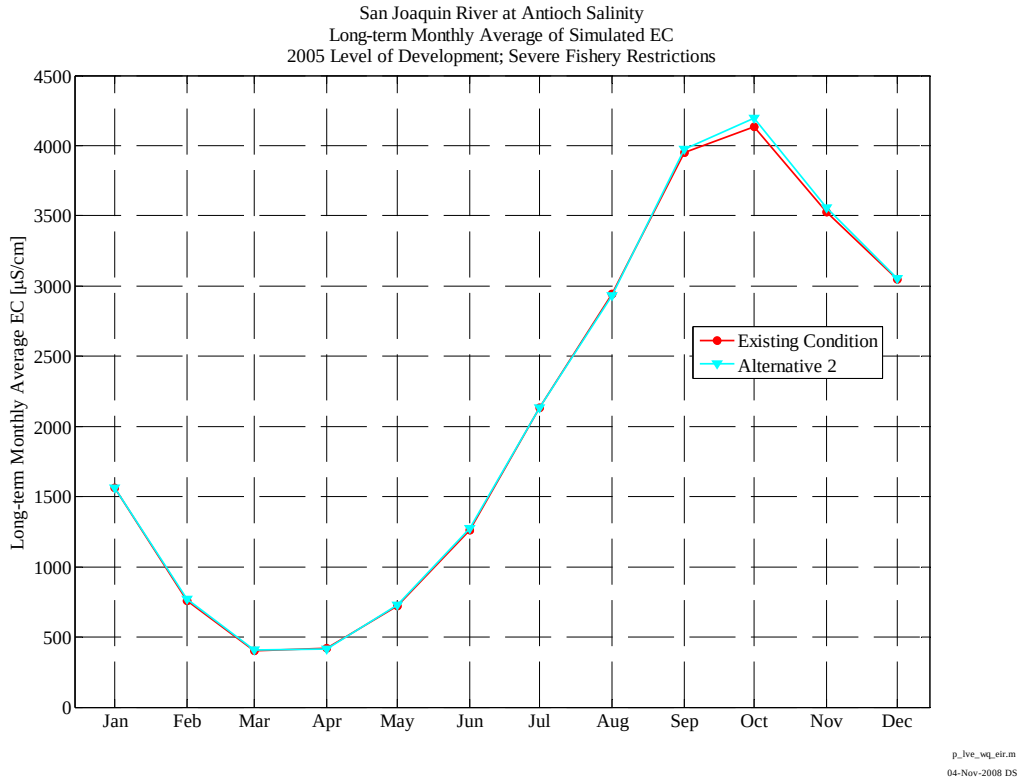
Alternative 2

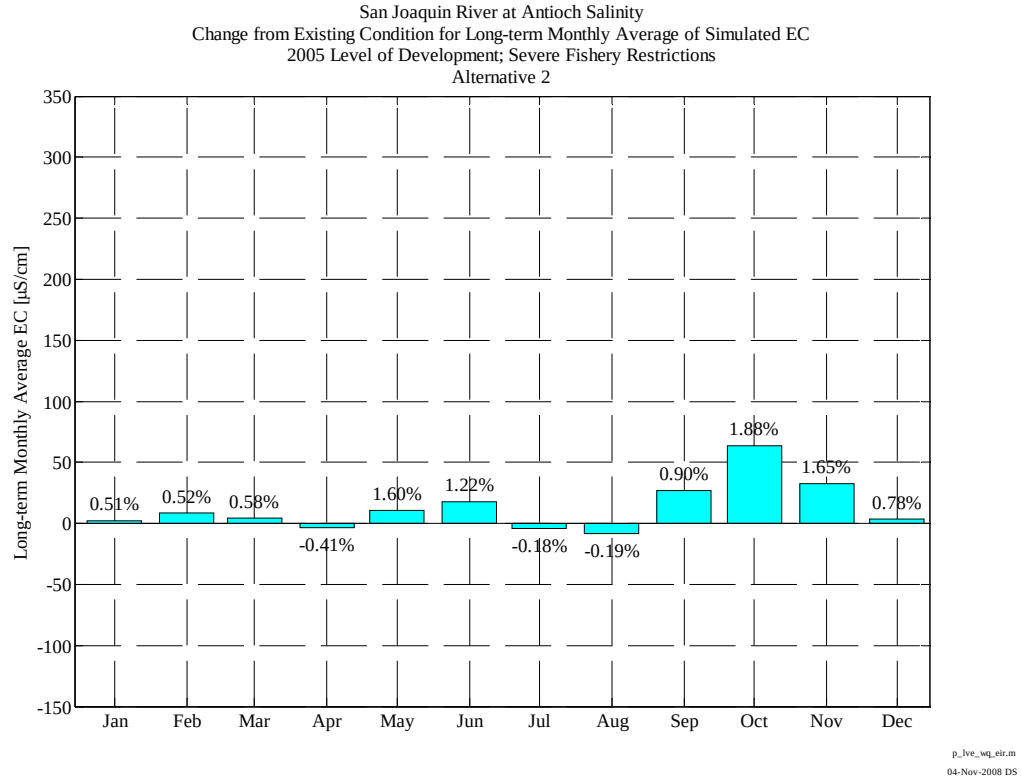
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

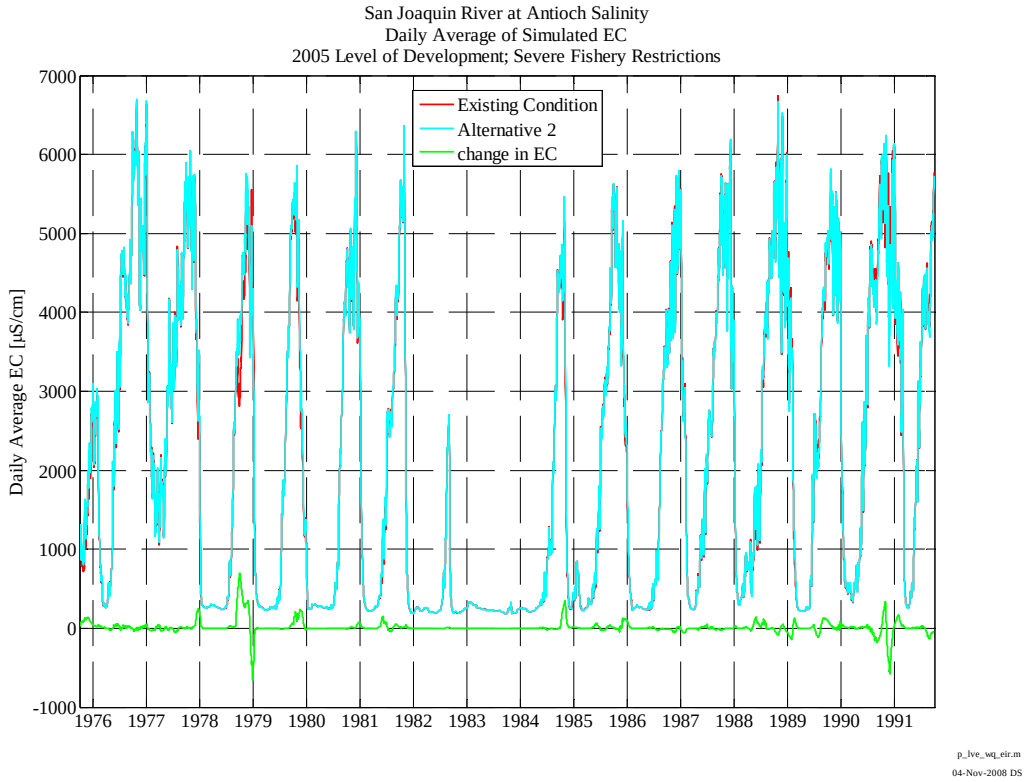
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	962	1,461	2,414	2,644	1,275	327	430	1,636	2,996	4,427	4,200	4,971
1977	6,009	5,094	5,403	3,404	1,850	1,509	1,639	2,458	3,333	3,690	4,209	4,945
1978	5,375	5,146	3,321	460	262	288	283	254	247	538	1,931	3,529
1979	4,311	5,268	4,262	1,019	277	242	243	266	339	1,286	2,931	4,856
1980	5,301	3,717	1,517	290	294	285	268	258	263	515	2,046	3,999
1981	4,434	4,644	4,445	1,145	249	221	265	504	1,334	2,596	3,203	4,463
1982	5,448	1,440	211	242	232	247	222	201	208	409	1,800	587
1983	202	202	241	314	301	263	245	230	225	220	214	195
1984	243	198	231	251	231	209	240	310	511	1,001	2,165	4,237
1985	4,698	1,344	316	599	344	240	319	518	1,322	2,670	3,272	4,753
1986	5,005	4,356	2,862	763	257	272	256	246	338	640	2,059	3,435
1987	3,834	4,453	5,160	3,265	866	260	366	911	1,542	2,481	3,320	4,501
1988	5,125	5,013	4,284	1,089	383	662	746	1,199	1,526	3,124	4,153	4,807
1989	5,508	4,932	4,649	3,728	1,435	268	219	244	1,053	2,250	3,135	4,542
1990	5,122	4,935	4,614	1,433	516	447	593	1,326	2,615	4,220	4,263	4,818
1991	5,579	4,711	4,930	4,347	3,523	759	343	1,110	2,569	4,021	4,030	4,960
Avg	4,197	3,557	3,054	1,562	768	406	417	730	1,276	2,131	2,933	3,975
W/AN/BN	3,698	2,904	1,807	477	265	258	251	252	305	659	1,878	2,977
D/C	4,586	4,065	4,024	2,406	1,160	521	547	1,101	2,032	3,276	3,754	4,751

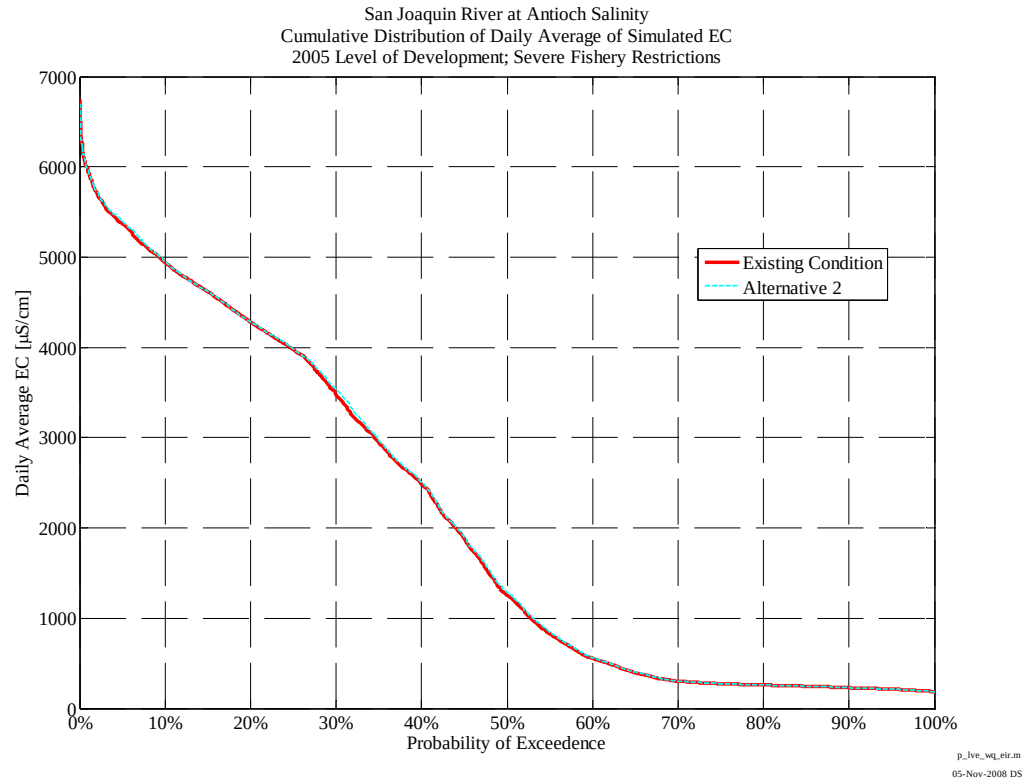
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	7.8%	9.3%	3.7%	1.2%	2.4%	2.2%	-1.6%	0.5%	1.2%	0.3%	0.5%	0.2%
1977	-0.3%	0.1%	0.5%	-0.2%	-1.3%	1.8%	-1.4%	0.0%	0.0%	-1.1%	0.1%	0.1%
1978	0.1%	0.3%	6.1%	6.6%	-0.1%	-0.5%	0.1%	-0.2%	-0.2%	3.1%	0.9%	13.6%
1979	11.8%	6.2%	-6.1%	-7.7%	-0.7%	-1.0%	-0.5%	0.3%	-0.7%	-0.6%	0.0%	0.8%
1980	2.9%	5.7%	2.9%	-0.5%	0.1%	-0.2%	0.0%	0.0%	-0.6%	-0.5%	-0.1%	0.0%
1981	0.1%	0.2%	1.3%	1.9%	0.5%	0.5%	0.6%	9.8%	7.3%	-0.6%	0.3%	0.8%
1982	0.2%	1.1%	0.6%	0.0%	-0.1%	-0.1%	0.0%	-0.4%	0.0%	0.0%	0.3%	0.5%
1983	0.5%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.2%	-0.3%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	-0.2%	1.7%	-0.4%	-1.2%	-0.4%	-0.1%
1985	4.8%	8.9%	3.4%	1.4%	1.0%	-1.0%	-1.4%	5.0%	2.3%	-0.8%	0.2%	0.5%
1986	-0.1%	0.5%	3.9%	3.7%	0.1%	-0.8%	0.5%	1.2%	2.6%	-1.2%	-0.7%	-0.3%
1987	-0.3%	-0.9%	0.1%	-1.3%	-1.9%	-0.4%	-1.2%	0.7%	1.7%	0.2%	-0.1%	-0.4%
1988	-0.3%	-0.1%	0.0%	1.2%	0.4%	1.2%	-1.4%	6.0%	4.2%	1.9%	0.1%	0.0%
1989	-1.1%	0.0%	-0.2%	-2.8%	4.6%	2.9%	0.2%	0.5%	1.3%	-2.5%	0.2%	2.7%
1990	1.1%	0.1%	0.4%	2.1%	1.5%	3.3%	-0.3%	0.6%	0.5%	-0.2%	-2.3%	-2.6%
1991	2.9%	-4.9%	-3.8%	2.7%	2.0%	1.5%	-0.3%	0.4%	0.2%	0.4%	-2.0%	-1.4%
Avg	1.9%	1.6%	0.8%	0.5%	0.5%	0.6%	-0.4%	1.6%	1.2%	-0.2%	-0.2%	0.9%
W/AN/BN	2.2%	1.9%	1.0%	0.3%	-0.1%	-0.4%	0.0%	0.3%	0.1%	-0.1%	0.0%	2.1%
D/C	1.6%	1.4%	0.6%	0.7%	1.0%	1.3%	-0.8%	2.6%	2.1%	-0.3%	-0.3%	0.0%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.51%
0.52%
0.58%
-0.41%
1.60%
1.22%
-0.18%
-0.19%
0.90%
1.88%
1.65%
0.78%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

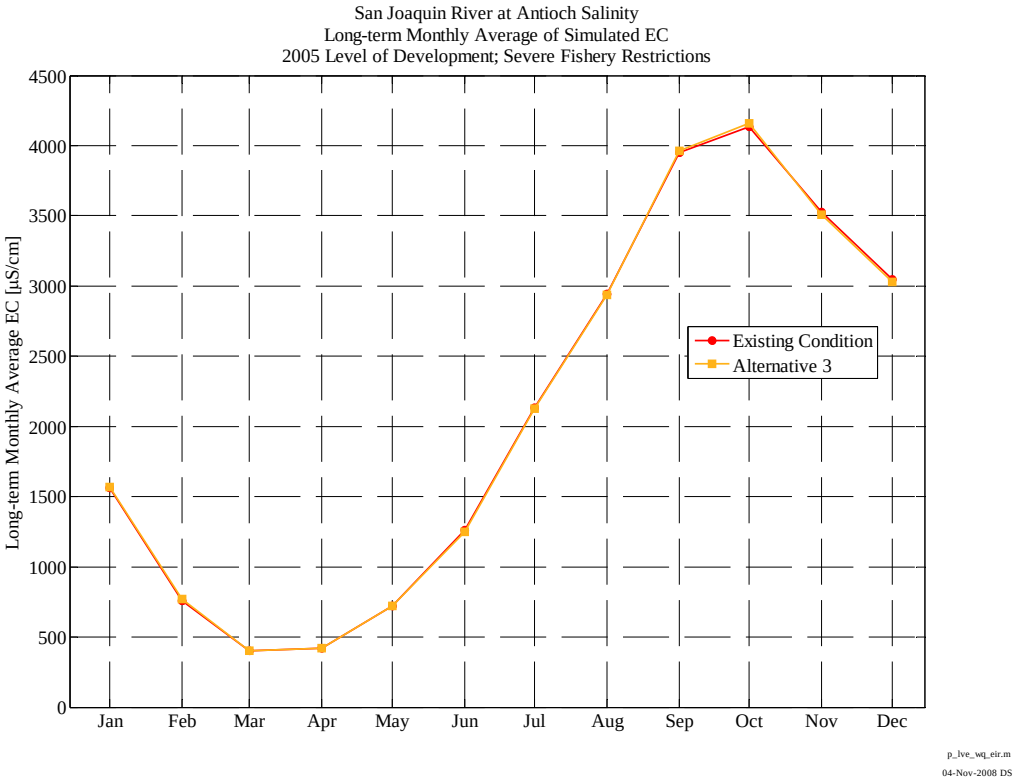
Alternative 3

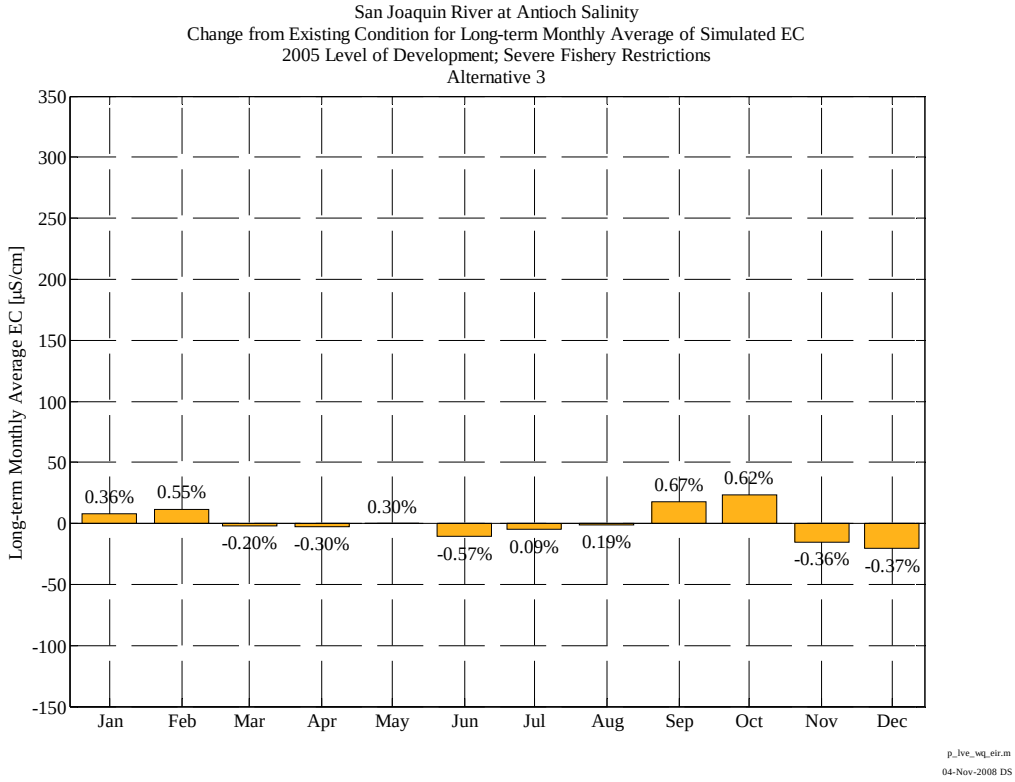
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

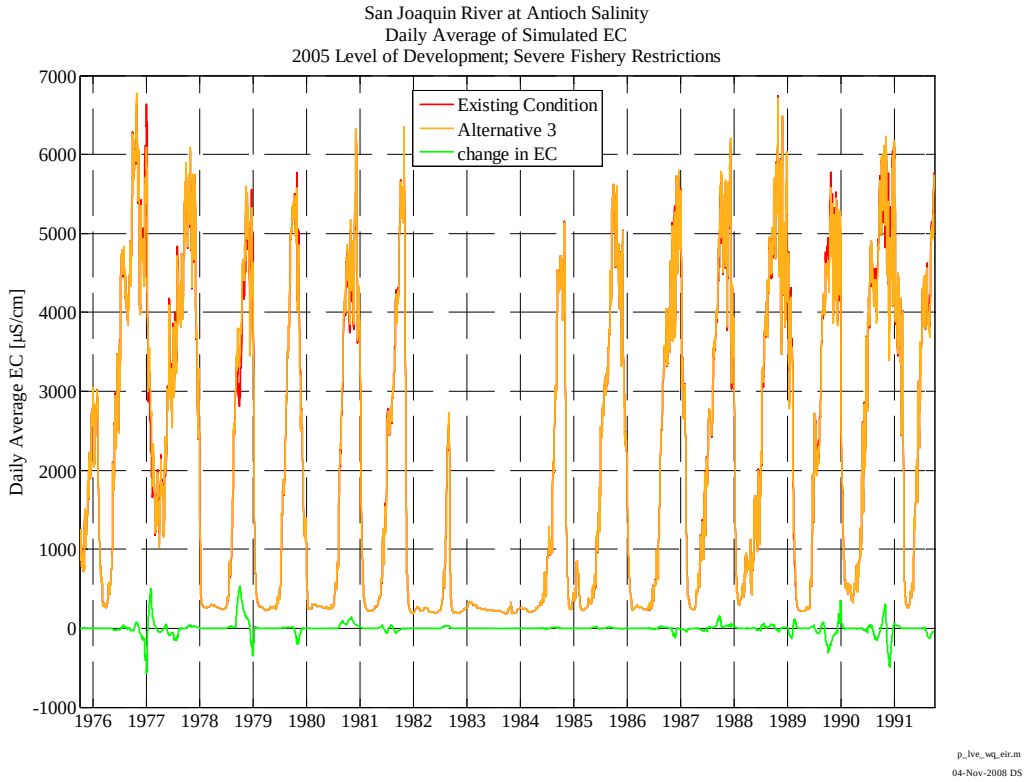
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	896	1,339	2,331	2,611	1,242	320	437	1,615	2,939	4,423	4,189	4,940
1977	6,056	5,055	5,118	3,572	2,034	1,462	1,626	2,459	3,266	3,608	4,180	4,943
1978	5,400	5,158	3,143	432	262	290	284	255	247	537	1,929	3,427
1979	4,203	5,100	4,394	1,078	278	242	244	266	340	1,298	2,941	4,829
1980	5,079	3,425	1,473	293	295	286	268	258	264	517	2,095	4,064
1981	4,530	4,718	4,426	1,132	248	219	262	471	1,226	2,607	3,187	4,389
1982	5,431	1,421	210	243	232	248	222	202	208	421	1,827	590
1983	201	202	242	315	301	263	245	231	226	220	215	195
1984	243	198	231	252	231	207	238	306	509	1,012	2,179	4,244
1985	4,481	1,233	305	591	340	242	324	506	1,295	2,690	3,270	4,735
1986	5,013	4,334	2,751	736	256	273	252	244	326	640	2,090	3,458
1987	3,850	4,416	5,151	3,294	856	259	372	892	1,490	2,484	3,338	4,623
1988	5,168	5,050	4,325	1,086	381	649	759	1,136	1,443	3,097	4,162	4,850
1989	5,560	4,918	4,671	3,752	1,423	268	221	245	1,054	2,273	3,132	4,336
1990	4,830	4,839	4,713	1,436	506	432	588	1,318	2,578	4,245	4,283	4,860
1991	5,573	4,741	4,987	4,272	3,462	747	344	1,106	2,560	4,007	4,032	4,964
Avg	4,157	3,509	3,030	1,568	772	400	418	719	1,248	2,130	2,940	3,965
W/AN/BN	3,653	2,834	1,778	478	265	258	250	252	303	663	1,896	2,972
D/C	4,549	4,034	4,003	2,416	1,166	511	548	1,083	1,983	3,270	3,752	4,738

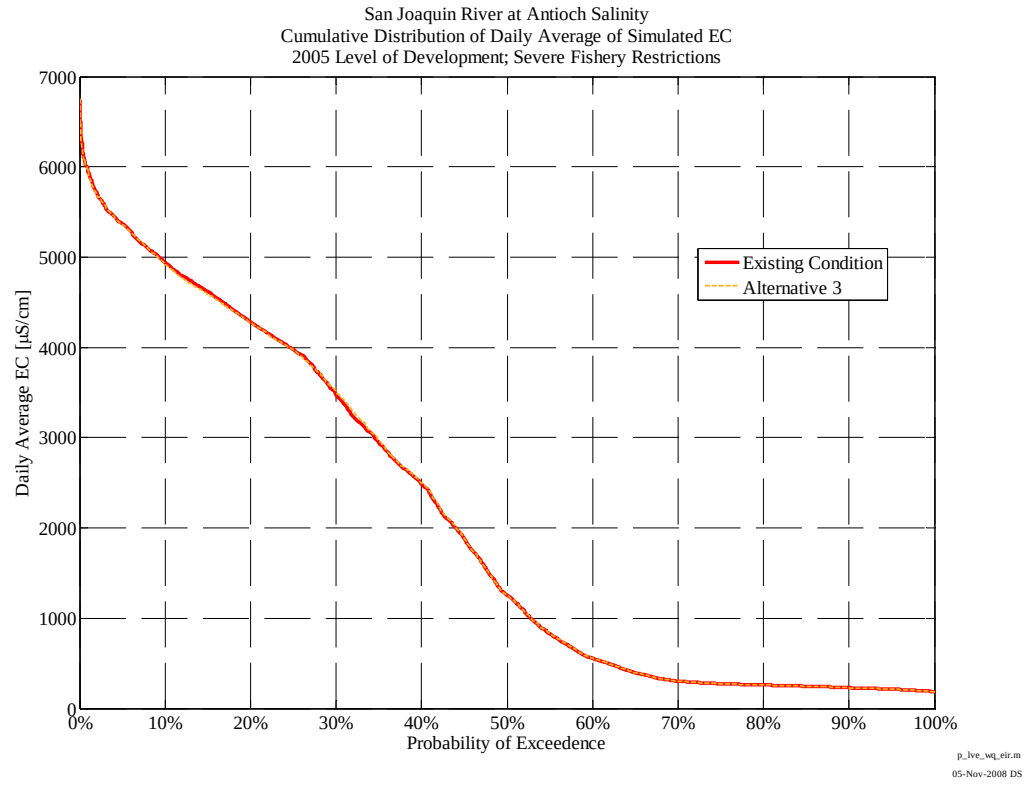
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.4%	0.2%	0.1%	-0.1%	-0.2%	-0.1%	0.0%	-0.9%	-0.7%	0.2%	0.2%	-0.5%
1977	0.5%	-0.7%	-4.8%	4.8%	8.5%	-1.4%	-2.2%	0.0%	-2.0%	-3.3%	-0.5%	0.0%
1978	0.6%	0.5%	0.4%	0.1%	0.0%	0.0%	0.4%	0.2%	-0.1%	2.9%	0.8%	10.3%
1979	9.0%	2.8%	-3.2%	-2.4%	-0.3%	-0.9%	-0.4%	0.1%	-0.4%	0.3%	0.3%	0.2%
1980	-1.4%	-2.6%	-0.1%	0.5%	0.3%	0.0%	0.0%	0.0%	-0.2%	-0.2%	2.3%	1.6%
1981	2.2%	1.8%	0.8%	0.8%	0.2%	-0.6%	-0.8%	2.5%	-1.4%	-0.2%	-0.2%	-0.9%
1982	-0.1%	-0.2%	0.0%	0.5%	0.2%	0.0%	0.0%	-0.1%	0.1%	2.8%	1.9%	0.9%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.1%	0.0%	0.0%	0.0%	-0.1%	-1.0%	-1.3%	0.5%	-0.6%	-0.2%	0.3%	0.1%
1985	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	0.3%	0.0%	0.1%	0.1%
1986	0.1%	-0.1%	-0.1%	0.1%	-0.1%	-0.4%	-0.7%	0.3%	-1.3%	-1.2%	0.8%	0.4%
1987	0.1%	-1.7%	-0.1%	-0.4%	-3.0%	-0.8%	0.3%	-1.4%	-1.7%	0.3%	0.4%	2.3%
1988	0.5%	0.7%	1.0%	0.9%	-0.2%	-0.7%	0.2%	0.4%	-1.5%	1.1%	0.3%	0.9%
1989	-0.1%	-0.3%	0.2%	-2.2%	3.7%	2.7%	0.8%	0.8%	1.4%	-1.5%	0.1%	-1.9%
1990	-4.6%	-1.8%	2.6%	2.4%	-0.6%	-0.1%	-1.0%	0.0%	-0.9%	0.4%	-1.8%	-1.8%
1991	2.8%	-4.3%	-2.7%	0.9%	0.3%	0.0%	0.0%	0.0%	-0.1%	0.1%	-1.9%	-1.3%
Avg	0.6%	-0.4%	-0.4%	0.4%	0.6%	-0.2%	-0.3%	0.3%	-0.6%	0.1%	0.2%	0.7%
W/AN/BN	1.2%	0.1%	-0.4%	-0.2%	0.0%	-0.3%	-0.3%	0.1%	-0.3%	0.6%	0.9%	1.9%
D/C	0.2%	-0.7%	-0.3%	0.8%	1.0%	-0.1%	-0.3%	0.4%	-0.7%	-0.3%	-0.4%	-0.3%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.36%
0.55%
-0.20%
-0.30%
0.30%
-0.57%
0.09%
0.19%
0.67%
0.62%
-0.36%
-0.37%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

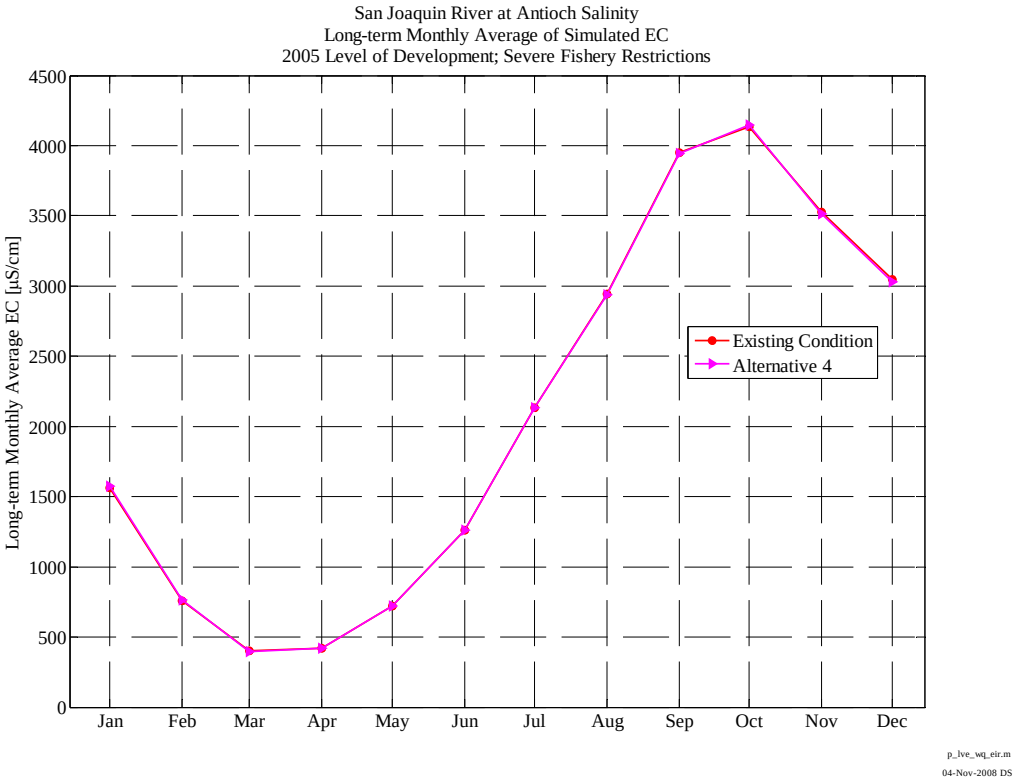
Alternative 4

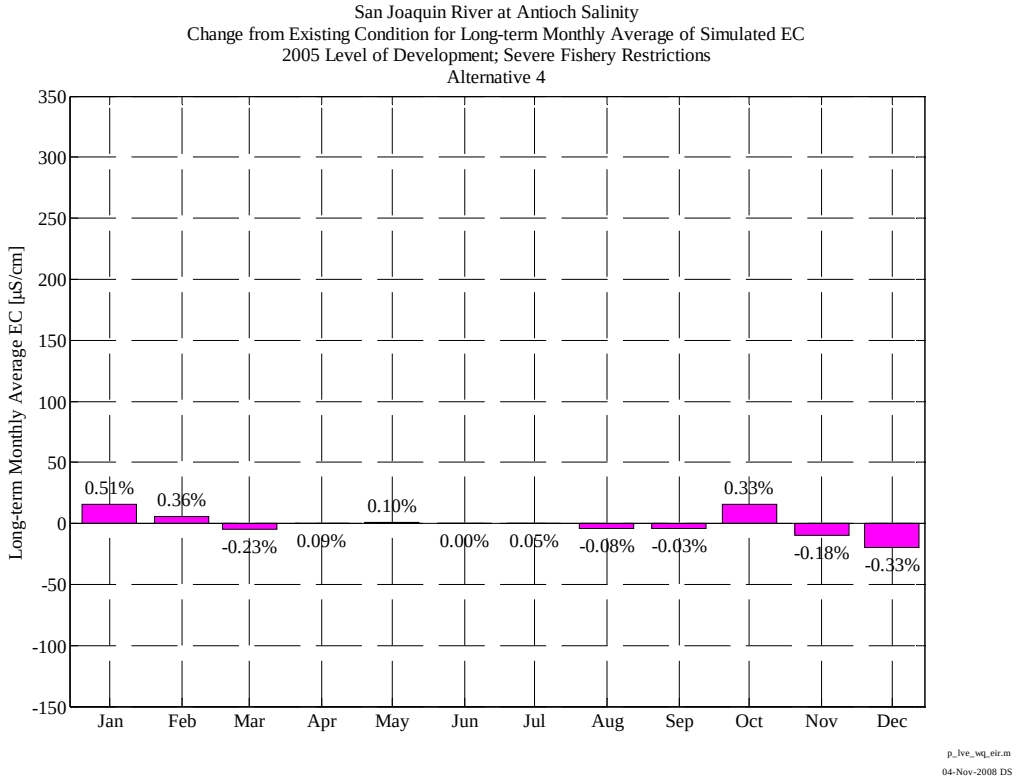
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

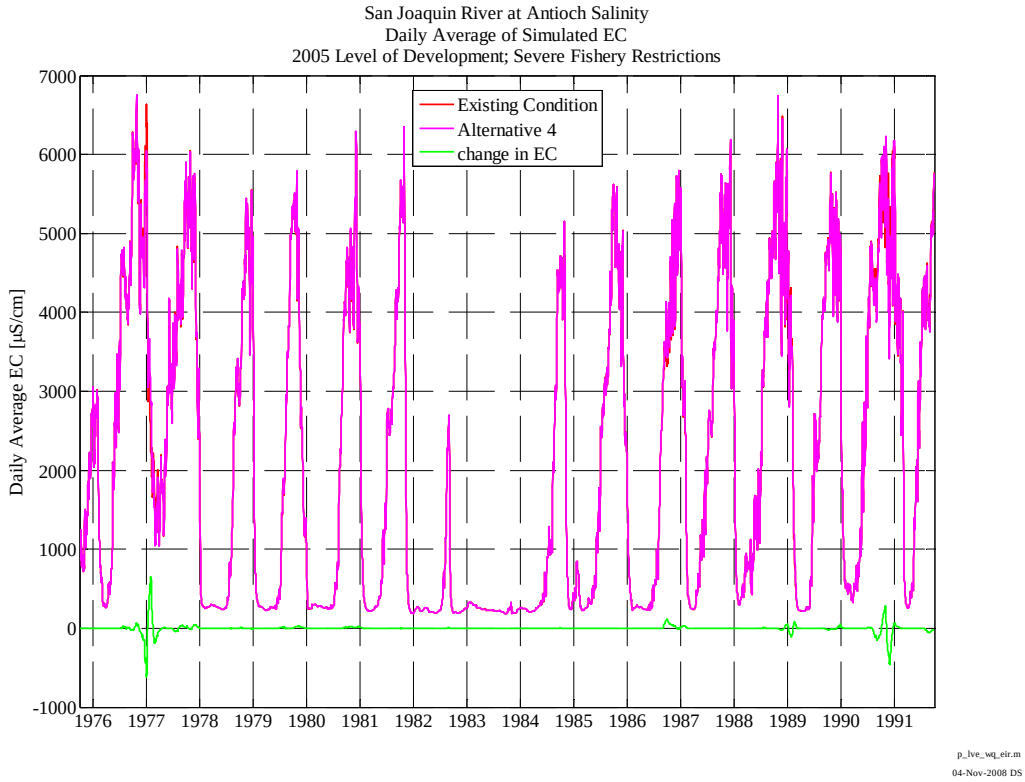
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	894	1,337	2,330	2,613	1,245	320	437	1,628	2,957	4,422	4,189	4,950
1977	6,049	5,067	5,106	3,651	1,921	1,398	1,658	2,463	3,331	3,699	4,220	4,960
1978	5,372	5,153	3,150	432	262	290	286	257	248	524	1,916	3,108
1979	3,860	4,960	4,535	1,103	279	244	244	265	342	1,306	2,935	4,819
1980	5,165	3,539	1,481	292	293	286	268	258	265	518	2,049	4,004
1981	4,446	4,648	4,403	1,128	248	220	264	459	1,244	2,613	3,195	4,428
1982	5,440	1,426	210	242	232	248	222	202	208	410	1,796	585
1983	201	202	242	315	301	263	245	231	225	220	215	195
1984	243	198	231	252	231	209	241	305	513	1,014	2,174	4,243
1985	4,485	1,234	306	591	340	242	324	494	1,291	2,690	3,266	4,729
1986	5,011	4,335	2,754	736	257	274	255	243	330	648	2,074	3,515
1987	3,914	4,526	5,158	3,331	890	261	371	904	1,516	2,476	3,324	4,515
1988	5,141	5,016	4,283	1,076	381	654	757	1,131	1,465	3,068	4,148	4,803
1989	5,565	4,913	4,682	3,776	1,406	266	221	245	1,039	2,308	3,130	4,415
1990	5,047	4,920	4,614	1,411	509	432	594	1,319	2,602	4,234	4,294	4,837
1991	5,558	4,756	5,002	4,266	3,457	747	344	1,106	2,563	4,002	4,075	5,000
Avg	4,149	3,514	3,030	1,576	766	397	421	719	1,259	2,134	2,937	3,944
W/AN/BN	3,613	2,830	1,800	482	265	259	251	252	304	663	1,880	2,924
D/C	4,566	4,046	3,987	2,427	1,155	505	552	1,083	2,001	3,279	3,760	4,737

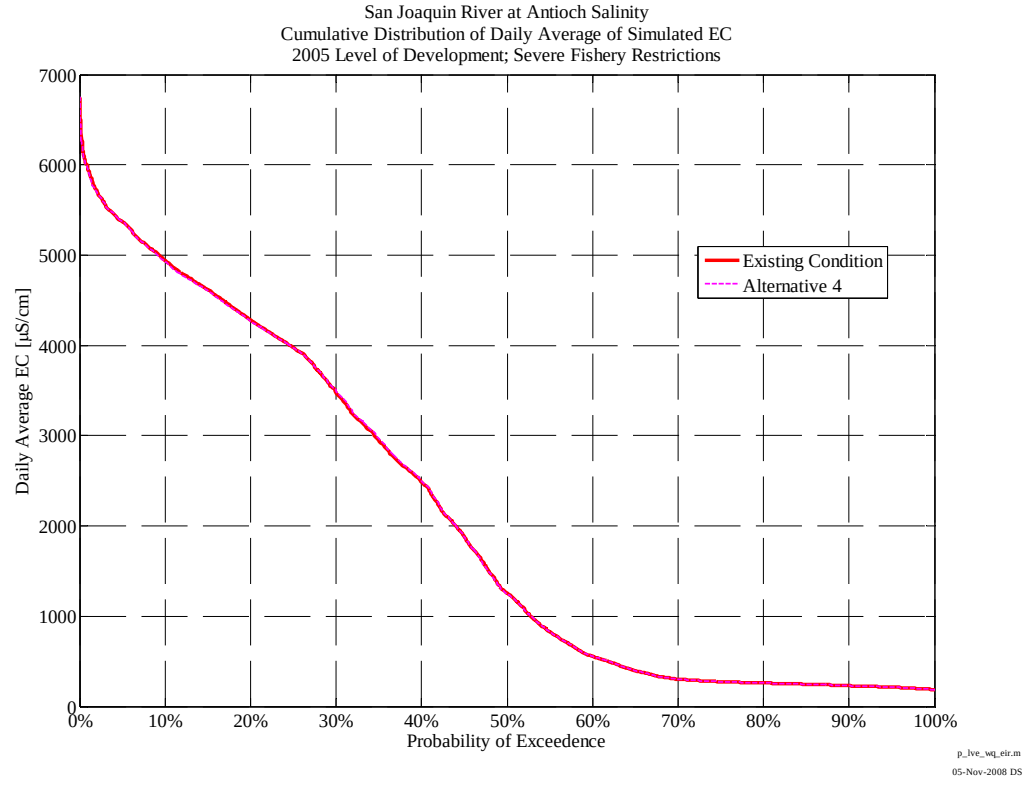
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.2%	0.2%	-0.3%
1977	0.4%	-0.5%	-5.0%	7.1%	2.4%	-5.8%	-0.3%	0.2%	0.0%	-0.8%	0.4%	0.4%
1978	0.0%	0.4%	0.7%	0.2%	-0.1%	0.0%	1.0%	0.7%	0.1%	0.3%	0.1%	0.1%
1979	0.1%	0.0%	-0.1%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	0.1%	0.9%	0.1%	0.0%
1980	0.3%	0.6%	0.4%	-0.1%	-0.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
1981	0.3%	0.3%	0.3%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.1%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	2.0%
1987	1.7%	0.7%	0.0%	0.7%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.1%
1989	0.0%	-0.4%	0.5%	-1.5%	2.5%	2.0%	0.8%	0.7%	0.0%	0.0%	0.1%	-0.1%
1990	-0.4%	-0.2%	0.4%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	-1.6%	-2.2%
1991	2.5%	-4.0%	-2.4%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.9%	-0.6%
Avg	0.3%	-0.2%	-0.3%	0.5%	0.4%	-0.2%	0.1%	0.1%	0.0%	0.1%	-0.1%	0.0%
W/AN/BN	0.1%	0.1%	0.1%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.0%	0.2%	0.1%	0.4%
D/C	0.5%	-0.4%	-0.7%	0.9%	0.7%	-0.4%	0.1%	0.1%	0.0%	-0.1%	-0.2%	-0.3%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.51%
0.36%
-0.23%
0.09%
0.10%
0.00%
0.05%
-0.08%
-0.03%
0.33%
-0.18%
-0.33%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Old River at Rock Slough

Existing Condition

Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	232	234	416	610	532	450	461	479	554	775	803	799
1977	1,063	934	1,016	1,146	721	631	548	566	686	694	759	867
1978	1,086	1,090	810	443	399	476	473	390	310	270	295	454
1979	539	752	912	683	367	321	374	354	276	253	422	750
1980	914	666	432	378	411	439	443	395	319	282	303	557
1981	715	717	911	697	317	329	454	464	330	483	610	757
1982	955	597	217	348	342	396	266	247	258	266	279	261
1983	197	234	375	428	358	287	319	282	260	266	214	195
1984	201	231	324	395	311	265	361	366	295	243	303	615
1985	741	486	224	229	266	415	523	492	340	442	583	750
1986	905	761	719	426	415	365	357	297	271	284	299	490
1987	581	684	978	954	599	406	453	457	365	489	646	797
1988	909	854	977	713	327	409	445	410	376	434	678	860
1989	1,027	993	923	893	743	412	383	336	285	489	649	827
1990	856	863	929	587	310	382	380	398	454	703	796	846
1991	1,057	1,026	1,019	1,085	916	620	451	382	430	682	754	847
Avg	748	695	699	626	458	413	418	395	363	441	525	667
W/AN/BN	685	619	541	443	372	364	370	333	284	266	302	475
D/C	798	755	821	768	526	450	455	442	424	577	698	817

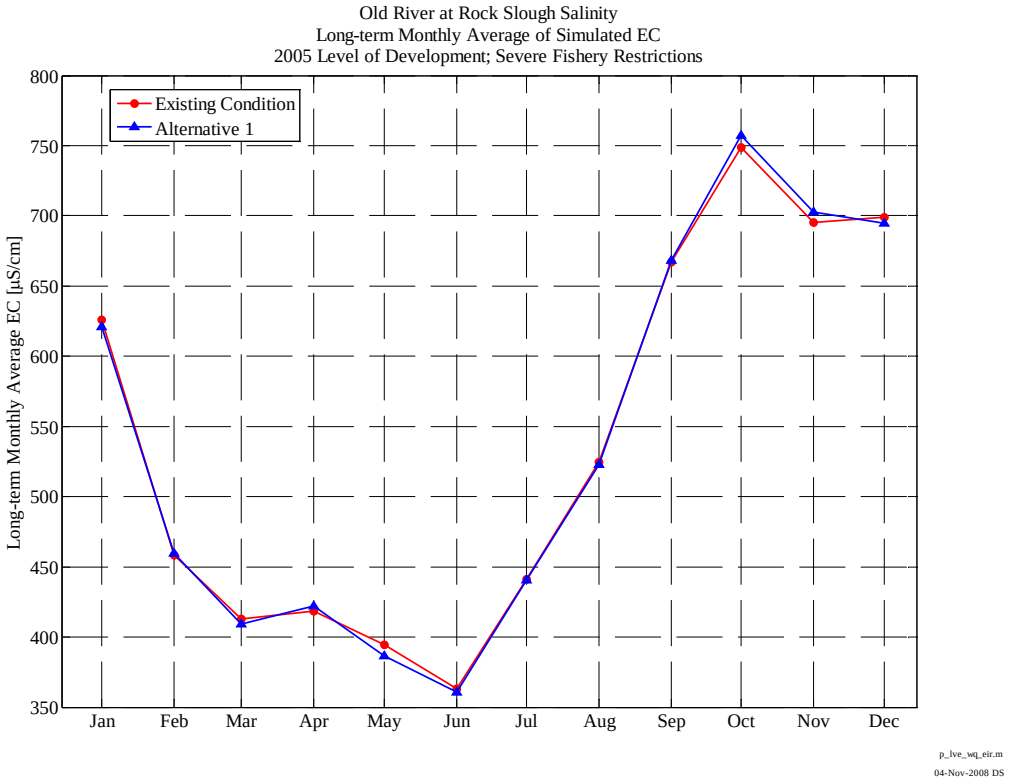
Alternative 1

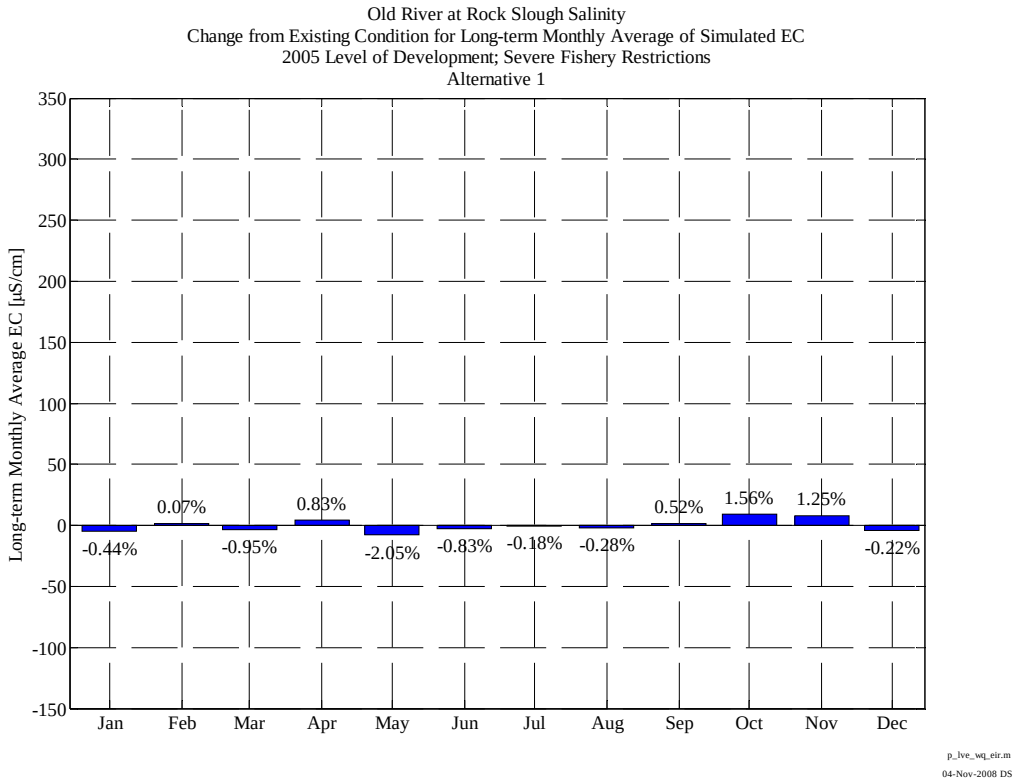
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

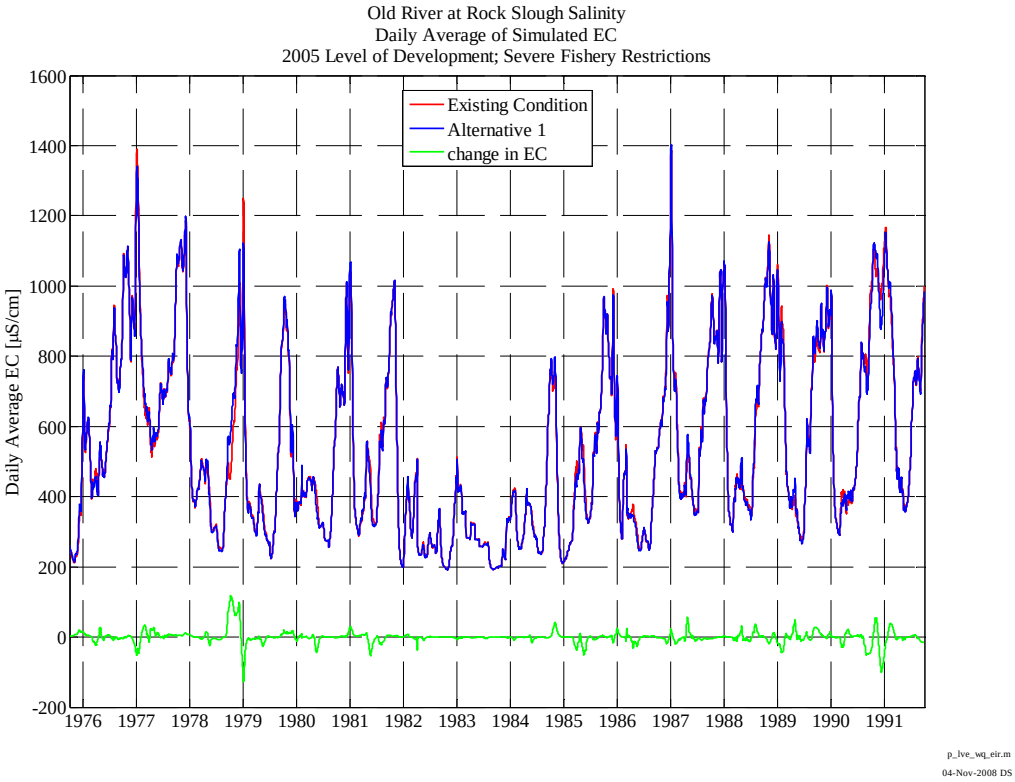
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	235	242	432	618	536	436	465	479	558	772	800	795
1977	1,061	936	994	1,115	745	637	568	576	688	695	766	871
1978	1,092	1,096	819	446	399	473	480	379	307	263	293	505
1979	639	820	908	633	360	316	369	338	276	253	421	756
1980	927	679	435	377	411	437	443	365	318	283	302	556
1981	714	719	924	714	320	334	459	429	320	473	598	762
1982	958	600	217	353	344	392	263	243	258	266	279	262
1983	197	234	372	426	357	287	318	281	259	263	214	195
1984	201	231	324	391	309	264	361	362	292	243	302	614
1985	759	507	225	230	266	395	515	454	335	439	579	753
1986	905	761	721	435	415	368	341	280	269	286	301	491
1987	579	678	971	956	585	402	473	467	358	484	641	793
1988	905	853	977	714	327	404	455	408	367	444	695	862
1989	1,020	985	924	864	723	411	404	343	277	493	646	852
1990	870	865	935	587	309	362	392	403	457	707	776	799
1991	1,060	1,040	939	1,077	950	625	449	378	429	685	752	833
Avg	758	703	695	621	460	409	422	387	360	441	523	669
W/AN/BN	703	631	542	437	371	362	368	321	283	265	302	482
D/C	800	758	813	764	529	445	464	438	421	577	695	813

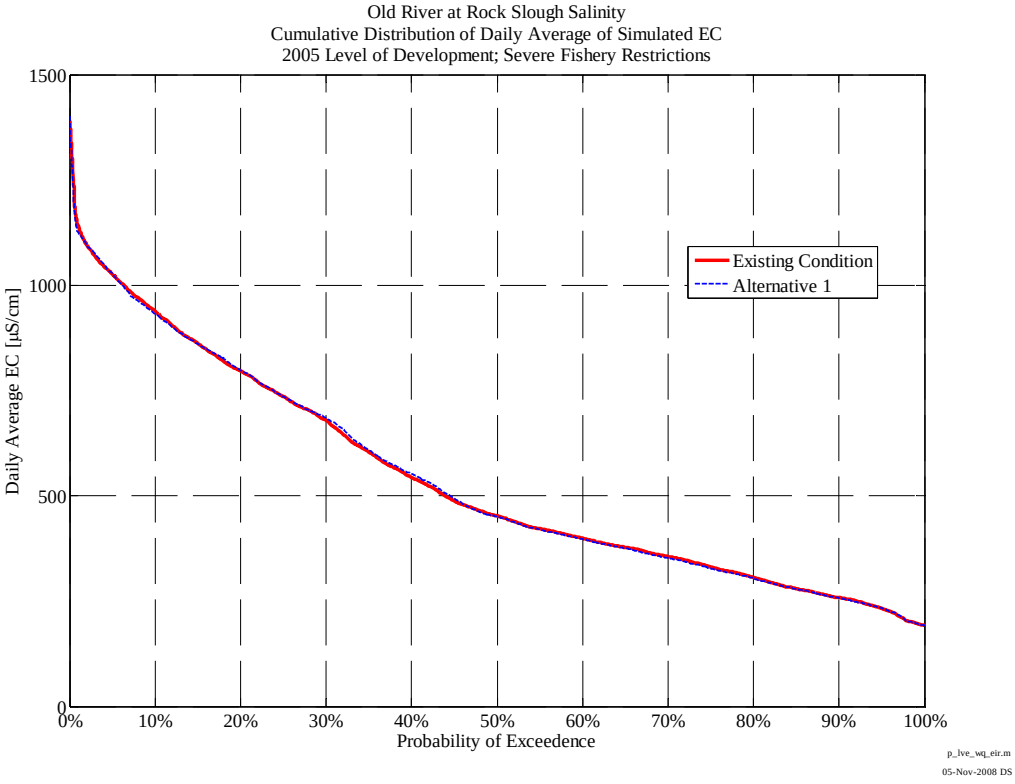
Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1.3%	3.6%	3.9%	1.4%	0.7%	-3.1%	0.7%	0.0%	0.7%	-0.4%	-0.4%	-0.5%
1977	-0.2%	0.2%	-2.2%	-2.6%	3.3%	1.1%	3.7%	1.8%	0.2%	0.2%	0.9%	0.5%
1978	0.5%	0.5%	1.1%	0.6%	0.0%	-0.8%	1.6%	-3.0%	-1.3%	-2.6%	-0.6%	11.2%
1979	18.7%	9.1%	-0.5%	-7.3%	-1.8%	-1.7%	-1.2%	-4.6%	-0.1%	-0.1%	-0.2%	0.7%
1980	1.5%	1.9%	0.8%	-0.1%	0.1%	-0.3%	0.0%	-7.6%	-0.3%	0.3%	-0.1%	-0.2%
1981	0.0%	0.3%	1.4%	2.4%	0.7%	1.8%	1.2%	-7.4%	-3.1%	-2.0%	-1.9%	0.6%
1982	0.3%	0.5%	-0.1%	1.4%	0.5%	-1.0%	-1.0%	-1.8%	0.0%	0.3%	0.1%	0.2%
1983	-0.1%	-0.1%	-0.6%	-0.5%	-0.1%	0.0%	-0.5%	-0.3%	-0.3%	-1.1%	-0.3%	0.0%
1984	0.0%	0.0%	-0.2%	-1.2%	-0.5%	-0.2%	-0.1%	-1.2%	-1.3%	-0.3%	-0.3%	-0.3%
1985	2.5%	4.3%	0.6%	0.3%	0.2%	-5.0%	-1.5%	-7.7%	-1.4%	-0.7%	-0.7%	0.4%
1986	0.0%	-0.1%	0.3%	2.0%	-0.1%	0.8%	-4.3%	-5.7%	-0.4%	0.7%	0.5%	0.2%
1987	-0.3%	-0.8%	-0.7%	0.3%	-2.4%	-0.9%	4.4%	2.3%	-1.8%	-1.1%	-0.8%	-0.6%
1988	-0.4%	-0.1%	0.0%	0.1%	-0.1%	-1.3%	2.3%	-0.4%	-2.3%	2.3%	2.5%	0.2%
1989	-0.7%	-0.8%	0.1%	-3.2%	-2.6%	-0.2%	5.4%	2.2%	-2.6%	0.7%	-0.4%	3.0%
1990	1.6%	0.2%	0.6%	0.0%	-0.4%	-5.2%	3.1%	1.5%	0.6%	0.5%	-2.5%	-5.6%
1991	0.3%	1.3%	-7.9%	-0.7%	3.7%	0.8%	-0.3%	-1.0%	-0.1%	0.5%	-0.3%	-1.6%
Avg	1.6%	1.2%	-0.2%	-0.4%	0.1%	-1.0%	0.8%	-2.1%	-0.8%	-0.2%	-0.3%	0.5%
W/AN/BN	3.0%	1.7%	0.1%	-0.7%	-0.3%	-0.5%	-0.8%	-3.4%	-0.5%	-0.4%	-0.1%	1.7%
D/C	0.4%	0.9%	-0.5%	-0.2%	0.3%	-1.3%	2.1%	-1.0%	-1.1%	0.0%	-0.4%	-0.4%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.44%
0.07%
-0.95%
0.83%
-2.05%
-0.83%
-0.18%
-0.28%
0.52%
1.56%
1.25%
-0.22%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1600
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

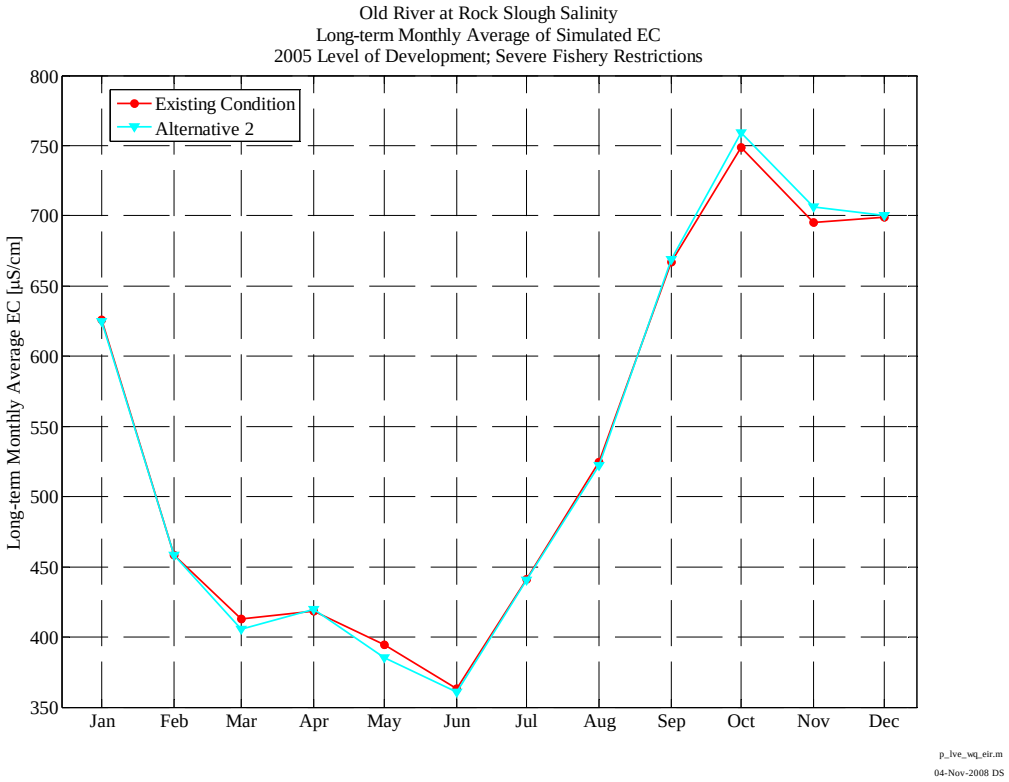
Alternative 2

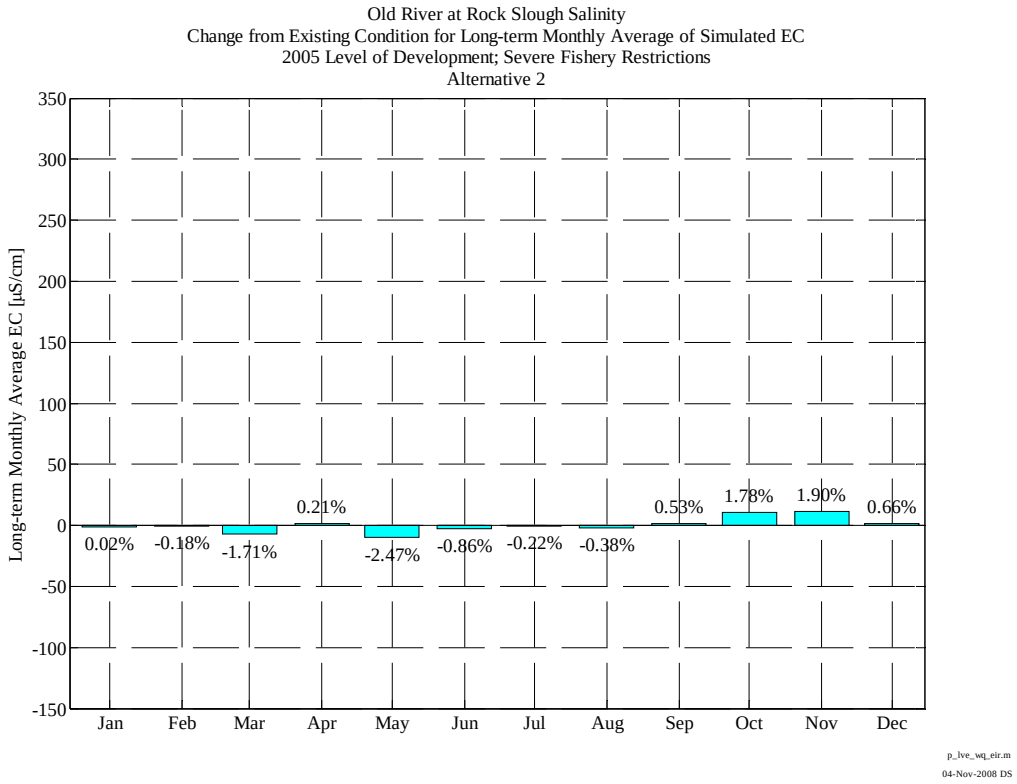
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

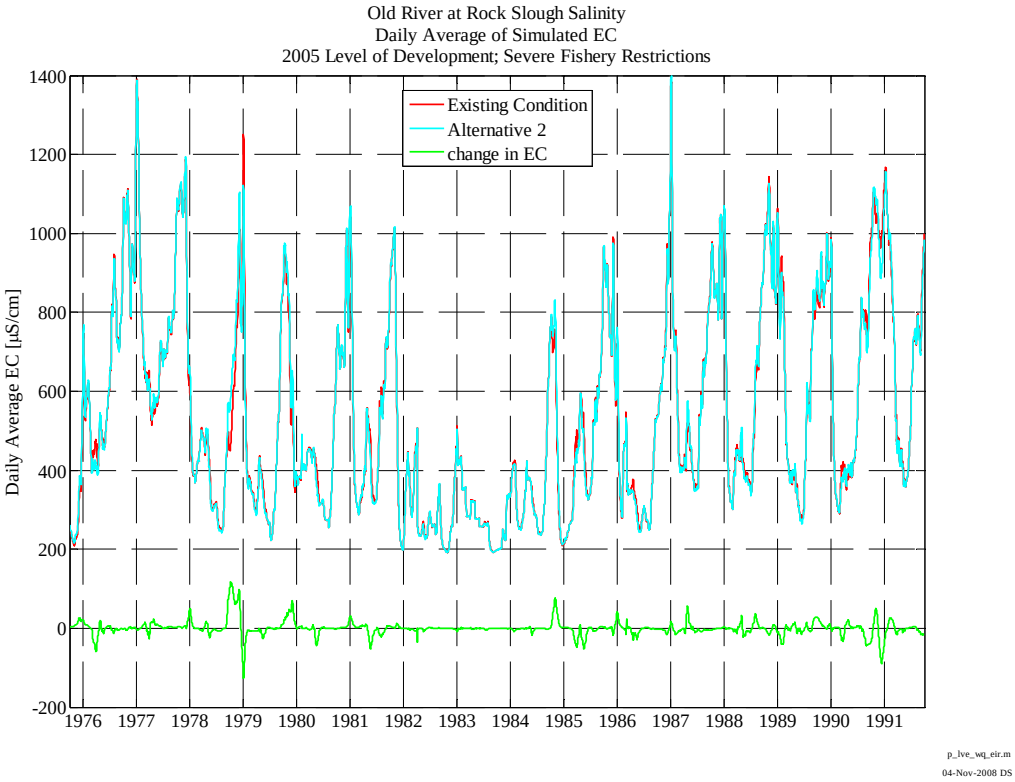
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	235	244	438	621	536	413	450	474	558	771	799	798
1977	1,060	936	1,017	1,143	729	624	563	576	691	695	763	869
1978	1,090	1,093	831	460	398	473	481	378	307	264	293	505
1979	639	820	908	633	361	314	368	338	276	253	421	756
1980	940	713	459	379	412	438	443	365	318	283	302	556
1981	714	719	924	714	319	334	459	430	319	473	598	762
1982	958	604	218	347	340	392	263	243	258	266	279	262
1983	197	234	372	427	357	287	318	281	259	263	214	195
1984	201	231	324	391	308	264	360	362	292	243	302	614
1985	775	528	227	231	265	386	511	453	335	439	579	753
1986	905	760	727	442	415	368	341	280	268	285	298	488
1987	578	679	972	956	587	403	473	467	358	484	641	793
1988	905	853	978	713	327	403	454	400	368	444	694	861
1989	1,020	985	925	869	724	411	391	333	276	493	646	853
1990	874	867	934	586	312	361	390	403	457	706	775	806
1991	1,059	1,037	949	1,079	939	618	447	378	430	685	751	832
Avg	759	706	700	624	458	405	420	385	361	440	522	669
W/AN/BN	704	636	549	440	370	362	368	321	282	265	301	482
D/C	802	761	818	768	527	439	460	435	421	577	694	814

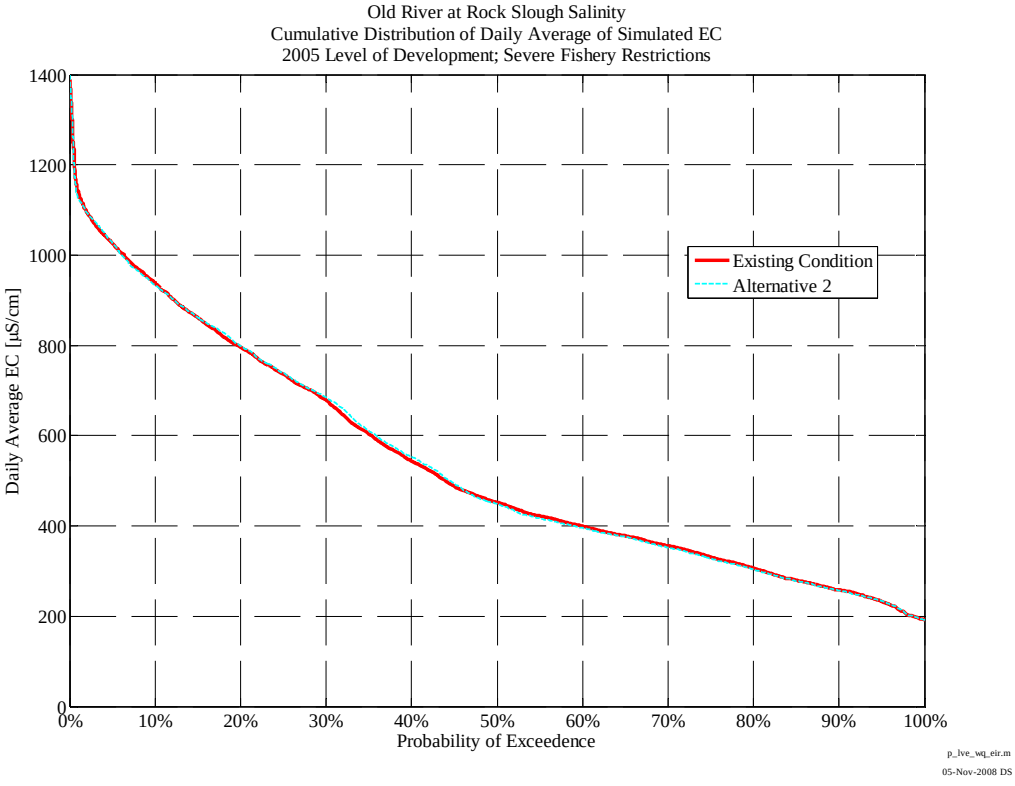
Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1.3%	4.4%	5.5%	1.9%	0.7%	-8.3%	-2.4%	-0.9%	0.7%	-0.5%	-0.5%	-0.2%
1977	-0.2%	0.2%	0.1%	-0.2%	1.1%	-1.1%	2.7%	1.9%	0.7%	0.1%	0.5%	0.2%
1978	0.3%	0.3%	2.6%	3.7%	-0.1%	-0.8%	1.6%	-3.1%	-1.3%	-2.5%	-0.7%	11.2%
1979	18.7%	9.1%	-0.5%	-7.3%	-1.6%	-2.1%	-1.5%	-4.7%	-0.1%	-0.1%	-0.2%	0.7%
1980	2.8%	7.0%	6.4%	0.4%	0.2%	-0.3%	0.0%	-7.7%	-0.4%	0.3%	-0.1%	-0.2%
1981	0.0%	0.3%	1.4%	2.4%	0.6%	1.7%	1.2%	-7.4%	-3.2%	-2.1%	-1.9%	0.6%
1982	0.3%	1.2%	0.2%	-0.3%	-0.7%	-1.2%	-1.1%	-1.8%	0.0%	0.3%	0.1%	0.2%
1983	-0.2%	-0.2%	-0.6%	-0.3%	-0.1%	0.0%	-0.5%	-0.3%	-0.3%	-1.1%	-0.3%	0.0%
1984	0.0%	0.0%	-0.2%	-1.2%	-1.1%	-0.4%	-0.2%	-1.2%	-1.3%	-0.3%	-0.3%	-0.3%
1985	4.6%	8.6%	1.5%	0.6%	-0.2%	-7.0%	-2.4%	-7.9%	-1.4%	-0.7%	-0.6%	0.5%
1986	0.1%	-0.1%	1.2%	3.7%	-0.2%	0.8%	-4.4%	-5.9%	-1.1%	0.5%	-0.3%	-0.4%
1987	-0.5%	-0.7%	-0.6%	0.2%	-2.0%	-0.9%	4.4%	2.3%	-1.8%	-1.1%	-0.8%	-0.5%
1988	-0.4%	-0.1%	0.1%	0.0%	-0.2%	-1.5%	2.2%	-2.5%	-2.1%	2.2%	2.4%	0.1%
1989	-0.6%	-0.8%	0.2%	-2.6%	-2.5%	-0.3%	1.9%	-0.7%	-3.0%	0.7%	-0.5%	3.1%
1990	2.1%	0.5%	0.5%	-0.2%	0.6%	-5.6%	2.8%	1.3%	0.6%	0.4%	-2.6%	-4.8%
1991	0.2%	1.0%	-6.9%	-0.5%	2.5%	-0.3%	-1.0%	-1.1%	0.1%	0.5%	-0.4%	-1.8%
Avg	1.8%	1.9%	0.7%	0.0%	-0.2%	-1.7%	0.2%	-2.5%	-0.9%	-0.2%	-0.4%	0.5%
W/AN/BN	3.1%	2.5%	1.3%	-0.2%	-0.5%	-0.6%	-0.9%	-3.5%	-0.6%	-0.4%	-0.2%	1.6%
D/C	0.7%	1.5%	0.2%	0.2%	0.1%	-2.6%	1.1%	-1.7%	-1.1%	0.0%	-0.5%	-0.3%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.02%
-0.18%
-1.71%
0.21%
-2.47%
-0.86%
-0.22%
-0.38%
0.53%
1.78%
1.90%
0.66%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

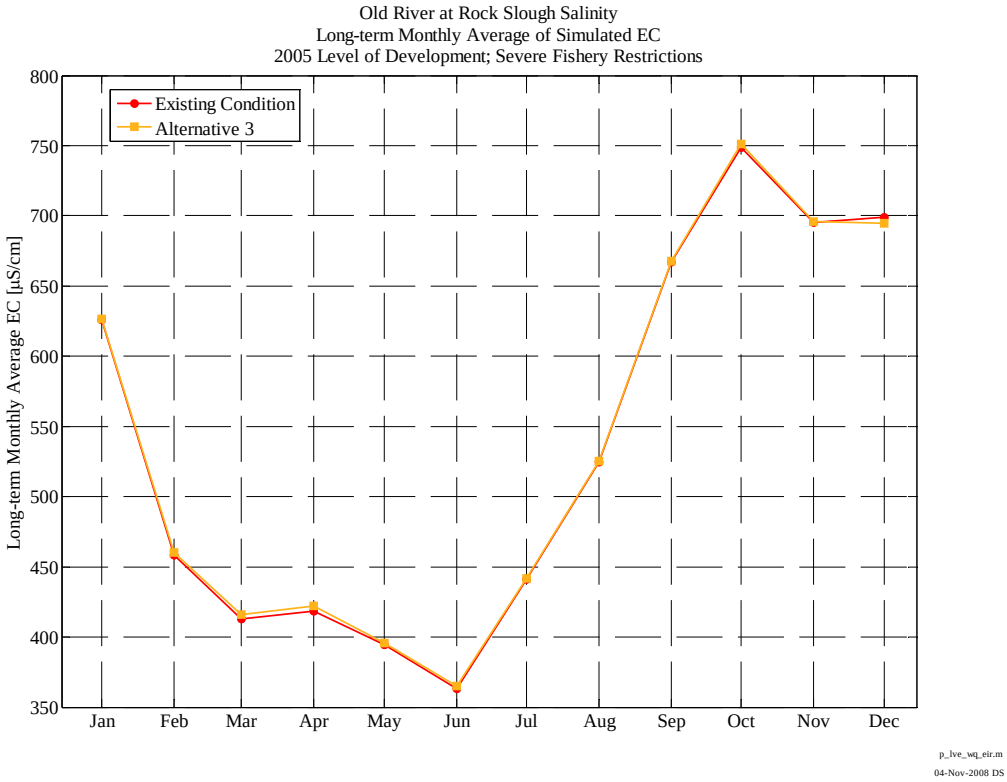
Alternative 3

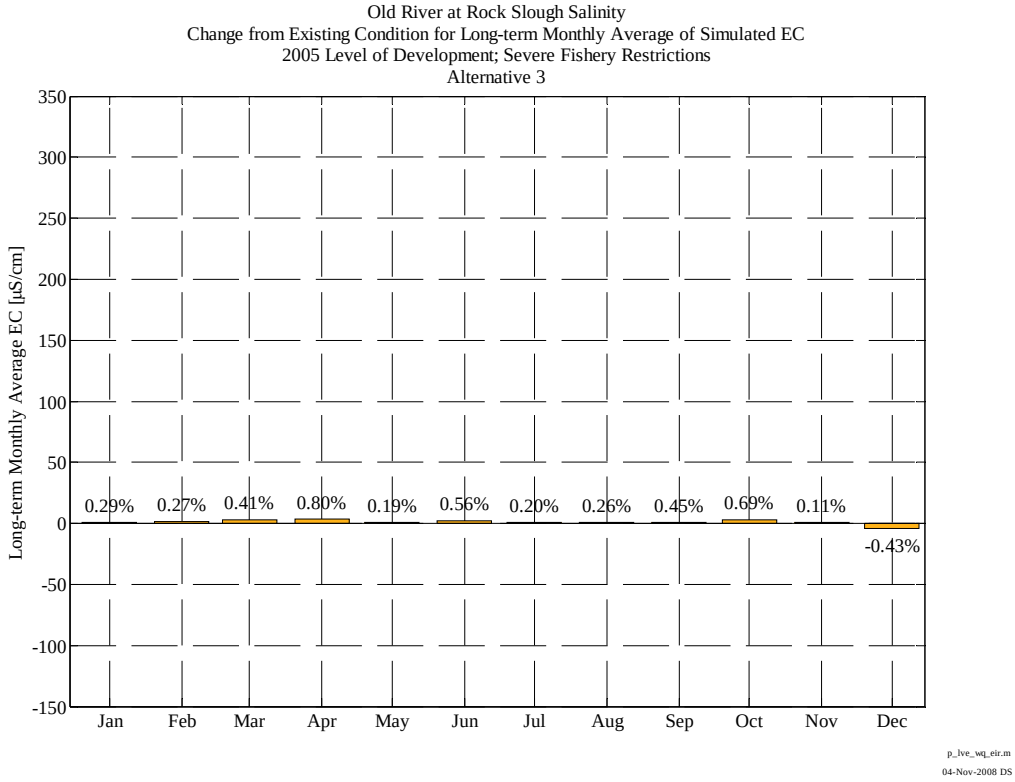
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	232	234	416	609	532	451	462	482	551	771	801	793
1977	1,067	938	980	1,134	760	672	577	579	683	693	764	868
1978	1,092	1,098	815	445	399	476	476	385	308	264	293	492
1979	614	787	905	668	363	315	370	349	278	254	425	754
1980	900	646	430	385	413	439	443	387	318	283	307	571
1981	730	736	924	703	318	321	449	454	330	476	609	749
1982	950	596	217	354	344	396	266	247	259	264	281	263
1983	197	234	375	428	358	287	319	282	260	266	214	195
1984	201	231	324	395	310	257	355	365	296	244	303	617
1985	741	485	224	229	266	415	523	477	340	442	582	751
1986	905	761	718	426	415	365	355	290	270	289	303	494
1987	582	677	958	954	594	405	453	473	384	498	654	811
1988	923	861	997	729	332	427	455	411	393	443	687	865
1989	1,026	990	924	879	726	422	402	360	283	493	649	823
1990	803	830	945	604	312	383	397	407	459	709	784	810
1991	1,059	1,036	961	1,080	921	620	450	381	429	682	749	832
Avg	751	696	695	626	460	416	422	396	365	442	525	668
W/AN/BN	694	622	541	443	372	362	369	329	284	266	304	484
D/C	796	754	814	769	529	457	463	447	428	579	698	811

Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.1%	0.0%	-0.1%	0.2%	0.1%	0.6%	-0.4%	-0.5%	-0.3%	-0.7%
1977	0.4%	0.4%	-3.5%	-1.0%	5.4%	6.6%	5.2%	2.4%	-0.5%	-0.1%	0.7%	0.1%
1978	0.5%	0.7%	0.6%	0.3%	0.0%	0.0%	0.8%	-1.4%	-0.8%	-2.3%	-0.6%	8.4%
1979	13.9%	4.7%	-0.8%	-2.2%	-1.1%	-1.9%	-1.0%	-1.6%	0.5%	0.4%	0.8%	0.6%
1980	-1.5%	-3.0%	-0.5%	2.0%	0.4%	0.0%	0.0%	-2.0%	-0.3%	0.2%	1.3%	2.5%
1981	2.1%	2.6%	1.4%	0.8%	0.2%	-2.3%	-1.1%	-2.2%	0.1%	-1.4%	-0.1%	-1.2%
1982	-0.5%	-0.2%	-0.2%	1.6%	0.5%	-0.2%	0.0%	-0.3%	0.2%	-0.4%	0.7%	0.6%
1983	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.2%	0.1%	0.0%	0.1%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.3%	-2.9%	-1.8%	-0.2%	0.4%	0.1%	0.2%	0.3%
1985	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-3.1%	0.0%	-0.1%	-0.1%	0.1%
1986	0.1%	0.0%	-0.1%	0.0%	-0.1%	0.2%	-0.6%	-2.6%	0.0%	1.7%	1.1%	0.9%
1987	0.3%	-1.0%	-2.0%	0.0%	-0.9%	-0.4%	0.0%	3.6%	5.3%	1.9%	1.3%	1.7%
1988	1.5%	0.8%	2.0%	2.2%	1.5%	4.3%	2.2%	0.2%	4.5%	2.0%	1.4%	0.6%
1989	-0.1%	-0.4%	0.1%	-1.5%	-2.2%	2.5%	4.8%	7.4%	-0.8%	0.8%	0.0%	-0.5%
1990	-6.1%	-3.8%	1.7%	2.9%	0.5%	0.2%	4.4%	2.4%	1.0%	0.8%	-1.5%	-4.3%
1991	0.2%	0.9%	-5.7%	-0.5%	0.5%	0.1%	-0.2%	-0.2%	-0.2%	0.0%	-0.6%	-1.7%
Avg	0.7%	0.1%	-0.4%	0.3%	0.3%	0.4%	0.8%	0.2%	0.6%	0.2%	0.3%	0.5%
W/AN/BN	1.8%	0.3%	-0.1%	0.3%	-0.1%	-0.7%	-0.4%	-1.1%	0.0%	0.0%	0.5%	1.9%
D/C	-0.2%	-0.1%	-0.7%	0.3%	0.5%	1.3%	1.7%	1.2%	1.0%	0.4%	0.1%	-0.7%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.29%
0.27%
0.41%
0.80%
0.19%
0.56%
0.20%
0.26%
0.45%
0.69%
0.11%
-0.43%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
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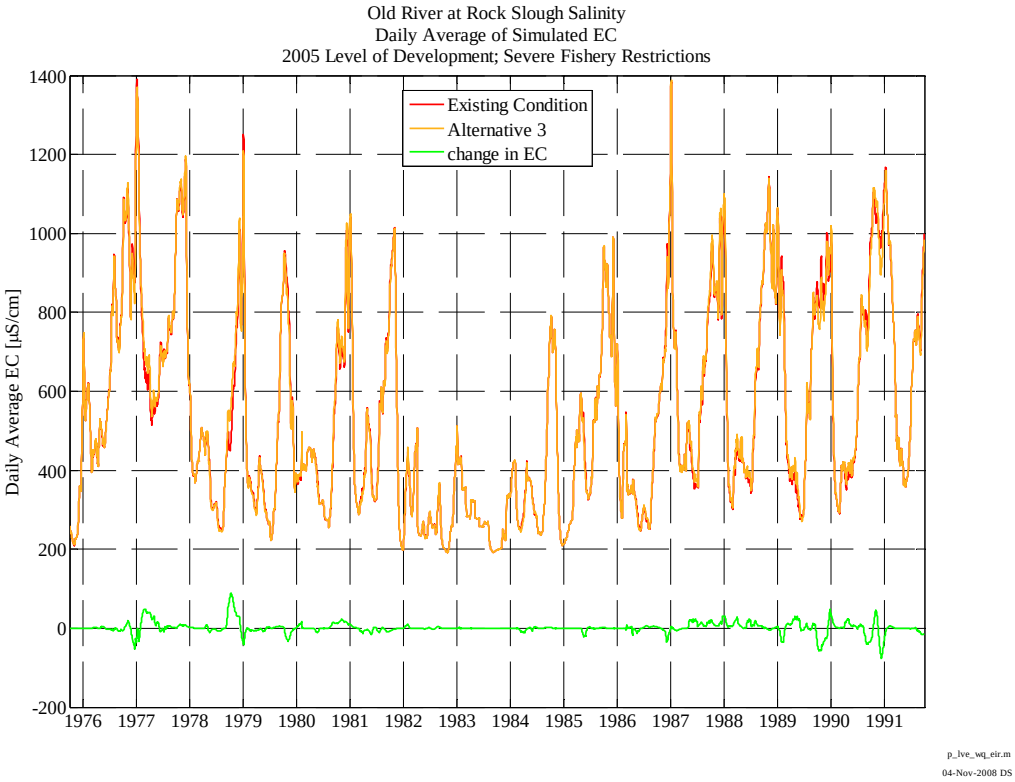
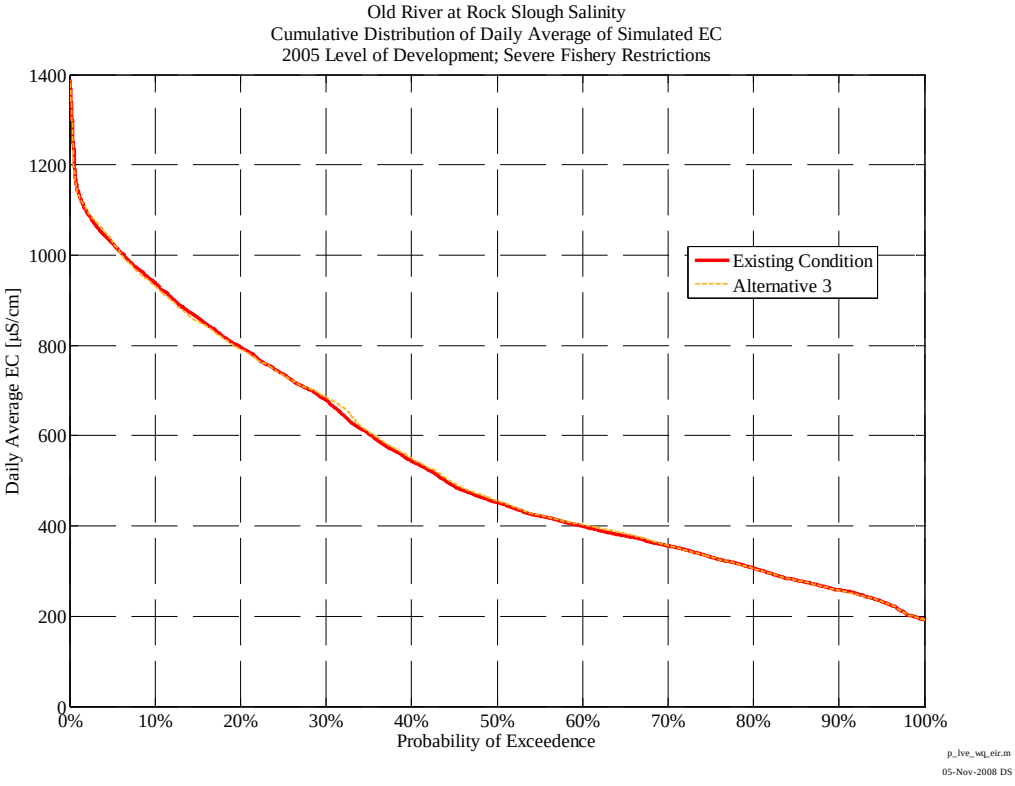
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

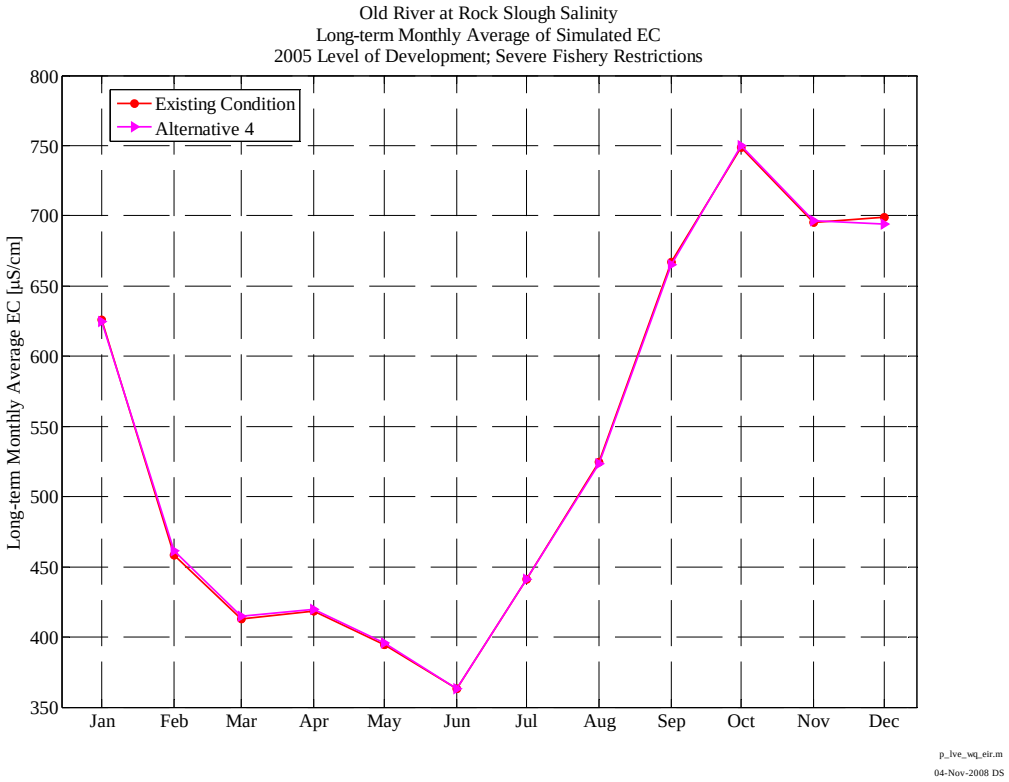
Alternative 4

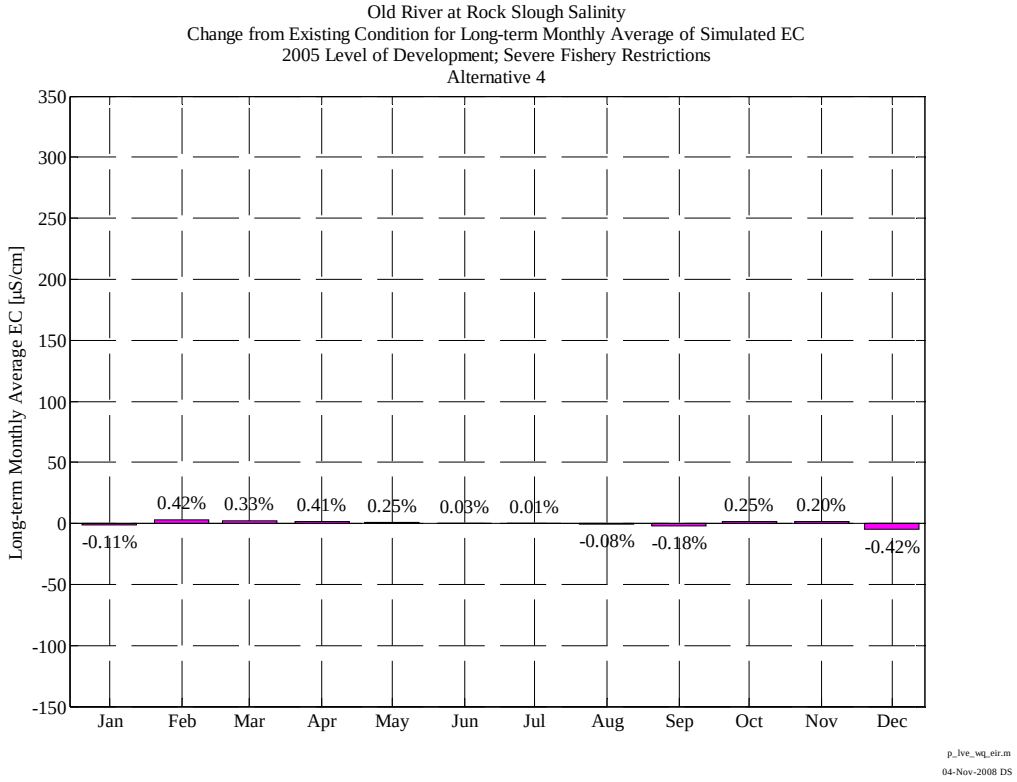
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

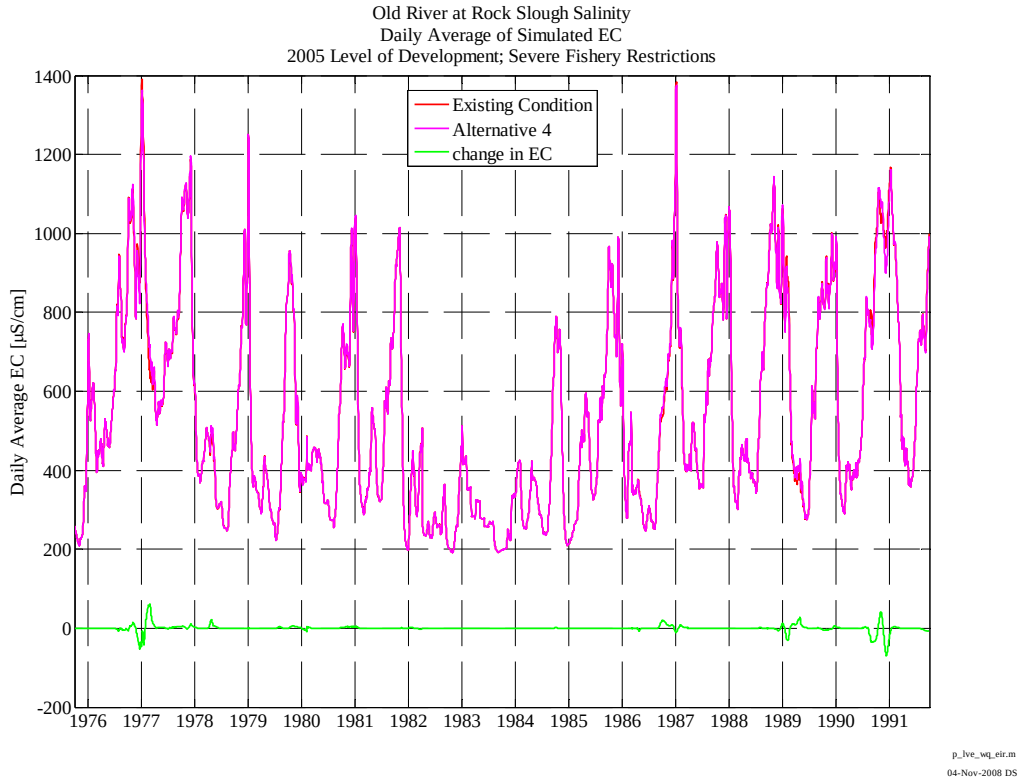
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	232	234	416	610	532	450	462	479	553	772	801	795
1977	1,066	938	980	1,130	771	652	549	567	687	694	762	871
1978	1,090	1,092	817	444	399	476	485	396	311	270	295	455
1979	538	751	912	683	367	320	373	354	276	254	424	750
1980	917	671	434	375	412	439	443	396	319	282	303	558
1981	717	721	915	700	317	328	454	464	330	483	610	757
1982	955	597	217	350	343	395	266	247	258	265	279	261
1983	197	234	375	428	358	287	319	282	260	266	214	195
1984	201	231	324	395	311	265	361	366	295	243	303	616
1985	742	486	224	229	266	415	523	492	340	443	583	750
1986	905	761	719	426	415	364	354	297	271	284	299	498
1987	597	691	980	952	604	407	454	457	365	489	646	797
1988	909	854	976	713	327	409	445	410	376	435	678	860
1989	1,026	991	923	887	728	421	402	343	286	489	649	827
1990	852	860	932	589	311	382	380	398	454	705	782	813
1991	1,060	1,036	965	1,082	919	620	451	382	430	681	752	840
Avg	750	697	694	625	461	415	420	396	363	441	524	665
W/AN/BN	686	620	543	443	372	364	372	334	284	266	302	476
D/C	800	757	812	766	531	454	458	444	424	577	696	812

Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	-0.4%	-0.3%	-0.5%
1977	0.4%	0.4%	-3.6%	-1.3%	7.0%	3.3%	0.2%	0.3%	0.1%	0.1%	0.4%	0.5%
1978	0.4%	0.2%	0.8%	0.2%	0.0%	0.0%	2.5%	1.4%	0.2%	-0.3%	-0.1%	0.1%
1979	0.0%	-0.1%	-0.1%	0.0%	0.0%	-0.2%	-0.2%	0.0%	-0.2%	0.4%	0.5%	0.0%
1980	0.3%	0.7%	0.5%	-0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1981	0.3%	0.4%	0.4%	0.4%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.1%	0.0%	0.4%	0.1%	-0.4%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.1%
1985	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.8%	-0.3%	0.0%	0.0%	0.0%	1.8%
1987	2.8%	1.1%	0.2%	-0.2%	0.8%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	-0.1%
1988	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%
1989	-0.1%	-0.3%	0.1%	-0.7%	-1.9%	2.3%	4.8%	2.3%	0.4%	0.0%	0.1%	-0.1%
1990	-0.5%	-0.4%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	-1.7%	-4.0%
1991	0.3%	0.9%	-5.3%	-0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.8%
Avg	0.2%	0.2%	-0.4%	-0.1%	0.4%	0.3%	0.4%	0.3%	0.0%	0.0%	-0.1%	-0.2%
W/AN/BN	0.1%	0.1%	0.2%	0.0%	0.0%	-0.1%	0.2%	0.2%	0.0%	0.0%	0.1%	0.3%
D/C	0.4%	0.3%	-0.9%	-0.2%	0.7%	0.7%	0.6%	0.3%	0.1%	0.0%	-0.2%	-0.5%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.11%
0.42%
0.33%
0.41%
0.25%
0.03%
0.01%
-0.08%
-0.18%
0.25%
0.20%
-0.42%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Barker Slough at North Bay Aqueduct

Existing Condition

Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	219	212	213	225	235	237	252	267	253	236	223	215
1977	216	220	220	222	245	265	270	273	278	274	263	253
1978	245	242	240	239	239	238	415	541	445	311	242	225
1979	224	225	223	257	416	525	562	551	424	285	229	218
1980	218	212	211	223	237	240	374	448	361	276	233	222
1981	222	224	227	240	294	310	303	299	285	249	226	219
1982	218	216	225	241	277	312	450	554	469	311	239	222
1983	218	217	248	331	413	434	507	609	504	341	247	223
1984	219	220	226	321	383	375	358	327	279	245	227	221
1985	224	224	250	296	309	310	319	326	294	255	232	222
1986	221	223	228	257	362	448	504	551	443	314	248	229
1987	225	226	227	231	255	270	277	290	286	248	224	217
1988	218	219	219	224	245	279	303	346	318	269	239	231
1989	229	231	230	230	230	230	244	274	271	238	221	216
1990	213	211	211	218	239	268	286	324	318	278	248	233
1991	229	229	230	230	230	231	232	267	303	291	265	253
Avg	222	222	227	249	288	311	354	390	346	276	238	226
W/AN/BN	223	222	229	267	332	368	453	511	418	297	238	223
D/C	222	222	225	235	254	267	276	296	290	260	238	229

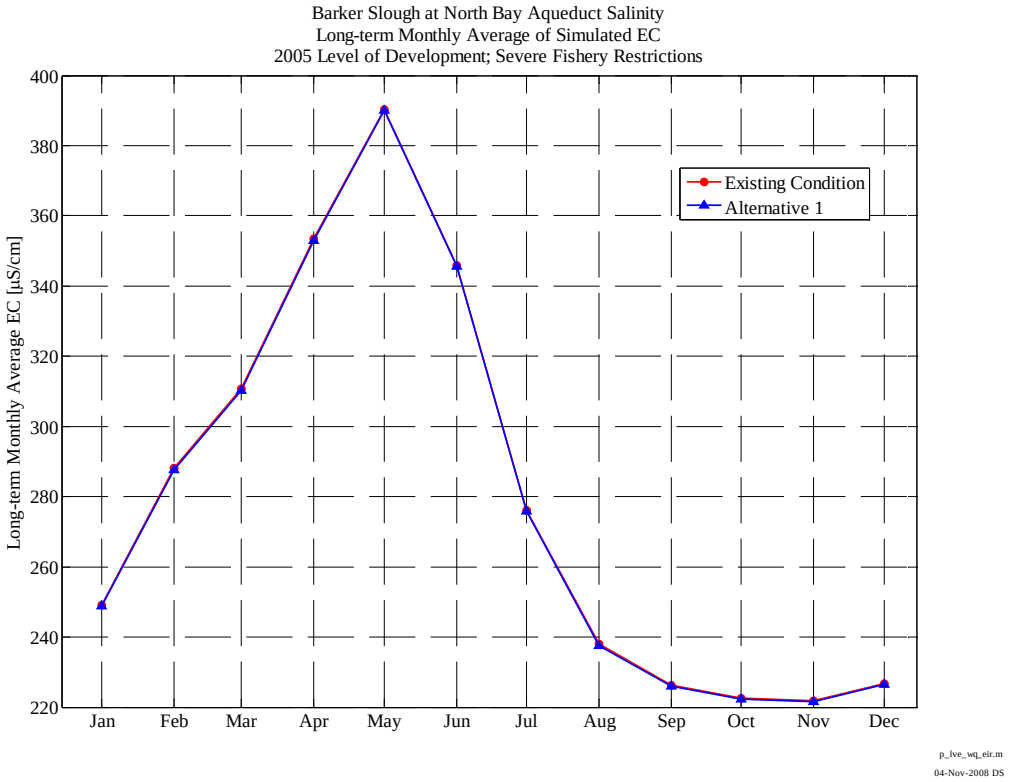
Alternative 1

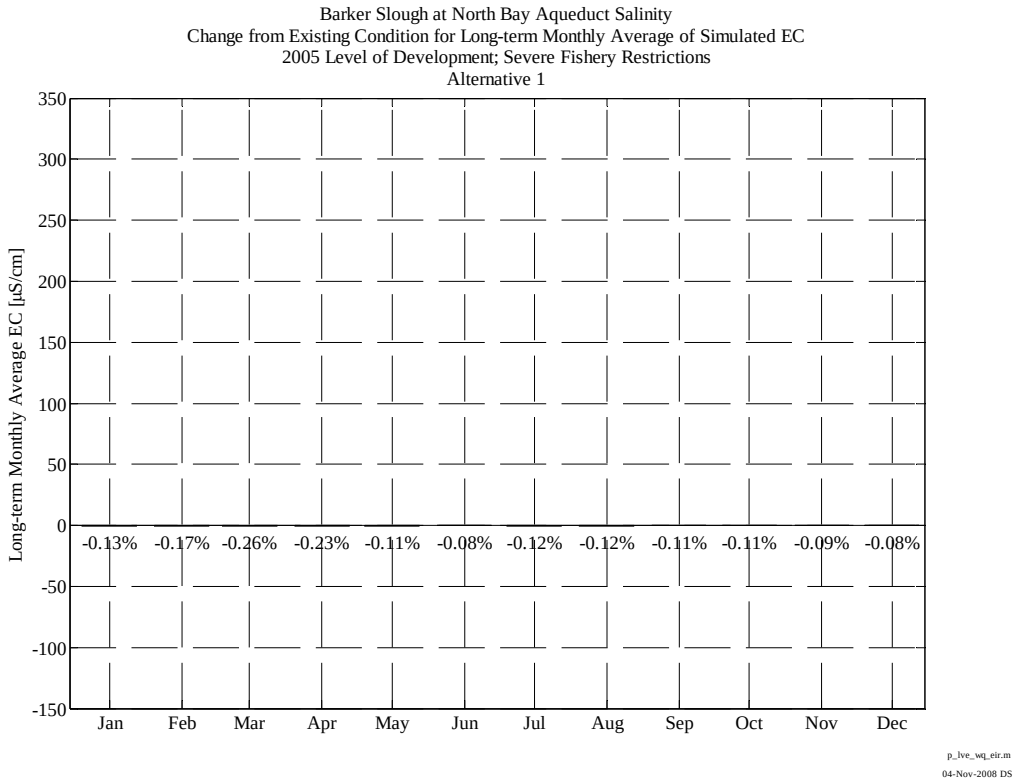
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

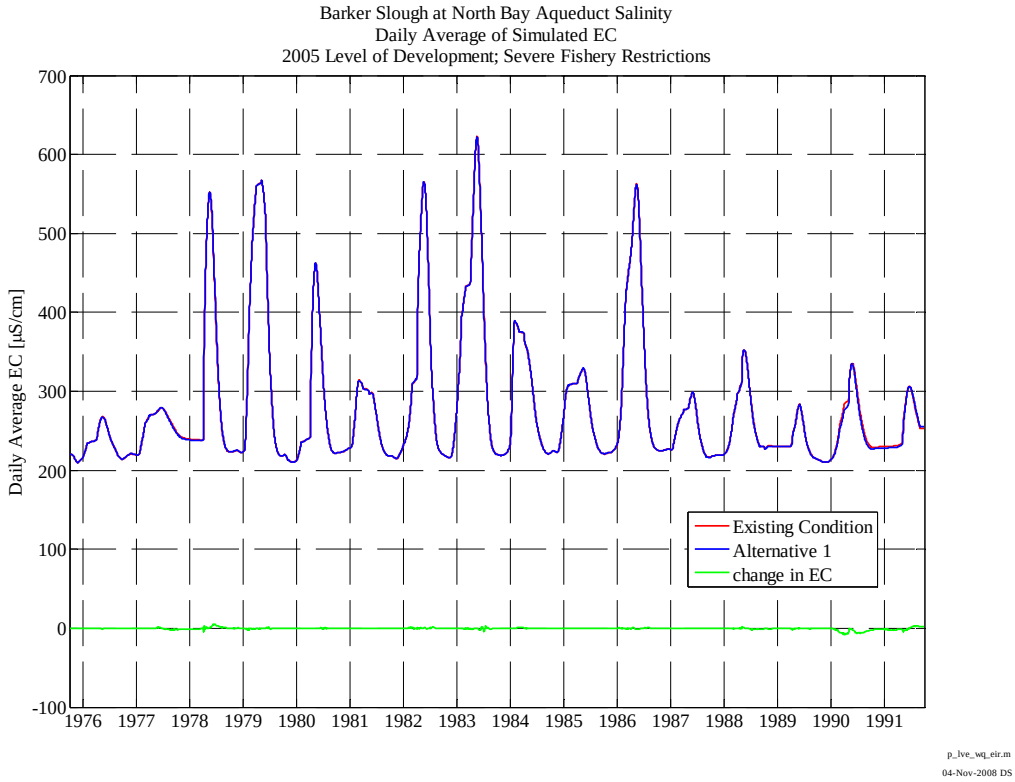
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	219	212	213	225	235	237	252	266	253	236	223	215
1977	216	220	220	222	245	264	270	273	279	273	262	251
1978	244	240	239	238	238	238	416	542	450	314	243	225
1979	224	225	223	256	415	525	562	551	424	284	229	218
1980	218	212	211	222	236	239	373	448	361	276	233	222
1981	222	224	227	240	294	310	303	298	285	249	226	219
1982	218	216	225	241	277	313	450	554	469	311	239	222
1983	218	217	248	331	412	433	505	608	504	340	247	223
1984	219	220	226	321	384	375	359	327	279	244	227	221
1985	224	224	250	296	309	310	319	326	294	254	232	222
1986	221	223	228	257	362	448	505	550	443	314	248	229
1987	225	225	227	231	255	270	277	290	286	247	224	217
1988	218	219	219	224	245	279	303	346	318	267	238	230
1989	228	230	230	230	230	230	243	273	271	238	221	215
1990	213	210	211	217	236	262	279	323	313	272	243	230
1991	227	228	228	228	229	229	231	265	303	294	268	256
Avg	222	222	227	249	288	310	353	390	346	276	238	226
W/AN/BN	223	222	229	267	332	367	453	511	418	298	238	223
D/C	221	221	225	235	253	266	275	296	289	259	237	228

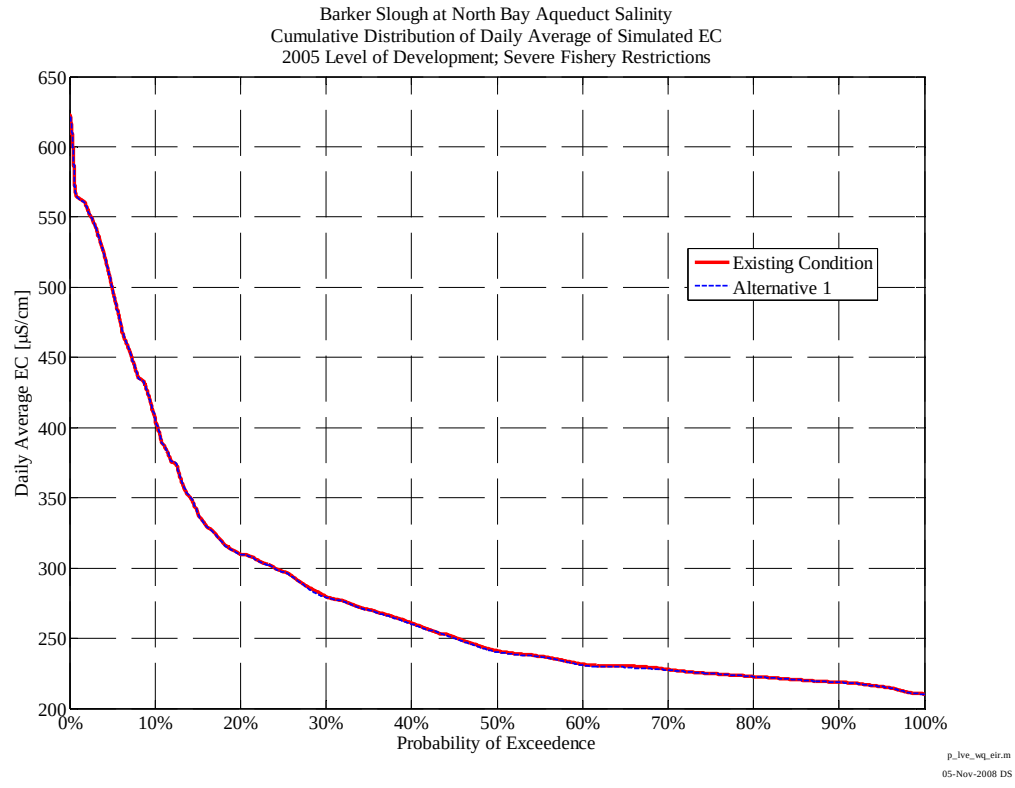
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%
1977	0.1%	0.1%	0.1%	0.1%	0.0%	-0.1%	-0.1%	0.1%	0.1%	-0.3%	-0.6%	-0.7%
1978	-0.6%	-0.6%	-0.5%	-0.4%	-0.3%	-0.3%	0.1%	0.1%	1.0%	0.9%	0.5%	0.1%
1979	0.0%	0.1%	0.1%	-0.2%	-0.2%	-0.2%	-0.1%	0.0%	0.1%	-0.2%	0.0%	0.0%
1980	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	-0.1%	0.2%	0.1%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	0.0%	-0.2%	-0.2%	-0.1%
1984	0.0%	0.0%	0.0%	-0.1%	0.1%	0.1%	0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	-0.1%	0.0%	0.0%
1986	0.0%	0.0%	0.1%	0.0%	-0.1%	-0.1%	0.0%	-0.2%	-0.1%	0.1%	0.2%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%
1988	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.1%	-0.1%	-0.6%	-0.4%	-0.3%
1989	-0.3%	-0.3%	-0.3%	-0.2%	-0.2%	-0.2%	-0.4%	-0.2%	0.0%	-0.1%	-0.3%	-0.1%
1990	-0.1%	-0.1%	-0.1%	-0.3%	-1.2%	-2.3%	-2.3%	-0.5%	-1.5%	-2.2%	-2.0%	-1.4%
1991	-0.8%	-0.7%	-0.7%	-0.8%	-0.8%	-0.8%	-0.7%	-0.9%	-0.2%	0.7%	1.0%	1.0%
Avg	-0.1%	-0.1%	-0.1%	-0.1%	-0.2%	-0.3%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
W/AN/BN	-0.1%	-0.1%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
D/C	-0.1%	-0.1%	-0.1%	-0.2%	-0.2%	-0.4%	-0.4%	-0.2%	-0.2%	-0.3%	-0.3%	-0.2%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Existing Condition
Alternative 1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.13%
-0.17%
-0.26%
-0.23%
-0.11%
-0.08%
-0.12%
-0.12%
-0.11%
-0.11%
-0.09%
-0.08%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 1
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 1
p_lve_wq_eir.m
05-Nov-2008 DS

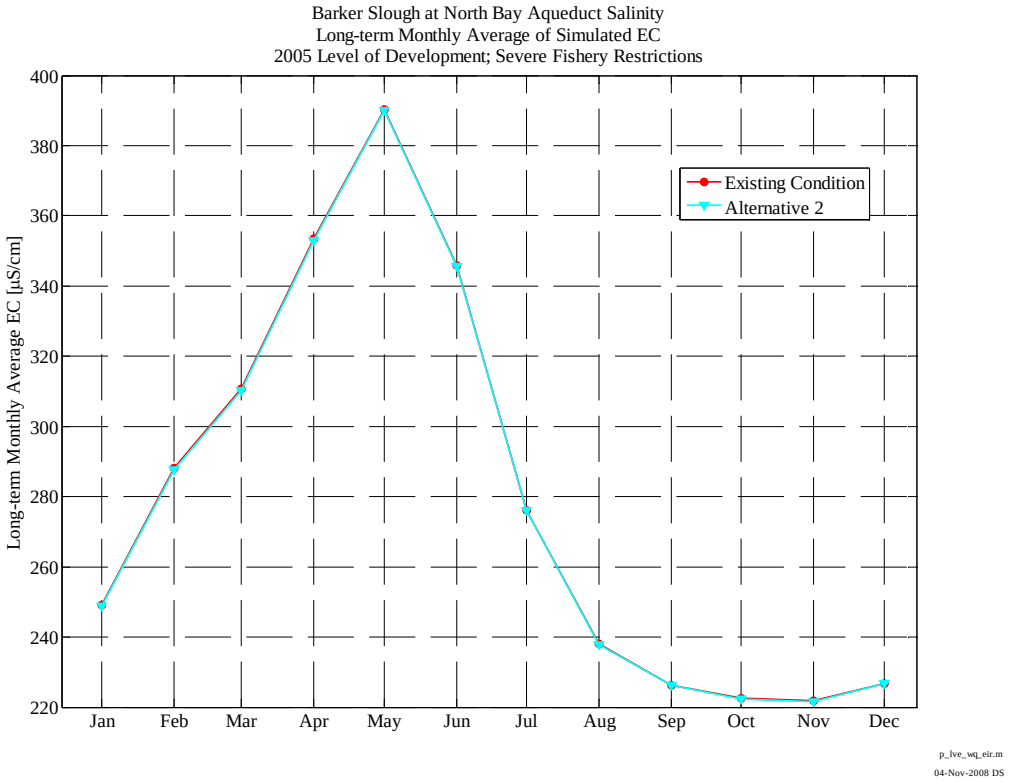
Alternative 2

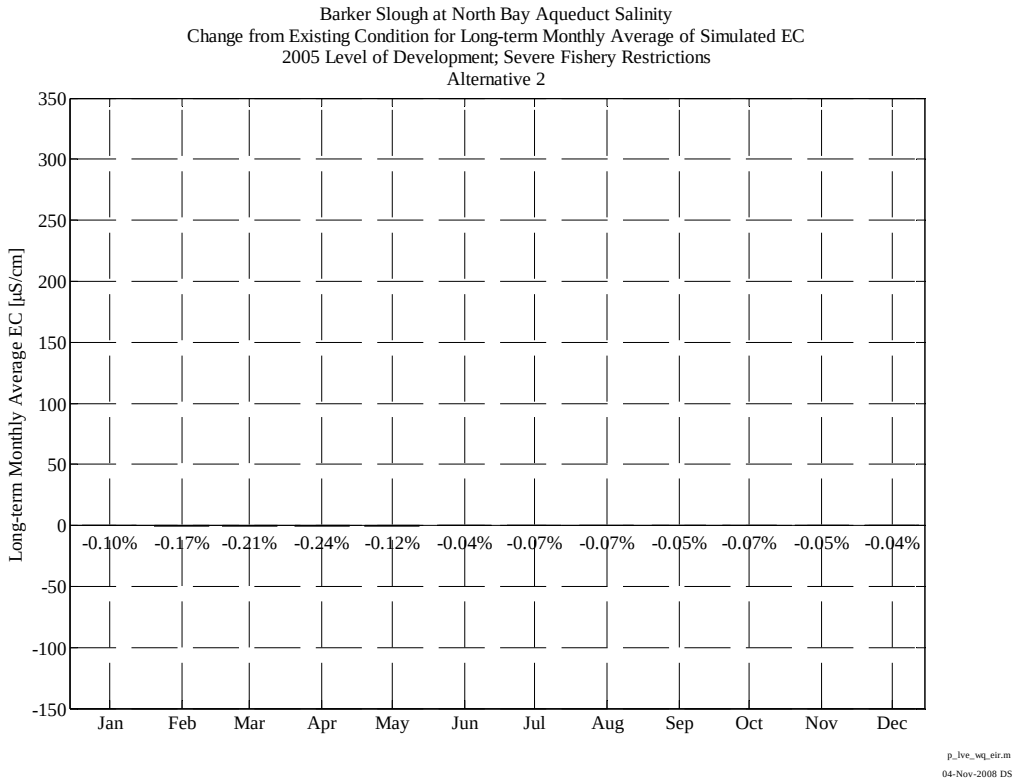
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

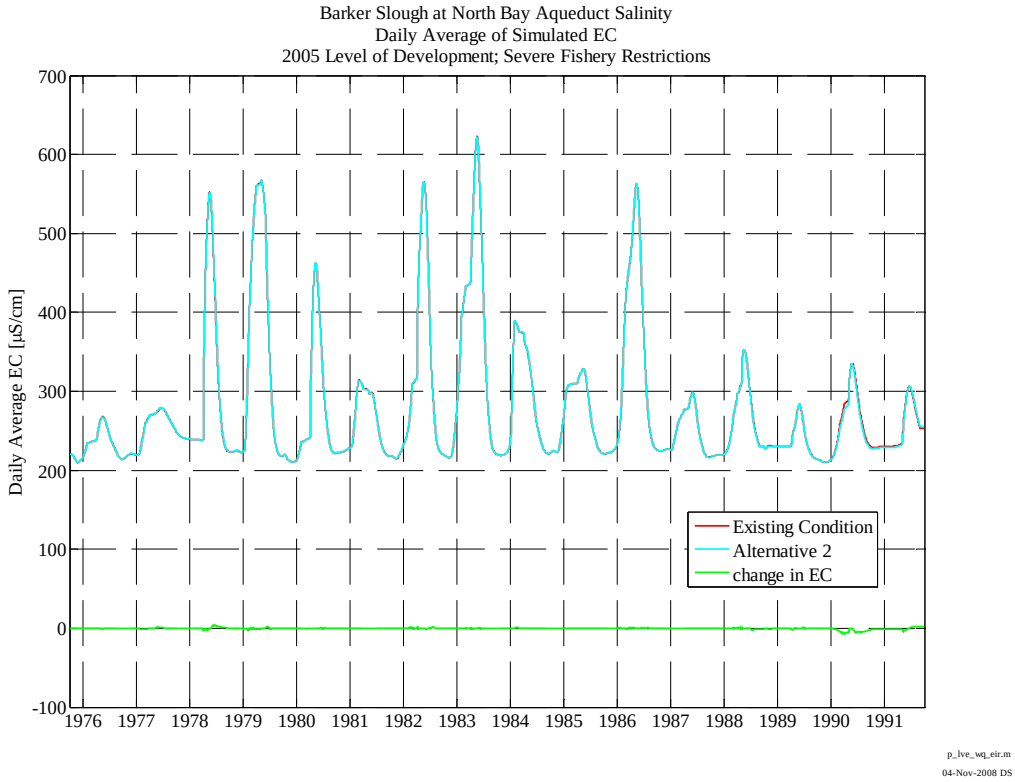
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	219	212	213	225	235	237	252	266	253	236	223	215
1977	216	220	220	222	244	264	270	273	279	274	263	253
1978	245	241	240	239	239	238	413	541	449	313	243	225
1979	224	225	223	256	415	525	561	551	425	284	229	218
1980	218	212	211	222	236	239	373	448	361	276	233	222
1981	222	224	227	240	294	310	302	298	285	249	226	219
1982	218	216	225	241	277	313	450	554	469	311	239	222
1983	218	217	248	331	412	434	506	608	504	341	247	223
1984	219	220	226	321	384	375	359	327	279	244	227	221
1985	224	224	250	296	309	310	319	326	294	255	232	222
1986	221	223	228	257	362	448	505	551	443	314	248	229
1987	225	225	227	231	255	270	277	290	286	247	224	217
1988	218	219	219	224	244	279	303	346	317	267	238	230
1989	228	230	230	230	230	230	243	273	271	238	221	215
1990	213	210	211	218	237	263	280	323	314	273	244	231
1991	227	228	229	229	229	229	231	265	303	293	267	255
Avg	222	222	227	249	288	310	353	390	346	276	238	226
W/AN/BN	223	222	229	267	332	368	453	511	418	298	238	223
D/C	221	221	225	235	253	266	275	296	289	259	238	229

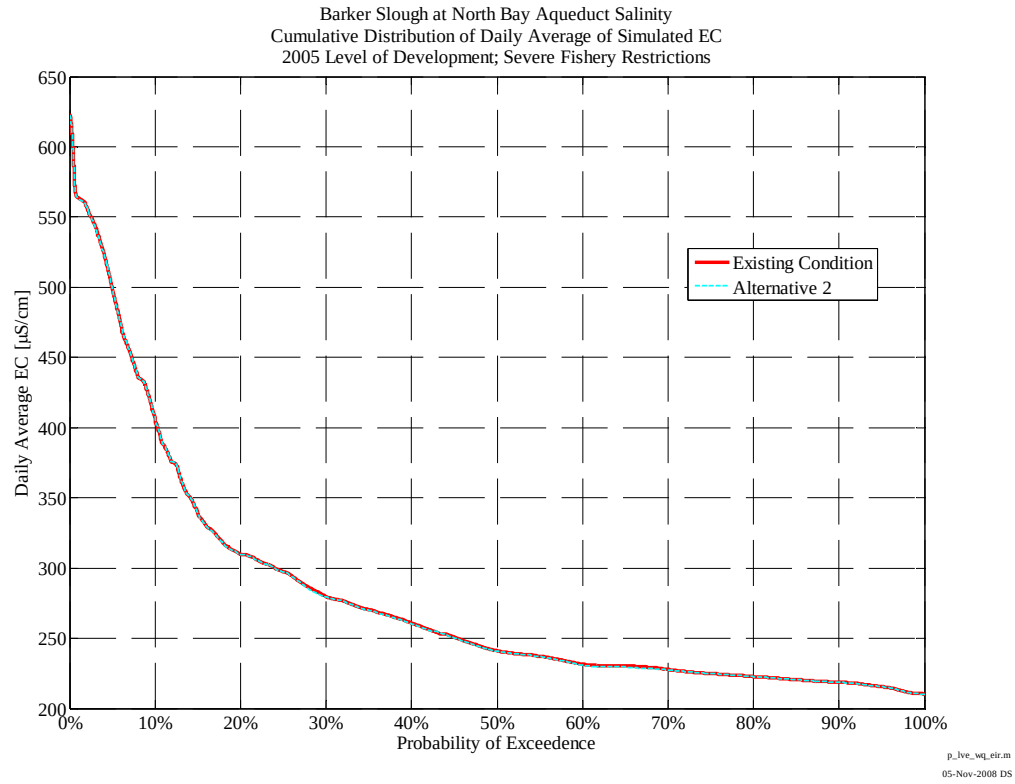
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%
1977	0.1%	0.1%	0.1%	-0.1%	-0.6%	-0.3%	-0.1%	0.1%	0.3%	0.1%	0.0%	-0.1%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.1%	0.8%	0.7%	0.4%	0.1%
1979	0.0%	0.1%	0.1%	-0.2%	-0.2%	-0.1%	-0.2%	0.0%	0.2%	-0.1%	0.0%	0.0%
1980	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.1%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	-0.1%	0.1%	0.1%	0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1986	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%
1988	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.0%	-0.1%	-0.7%	-0.4%	-0.4%
1989	-0.3%	-0.3%	-0.3%	-0.2%	-0.2%	-0.2%	-0.4%	-0.1%	0.1%	-0.1%	-0.3%	-0.1%
1990	-0.1%	-0.1%	-0.1%	-0.3%	-1.0%	-2.0%	-2.0%	-0.4%	-1.3%	-1.8%	-1.7%	-1.1%
1991	-0.7%	-0.6%	-0.6%	-0.6%	-0.7%	-0.6%	-0.5%	-0.9%	-0.2%	0.6%	0.8%	0.8%
Avg	-0.1%	-0.1%	0.0%	-0.1%	-0.2%	-0.2%	-0.2%	-0.1%	0.0%	-0.1%	-0.1%	-0.1%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.1%	0.0%
D/C	-0.1%	-0.1%	-0.1%	-0.1%	-0.3%	-0.4%	-0.3%	-0.2%	-0.2%	-0.2%	-0.2%	-0.1%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.10%
-0.17%
-0.21%
-0.24%
-0.12%
-0.04%
-0.07%
-0.07%
-0.05%
-0.07%
-0.05%
-0.04%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 2
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 2
p_lve_wq_eir.m
05-Nov-2008 DS

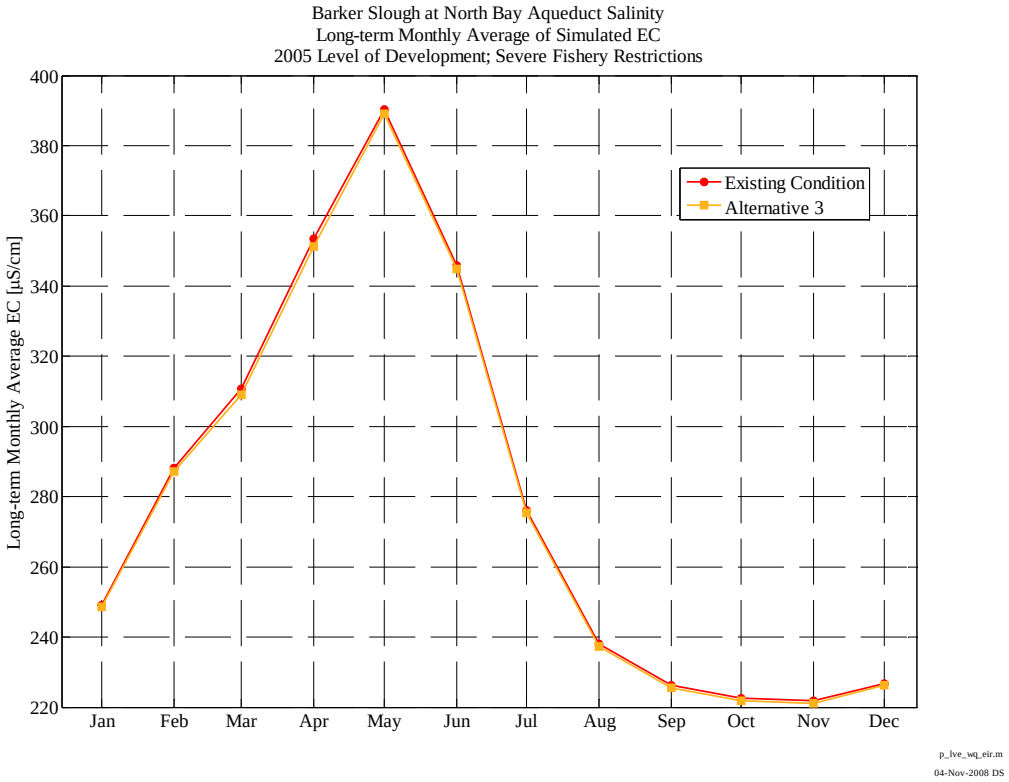
Alternative 3

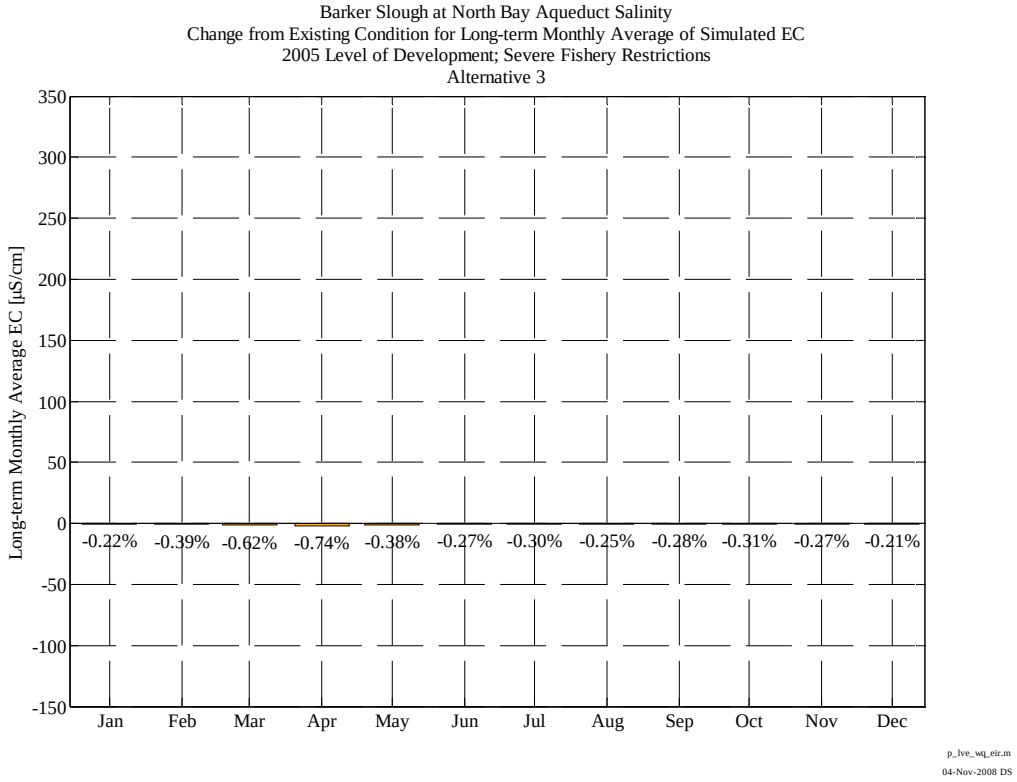
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

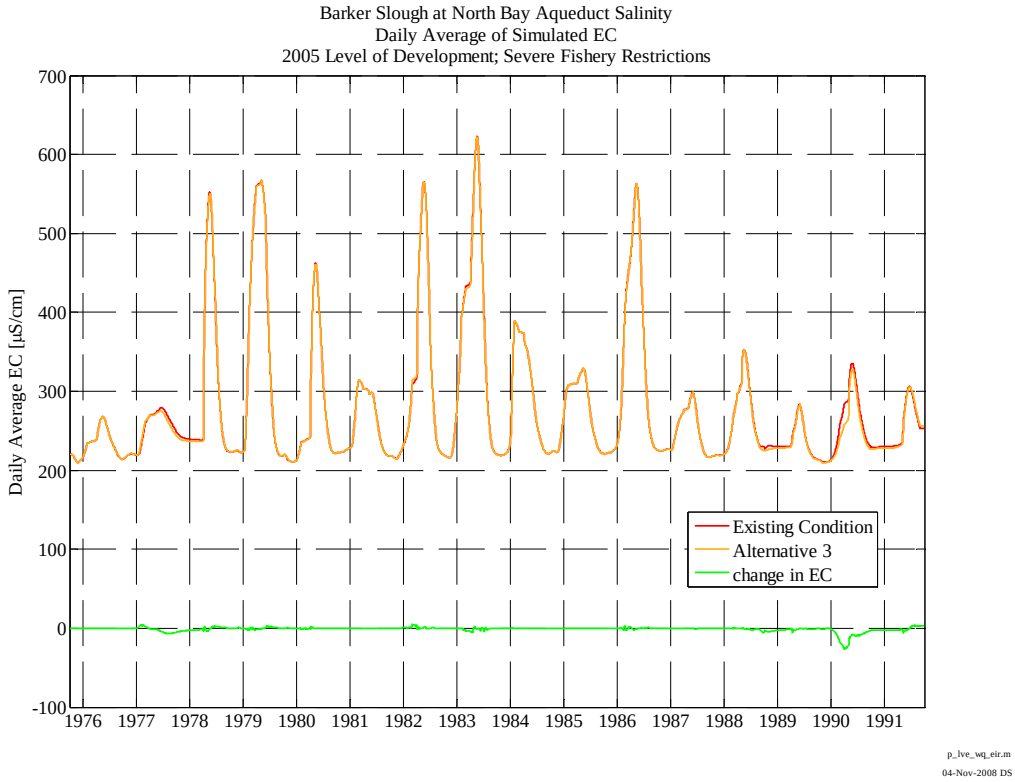
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	219	212	213	225	235	237	252	267	253	236	223	215
1977	216	220	220	223	249	265	270	272	275	268	257	247
1978	241	238	237	237	237	237	414	540	448	313	243	225
1979	224	225	223	256	415	525	561	551	426	286	230	219
1980	218	212	211	222	236	239	374	448	361	276	233	222
1981	222	224	227	240	294	310	303	298	285	249	226	219
1982	218	216	225	241	278	317	450	554	469	311	239	222
1983	218	217	248	331	411	431	504	609	503	339	247	223
1984	219	219	226	321	384	375	358	327	279	245	227	221
1985	224	224	250	296	309	310	319	326	294	255	232	222
1986	221	223	228	257	362	448	504	550	443	314	248	229
1987	225	226	227	231	255	270	277	290	286	248	224	217
1988	218	219	219	224	245	279	303	345	316	267	238	227
1989	225	227	228	228	228	229	242	272	271	238	220	215
1990	212	210	211	216	229	248	261	313	309	269	242	229
1991	227	228	228	228	228	229	230	265	302	294	268	257
Avg	222	221	226	249	287	309	351	389	345	275	237	226
W/AN/BN	223	221	228	267	332	367	452	511	418	298	238	223
D/C	221	221	225	235	252	264	273	294	288	258	237	228

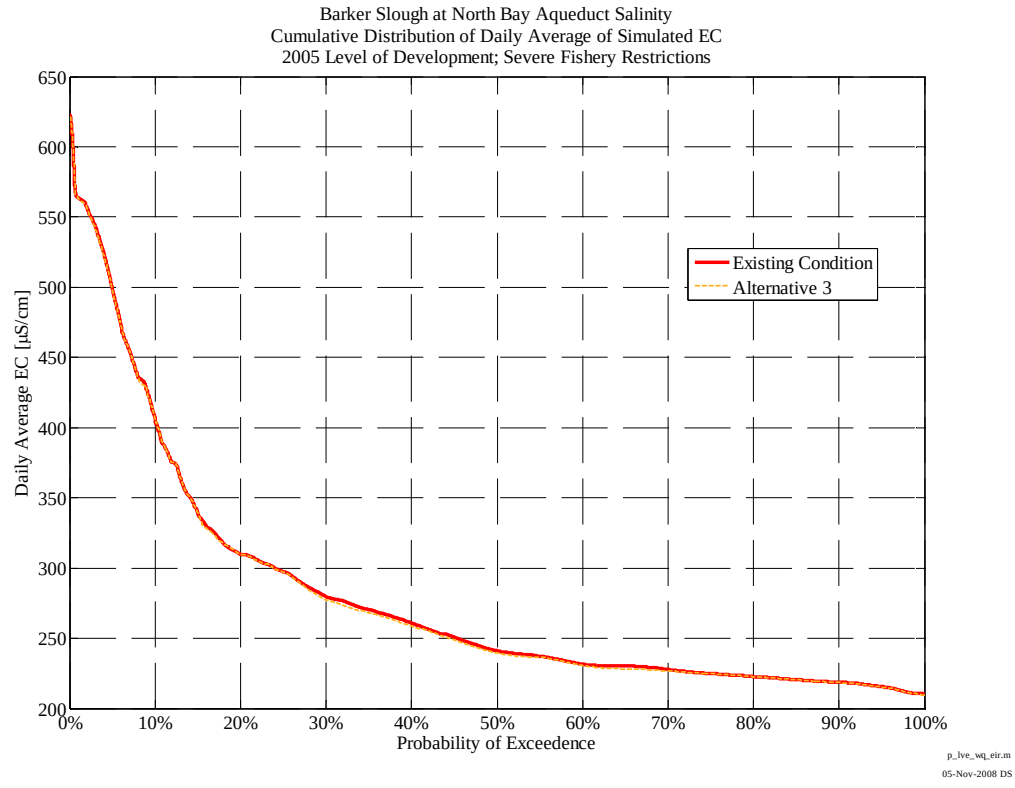
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.1%	0.1%	0.1%	0.8%	1.4%	0.3%	-0.3%	-0.5%	-1.3%	-2.2%	-2.5%	-2.3%
1978	-1.8%	-1.4%	-1.2%	-1.0%	-0.9%	-0.7%	-0.4%	-0.3%	0.5%	0.6%	0.4%	0.1%
1979	0.0%	0.1%	0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.1%	0.5%	0.5%	0.3%	0.1%
1980	0.1%	0.1%	0.0%	-0.2%	-0.3%	-0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	0.0%
1982	-0.1%	-0.1%	0.1%	0.2%	0.4%	1.3%	0.0%	0.1%	0.0%	0.1%	0.1%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.8%	-0.6%	0.0%	-0.2%	-0.5%	-0.2%	0.0%
1984	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.0%
1987	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	0.0%	0.0%	0.0%
1988	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	-0.5%	-0.7%	-0.4%	-1.7%
1989	-1.7%	-1.8%	-1.3%	-1.1%	-0.9%	-0.6%	-1.0%	-0.5%	-0.1%	-0.3%	-0.6%	-0.4%
1990	-0.3%	-0.4%	-0.3%	-1.1%	-4.5%	-7.7%	-8.6%	-3.4%	-2.8%	-3.1%	-2.5%	-1.7%
1991	-1.0%	-0.8%	-0.9%	-1.0%	-1.0%	-1.0%	-0.8%	-1.0%	-0.3%	0.9%	1.2%	1.3%
Avg	-0.3%	-0.3%	-0.2%	-0.2%	-0.4%	-0.6%	-0.7%	-0.4%	-0.3%	-0.3%	-0.2%	-0.3%
W/AN/BN	-0.3%	-0.2%	-0.1%	-0.2%	-0.2%	-0.1%	-0.2%	-0.1%	0.1%	0.1%	0.1%	0.0%
D/C	-0.3%	-0.3%	-0.3%	-0.3%	-0.5%	-1.0%	-1.2%	-0.6%	-0.6%	-0.6%	-0.5%	-0.5%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.22%
-0.39%
-0.62%
-0.74%
-0.38%
-0.27%
-0.30%
-0.25%
-0.28%
-0.31%
-0.27%
-0.21%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 3
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 3
p_lve_wq_eir.m
05-Nov-2008 DS

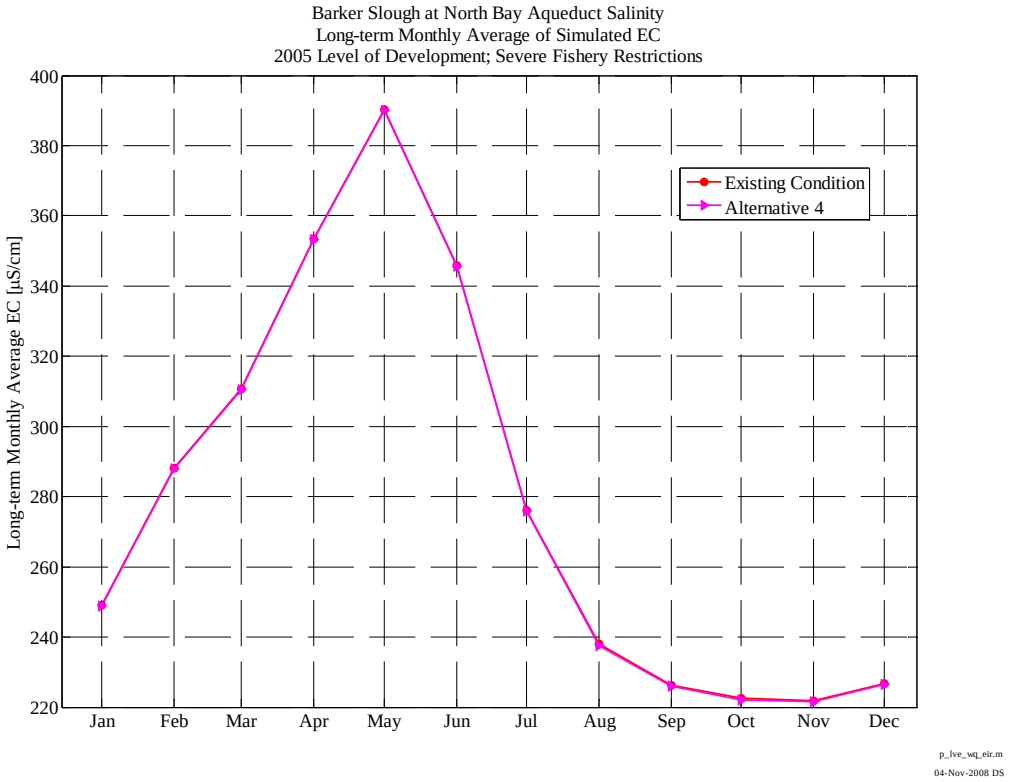
Alternative 4

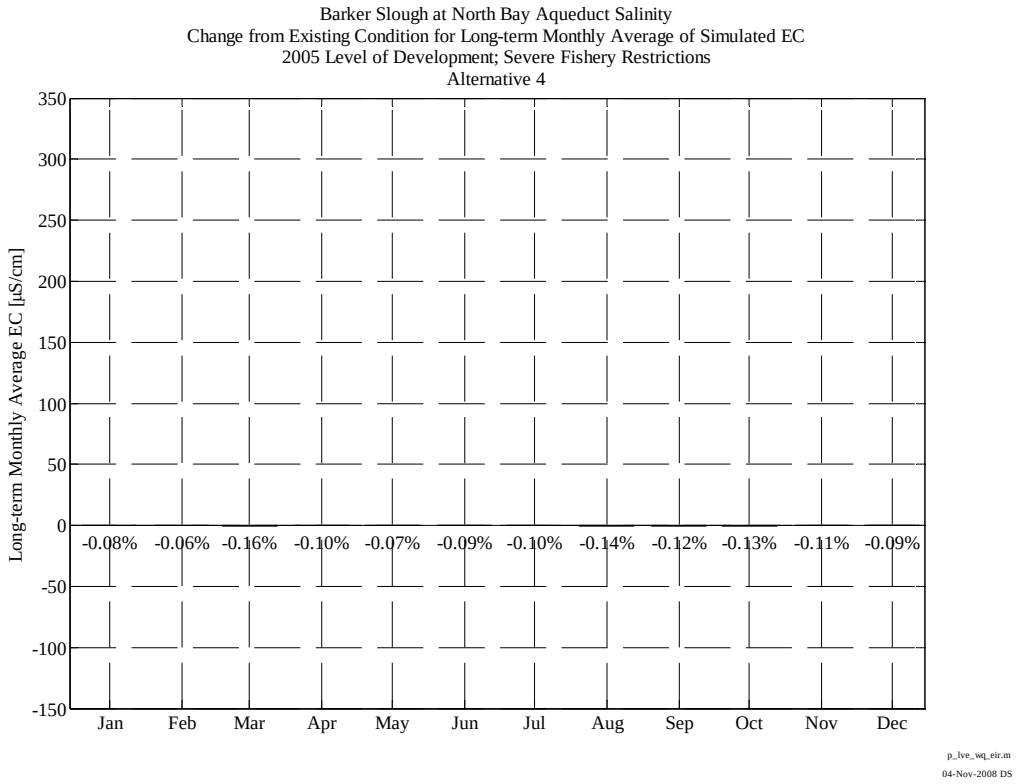
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

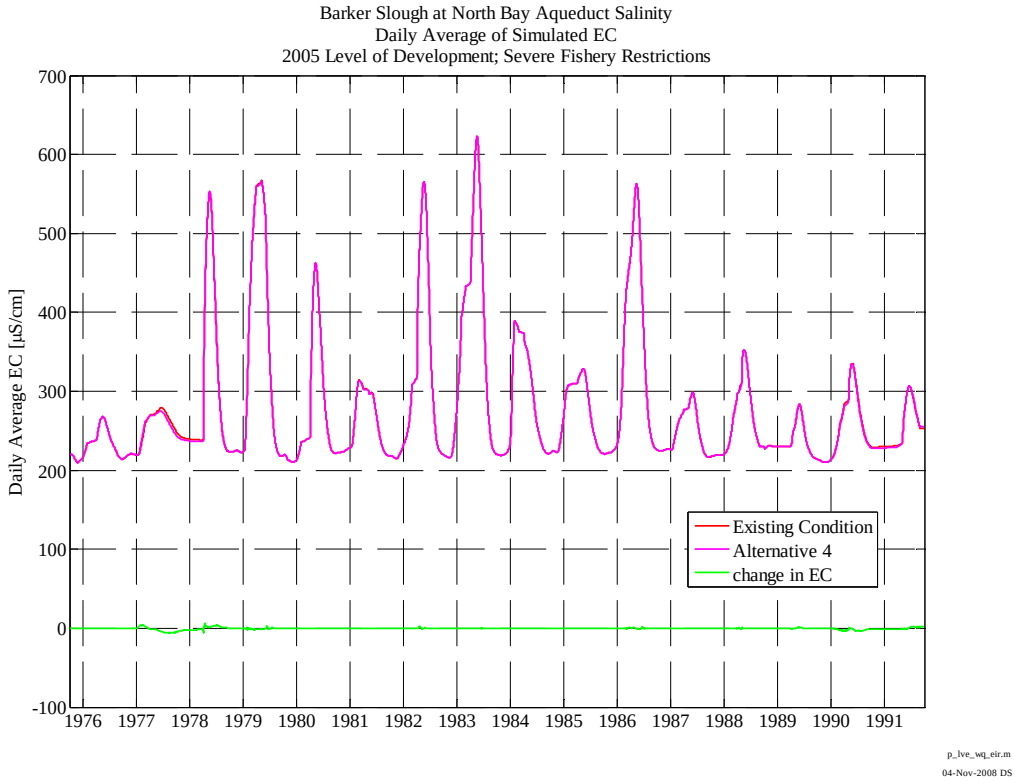
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	219	212	213	225	235	237	252	267	253	236	223	215
1977	216	220	220	223	249	265	269	271	274	269	258	248
1978	242	239	238	237	237	237	418	543	448	314	243	225
1979	224	225	223	257	415	524	561	550	424	285	229	218
1980	218	212	211	223	237	240	374	448	361	276	233	222
1981	222	224	227	240	294	310	302	298	285	249	226	219
1982	218	216	225	241	276	313	451	553	469	311	239	222
1983	218	217	248	331	413	434	507	609	504	340	247	223
1984	219	220	226	321	383	375	358	327	279	245	227	221
1985	224	224	250	296	309	310	319	326	294	255	232	222
1986	221	223	228	257	362	448	505	550	443	314	248	229
1987	225	226	227	231	255	270	277	290	286	248	224	217
1988	218	219	219	224	244	279	303	345	318	269	239	230
1989	229	231	230	230	230	230	244	274	271	238	221	216
1990	213	210	211	218	238	266	283	324	316	275	246	232
1991	228	228	228	228	229	229	231	266	304	293	266	255
Avg	222	222	227	249	288	310	353	390	346	276	238	226
W/AN/BN	223	222	228	267	332	367	453	511	418	298	238	223
D/C	222	222	225	235	254	266	276	296	289	259	237	228

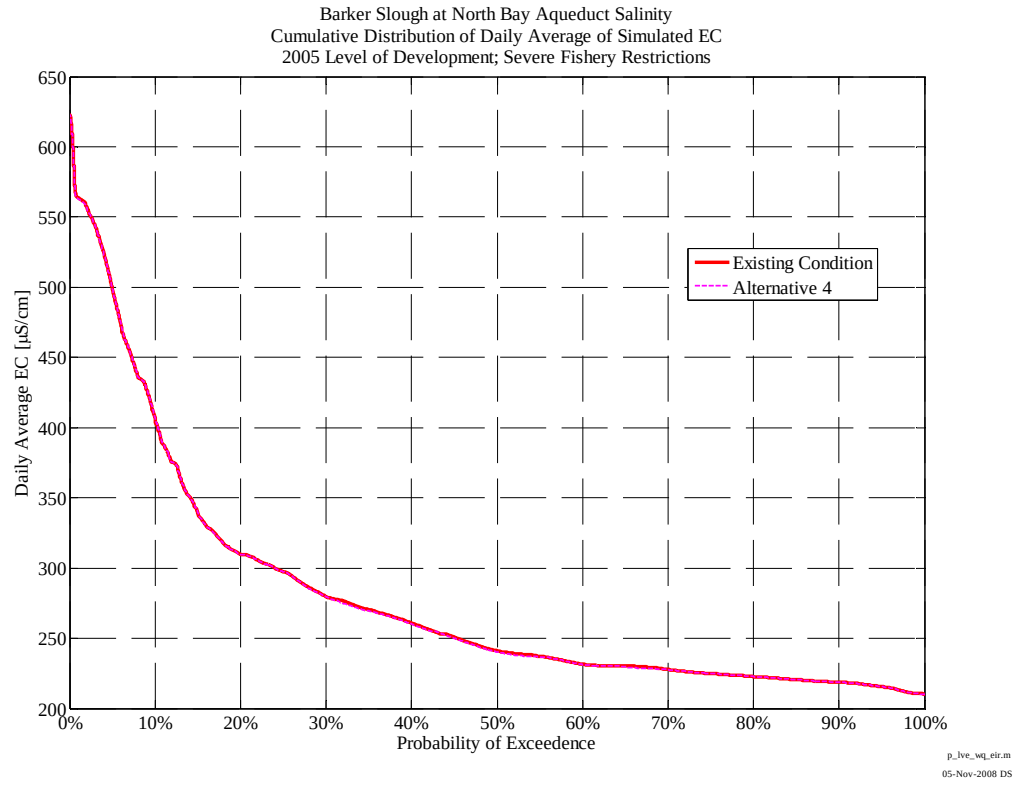
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.1%	0.1%	0.1%	0.8%	1.4%	0.3%	-0.4%	-0.7%	-1.4%	-2.0%	-2.2%	-2.0%
1978	-1.5%	-1.2%	-1.0%	-0.9%	-0.8%	-0.6%	0.6%	0.3%	0.7%	1.0%	0.5%	0.2%
1979	0.1%	0.1%	0.1%	-0.2%	-0.2%	-0.3%	-0.3%	-0.2%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	0.1%	0.0%	-0.1%	0.0%
1990	0.0%	-0.1%	0.0%	-0.2%	-0.5%	-1.0%	-1.0%	0.0%	-0.8%	-1.1%	-1.1%	-0.6%
1991	-0.6%	-0.6%	-0.7%	-0.7%	-0.7%	-0.7%	-0.5%	-0.4%	0.1%	0.6%	0.5%	0.6%
Avg	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
W/AN/BN	-0.2%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%
D/C	-0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.2%	-0.2%	-0.1%	-0.2%	-0.3%	-0.3%	-0.2%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Existing Condition
Alternative 4
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.08%
-0.06%
-0.16%
-0.10%
-0.07%
-0.09%
-0.10%
-0.14%
-0.12%
-0.13%
-0.11%
-0.09%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 4
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 4
p_lve_wq_eir.m
05-Nov-2008 DS

Cache Slough at City of Vallejo Intake

Existing Condition

Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	211	248	236	215	208	205	197	197
1977	202	208	209	209	210	255	241	217	208	204	202	202
1978	206	215	386	729	792	792	634	386	271	213	205	205
1979	205	208	210	647	763	589	412	307	236	209	202	202
1980	204	204	328	641	758	657	447	310	244	211	204	204
1981	205	209	211	424	314	230	277	240	213	207	200	200
1982	201	203	428	710	667	677	730	561	287	217	206	204
1983	203	203	204	705	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	293	276	231	211	205	201	202
1985	204	204	205	205	206	218	303	249	213	206	200	200
1986	202	206	208	508	743	788	587	349	259	215	206	205
1987	206	210	211	211	212	214	264	232	210	203	197	198
1988	201	205	207	574	648	392	298	242	213	204	200	201
1989	206	210	212	213	214	233	264	232	207	203	197	197
1990	197	201	205	206	207	249	308	245	215	207	201	202
1991	205	210	212	214	216	235	327	289	224	207	203	204
Avg	203	207	258	435	463	429	393	297	231	209	202	201
W/AN/BN	203	206	323	642	711	656	538	370	256	213	204	203
D/C	203	207	208	274	271	253	280	240	212	205	200	200

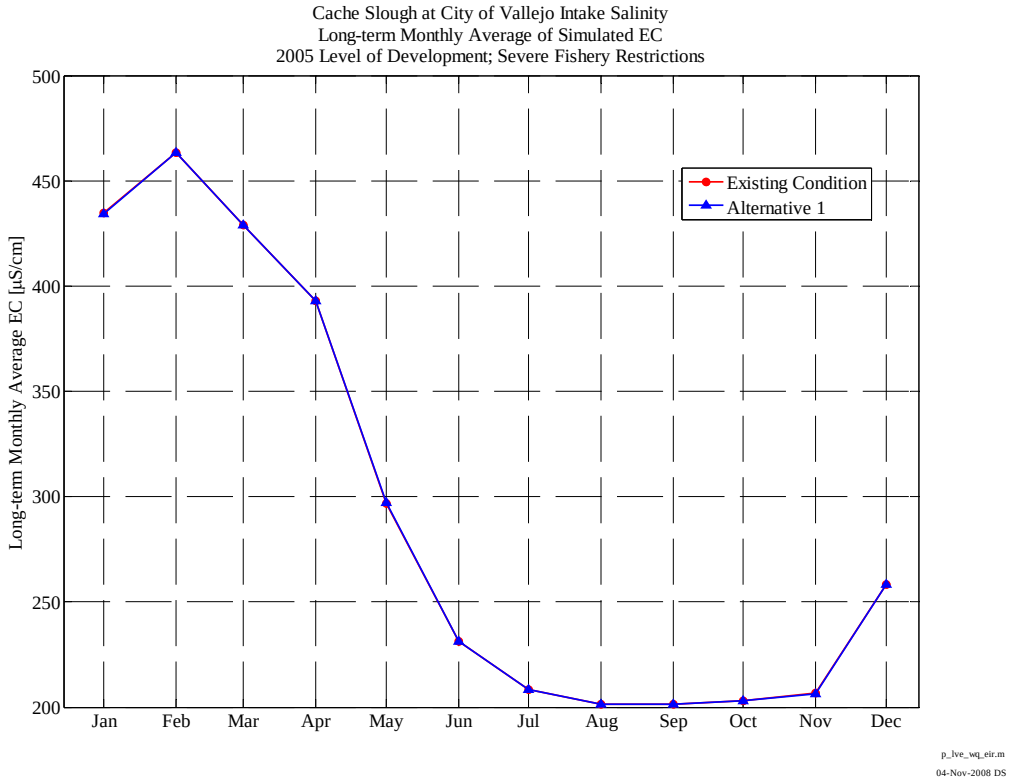
Alternative 1

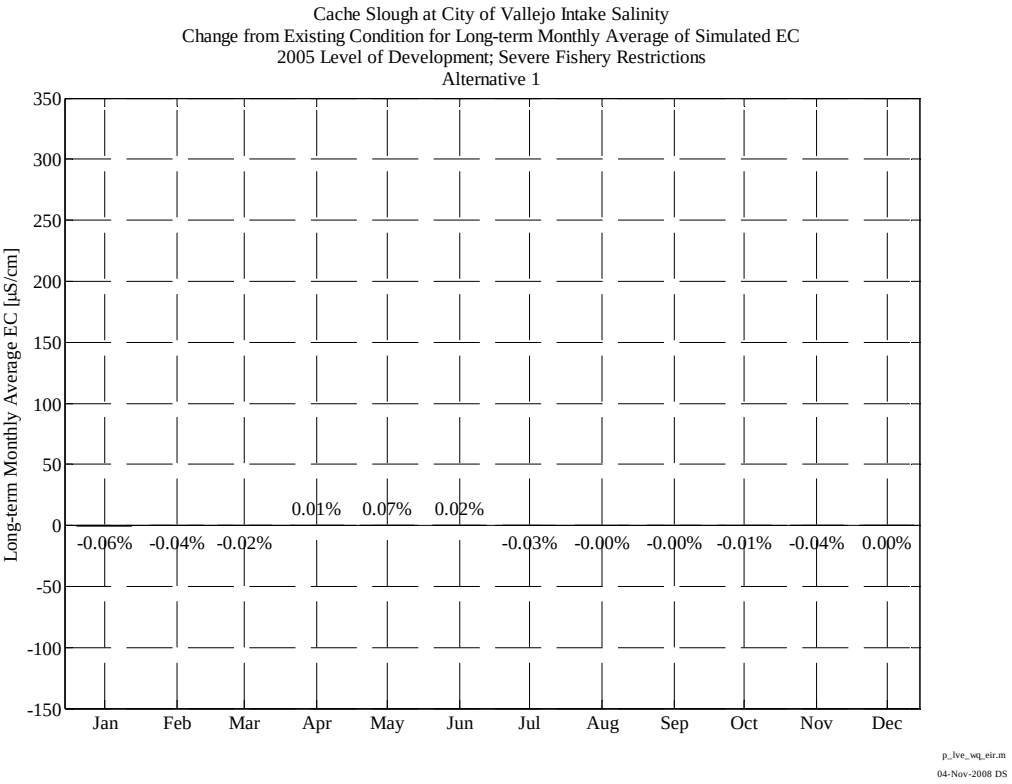
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

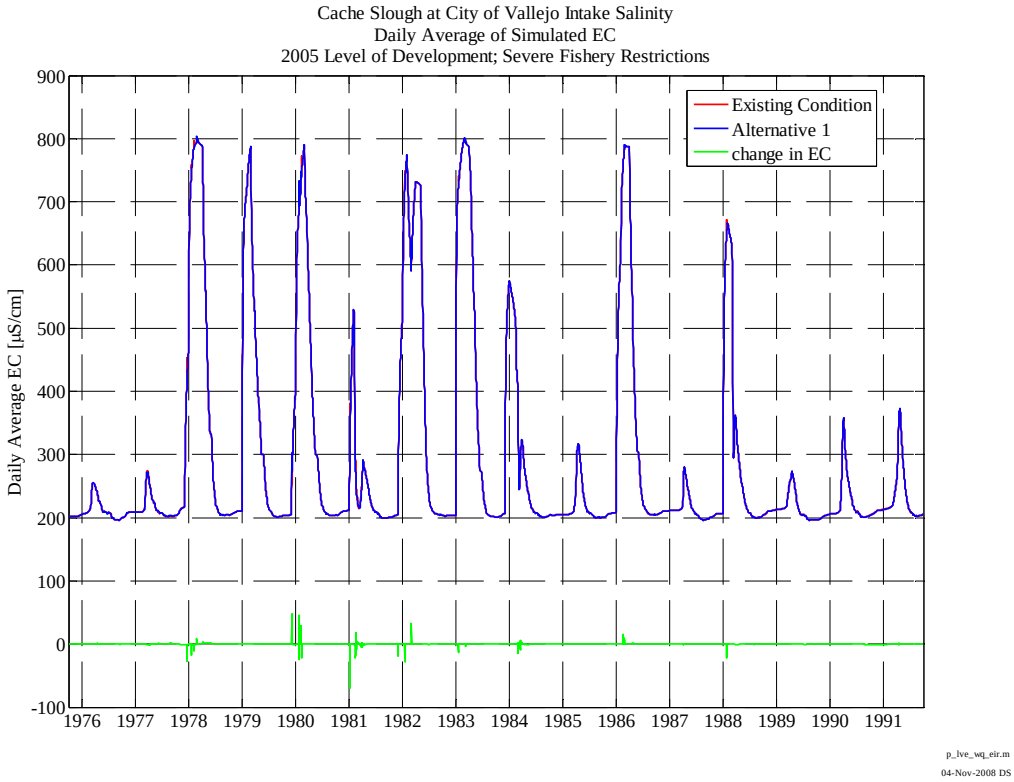
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	211	248	237	215	208	204	197	197
1977	202	208	209	209	210	254	240	218	208	204	203	203
1978	206	215	385	728	791	793	636	388	272	213	204	205
1979	205	209	210	647	763	589	411	307	236	209	202	202
1980	204	204	330	641	758	657	447	310	244	211	204	204
1981	205	209	211	423	313	229	277	240	213	206	200	200
1982	201	203	427	709	667	678	730	561	287	216	206	204
1983	203	203	204	704	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	275	231	210	205	201	202
1985	204	204	205	205	206	218	303	249	213	206	200	200
1986	202	206	208	508	744	788	587	350	259	215	206	205
1987	206	210	211	211	212	214	264	232	210	202	197	198
1988	201	205	207	573	648	392	297	243	213	204	200	201
1989	206	211	212	213	214	233	264	232	207	202	197	197
1990	197	201	205	206	207	249	308	246	215	207	201	202
1991	205	210	212	213	216	235	328	289	224	207	203	204
Avg	203	207	258	434	463	429	393	297	231	209	202	201
W/AN/BN	203	206	323	642	711	656	538	370	256	213	204	203
D/C	203	207	208	273	271	252	280	240	212	205	200	200

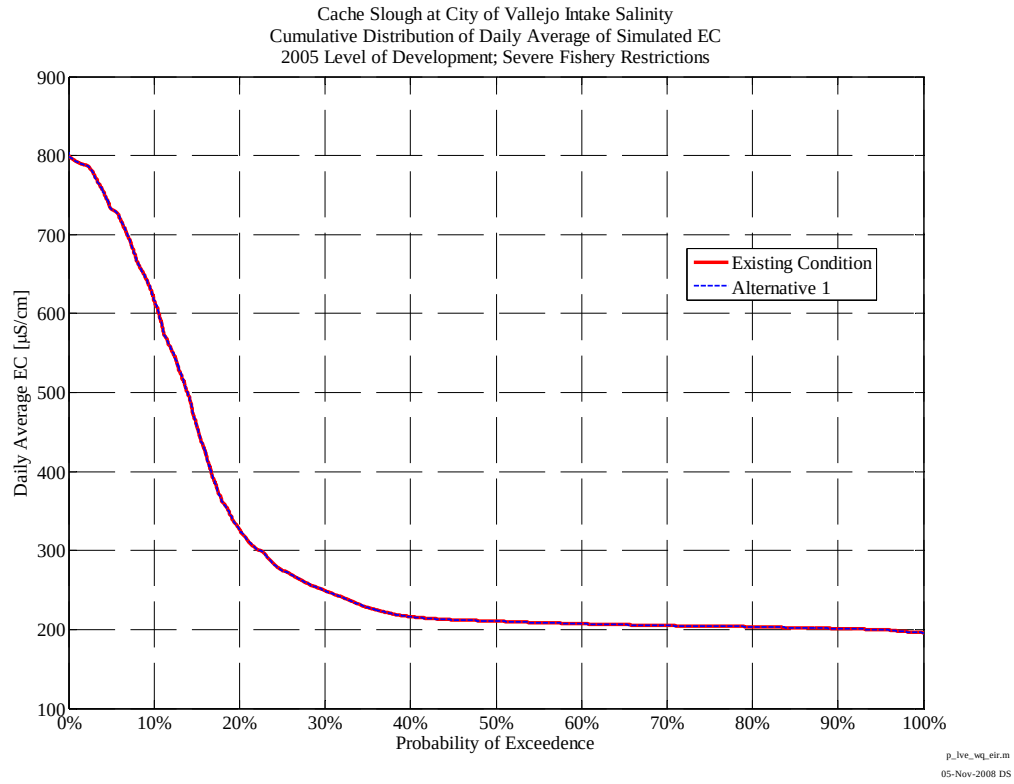
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.0%	0.0%	-0.1%	0.1%	-0.1%
1977	0.1%	0.1%	0.1%	-0.1%	-0.1%	-0.2%	-0.3%	0.3%	0.1%	0.2%	0.4%	0.2%
1978	0.0%	-0.4%	-0.4%	-0.2%	-0.1%	0.0%	0.3%	0.4%	0.3%	0.1%	-0.1%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.4%	-0.4%	-0.4%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
1982	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.2%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1986	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.1%	0.0%	-0.1%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	-0.2%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%	0.0%	-0.2%	-0.1%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	-0.1%	-0.2%	-0.3%
1991	-0.3%	-0.3%	-0.3%	-0.2%	-0.2%	0.0%	0.1%	0.2%	0.1%	0.1%	0.0%	0.1%
Avg	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.0%	-0.1%	0.0%	0.0%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Existing Condition
Alternative 1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.06%
-0.04%
-0.02%
0.01%
0.07%
0.02%
-0.03%
-0.00%
-0.00%
-0.01%
-0.04%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

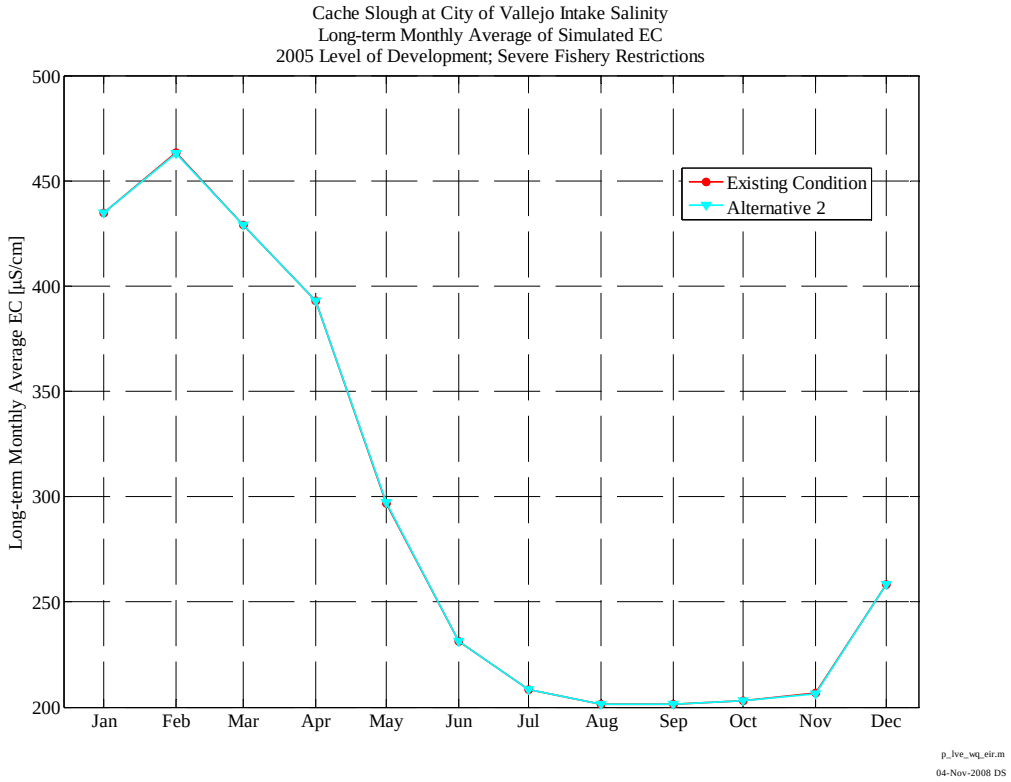
Alternative 2

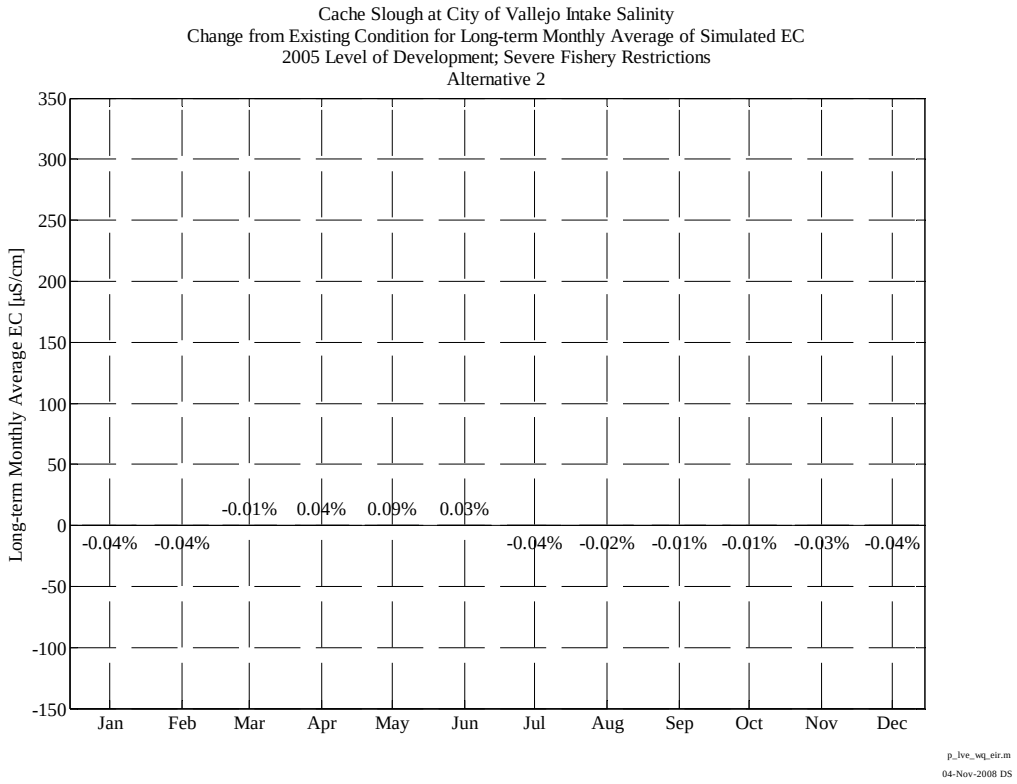
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

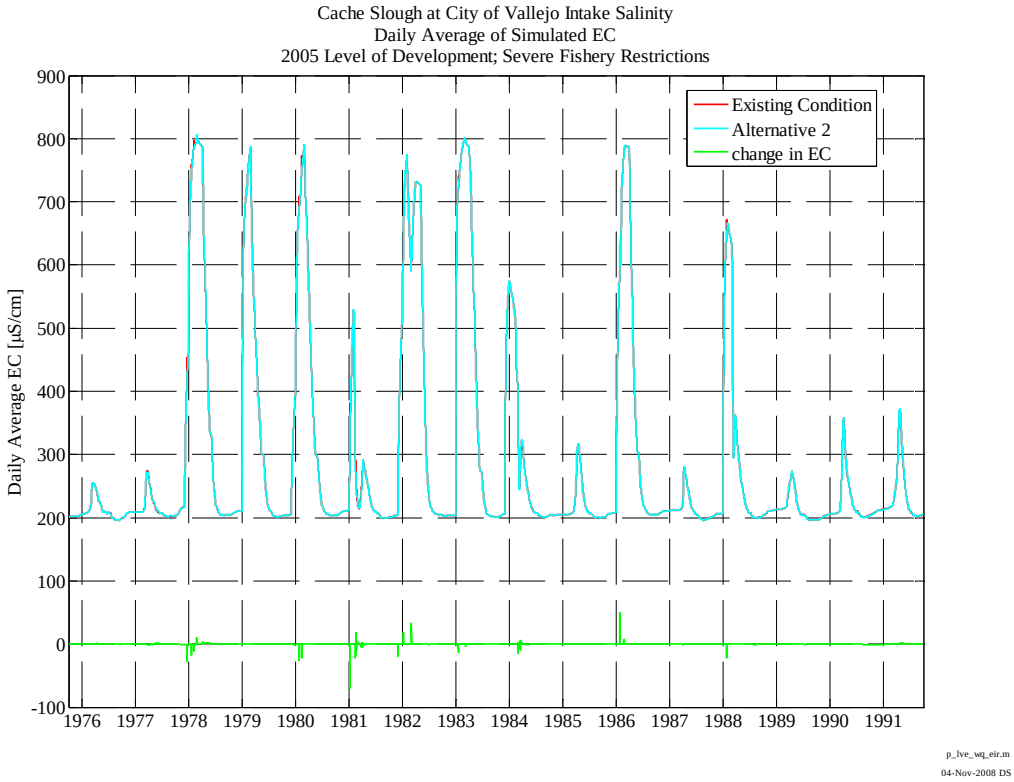
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	211	248	237	215	208	204	197	197
1977	202	208	209	209	210	254	241	218	208	204	202	203
1978	206	215	385	728	791	793	636	388	272	213	204	205
1979	205	209	210	647	763	589	412	307	236	209	202	202
1980	204	204	328	640	757	657	447	310	244	211	204	204
1981	205	209	211	423	313	229	277	240	213	206	200	200
1982	201	203	427	711	667	678	730	561	287	216	206	204
1983	203	203	204	704	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	275	231	210	205	201	202
1985	204	204	205	205	206	218	303	249	213	206	200	200
1986	202	206	208	510	743	788	587	349	259	215	206	205
1987	206	210	211	211	212	214	264	232	210	202	197	198
1988	201	205	207	573	649	392	298	243	213	204	200	201
1989	206	211	212	213	214	233	264	232	207	202	197	197
1990	197	201	205	206	207	249	309	246	215	207	201	202
1991	205	210	212	213	216	235	328	290	225	208	203	204
Avg	203	207	258	435	463	429	393	297	232	208	202	201
W/AN/BN	203	206	323	642	710	656	539	370	256	213	204	203
D/C	203	207	208	273	271	252	280	241	212	205	200	200

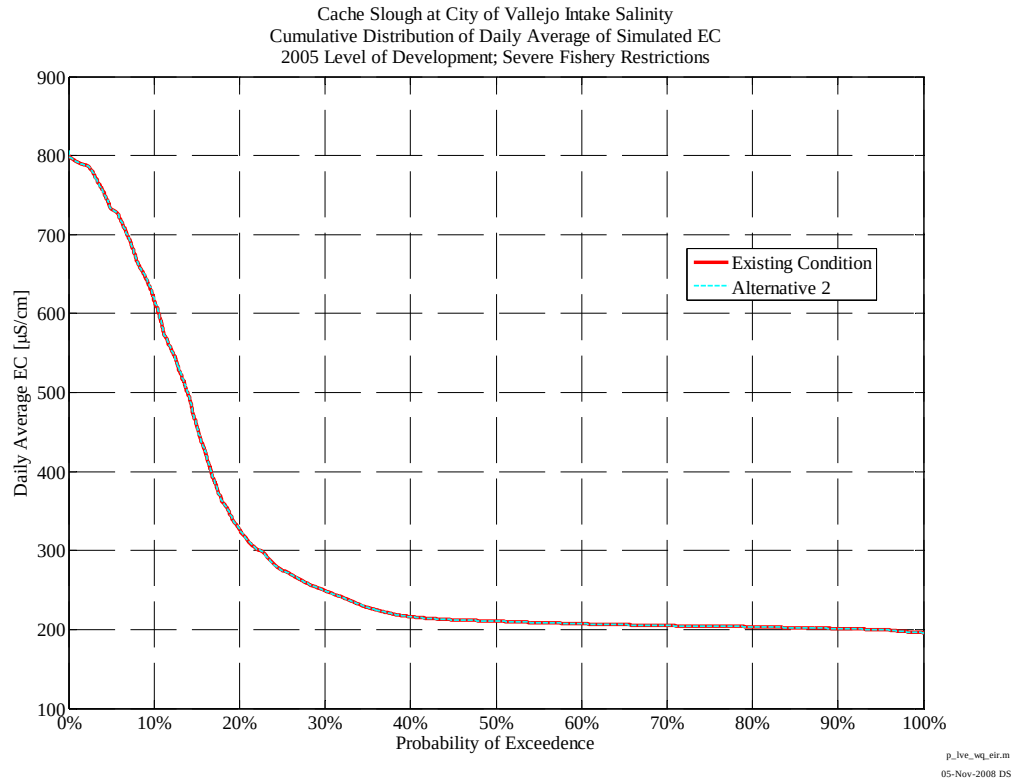
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.0%	0.0%	-0.1%	0.1%	-0.1%
1977	0.1%	0.1%	0.1%	-0.1%	-0.1%	-0.1%	-0.3%	0.4%	0.1%	0.1%	0.2%	0.2%
1978	0.0%	-0.4%	-0.4%	-0.2%	-0.1%	0.0%	0.3%	0.4%	0.2%	0.1%	-0.1%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.4%	-0.4%	-0.4%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
1982	0.0%	0.0%	-0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.3%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.1%	0.0%	-0.1%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.2%	-0.2%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%	0.0%	-0.2%	-0.1%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	-0.1%	-0.2%	-0.3%
1991	-0.3%	-0.3%	-0.2%	-0.2%	-0.1%	0.0%	0.2%	0.4%	0.3%	0.1%	0.0%	0.1%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.0%	-0.1%	0.0%	0.0%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Existing Condition
Alternative 2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.04%
-0.04%
-0.01%
0.04%
0.09%
0.03%
-0.04%
-0.02%
-0.01%
-0.01%
-0.03%
-0.04%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

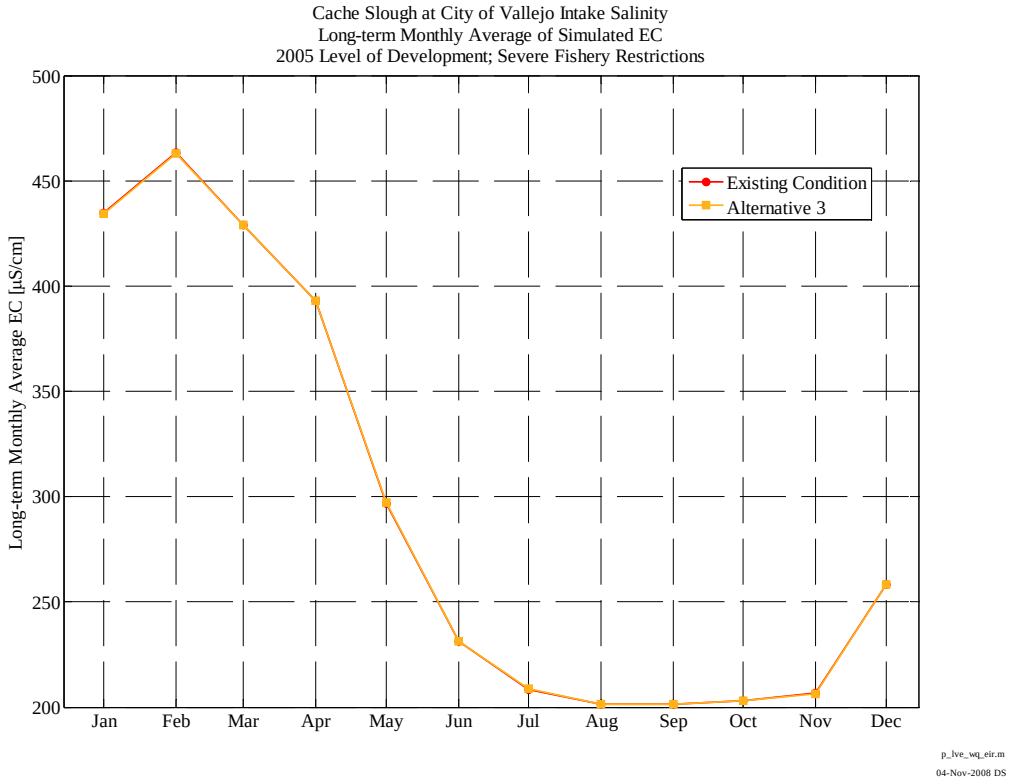
Alternative 3

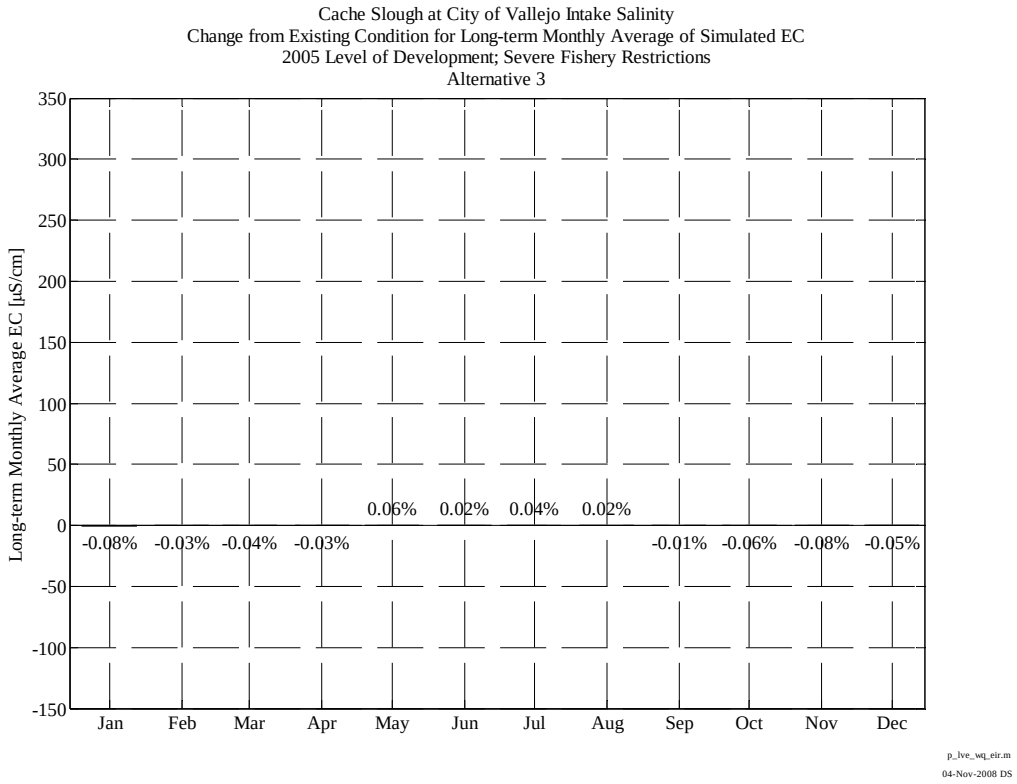
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

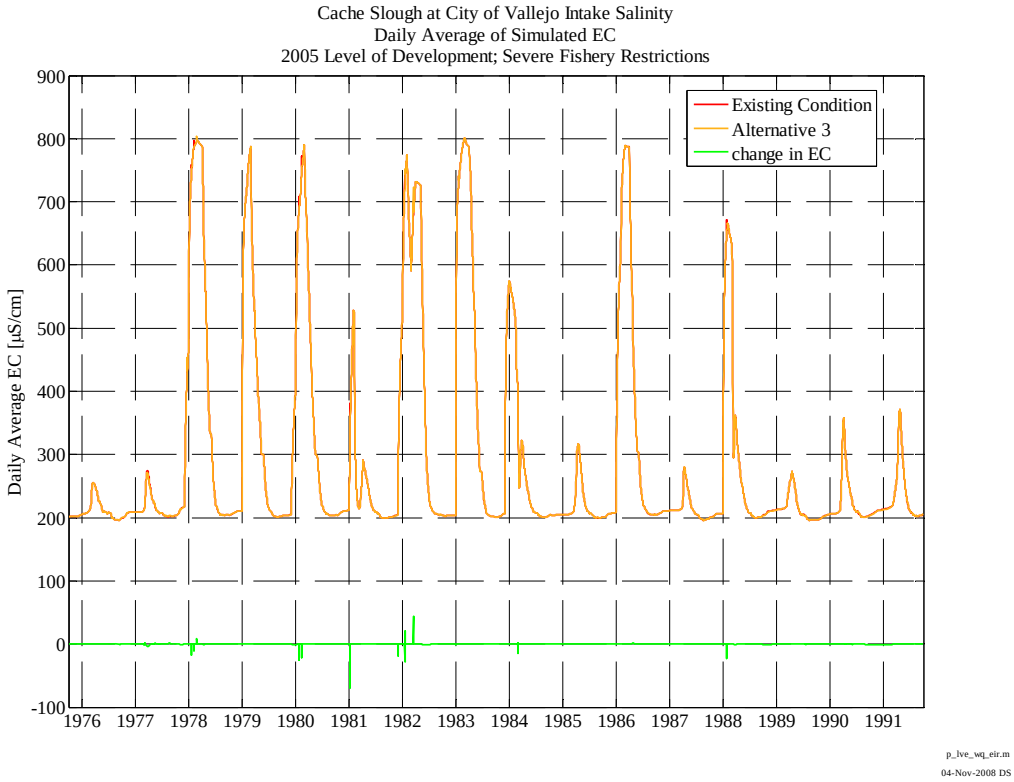
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	211	248	236	215	208	205	197	197
1977	202	208	209	209	210	253	240	218	208	204	203	203
1978	206	215	387	728	792	792	634	386	272	213	204	205
1979	205	209	210	647	763	589	412	307	236	209	202	202
1980	203	204	327	639	757	657	447	310	244	211	204	204
1981	205	209	211	422	314	230	277	240	213	207	200	200
1982	201	203	427	710	667	678	730	561	286	216	206	204
1983	203	203	204	705	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	276	231	211	205	201	202
1985	204	204	205	205	206	218	303	249	213	206	200	200
1986	202	206	208	508	743	788	587	350	259	215	206	205
1987	206	210	211	211	212	214	264	232	210	203	197	198
1988	201	205	207	572	648	392	298	243	213	204	200	201
1989	205	210	211	213	214	233	264	232	207	202	197	197
1990	197	201	204	206	207	250	308	245	215	207	201	202
1991	205	210	212	213	216	234	327	289	224	208	203	204
Avg	203	206	258	434	463	429	393	297	231	209	202	201
W/AN/BN	203	206	323	642	710	656	538	370	256	213	204	203
D/C	203	207	208	273	271	252	280	240	212	205	200	200

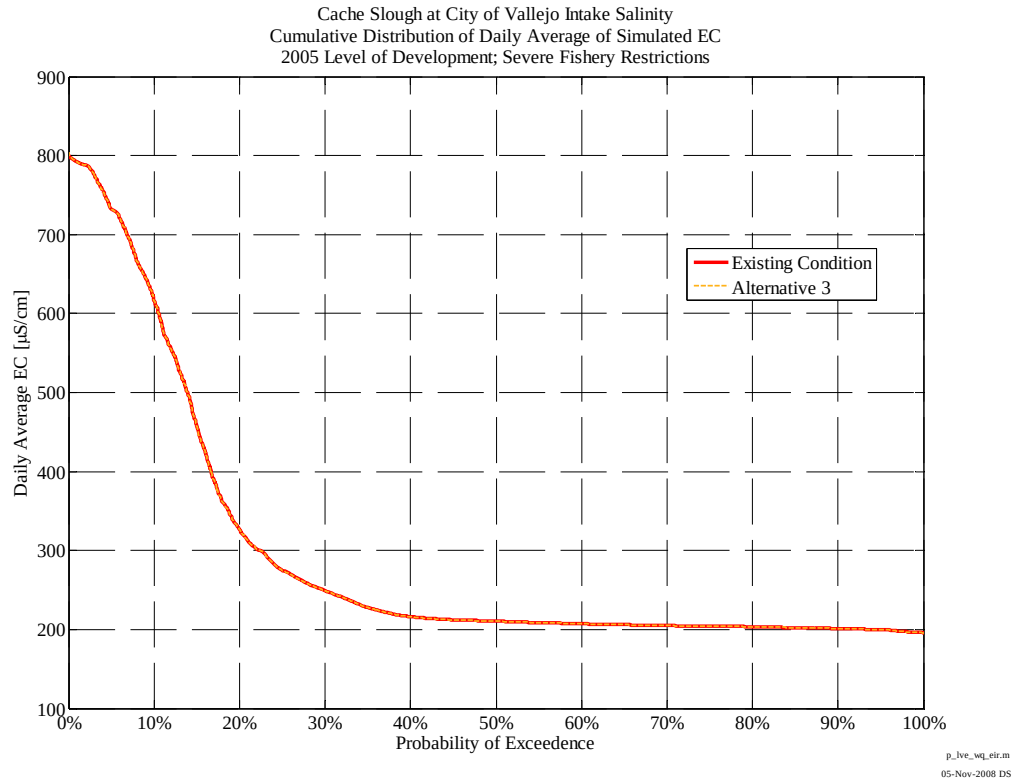
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1977	0.1%	0.1%	0.1%	0.0%	-0.1%	-0.7%	-0.4%	0.3%	0.1%	0.2%	0.4%	0.2%
1978	0.0%	-0.3%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.0%	-0.1%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	-0.2%	0.0%	0.0%	0.2%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.0%	0.1%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%	0.0%	0.1%	0.2%	0.0%	0.0%
1988	-0.1%	-0.1%	-0.1%	-0.2%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.1%	-0.1%	-0.1%
1989	-0.5%	-0.4%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.2%	-0.1%	0.0%
1990	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.2%	-0.1%	-0.3%
1991	-0.4%	-0.4%	-0.3%	-0.3%	-0.2%	-0.1%	0.0%	0.2%	0.2%	0.2%	0.1%	0.1%
Avg	-0.1%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	-0.1%	-0.1%	0.1%	0.0%	0.1%	0.0%	0.0%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Existing Condition
Alternative 3
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.08%
-0.03%
-0.04%
-0.03%
0.06%
0.02%
0.04%
0.02%
-0.01%
-0.06%
-0.08%
-0.05%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

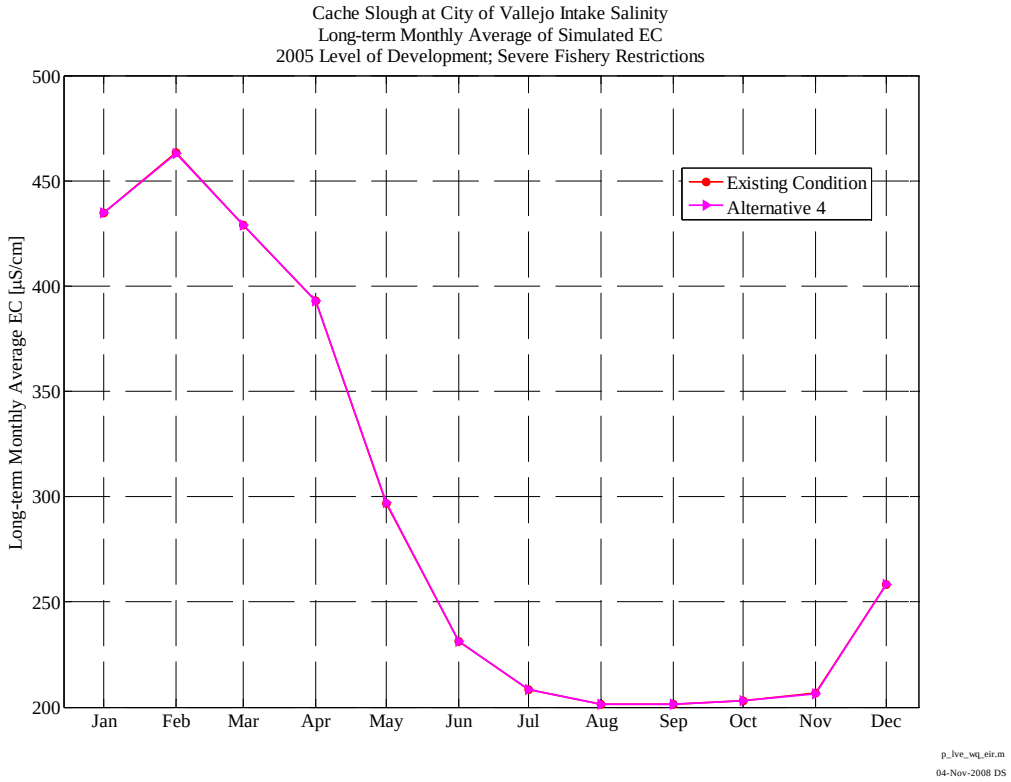
Alternative 4

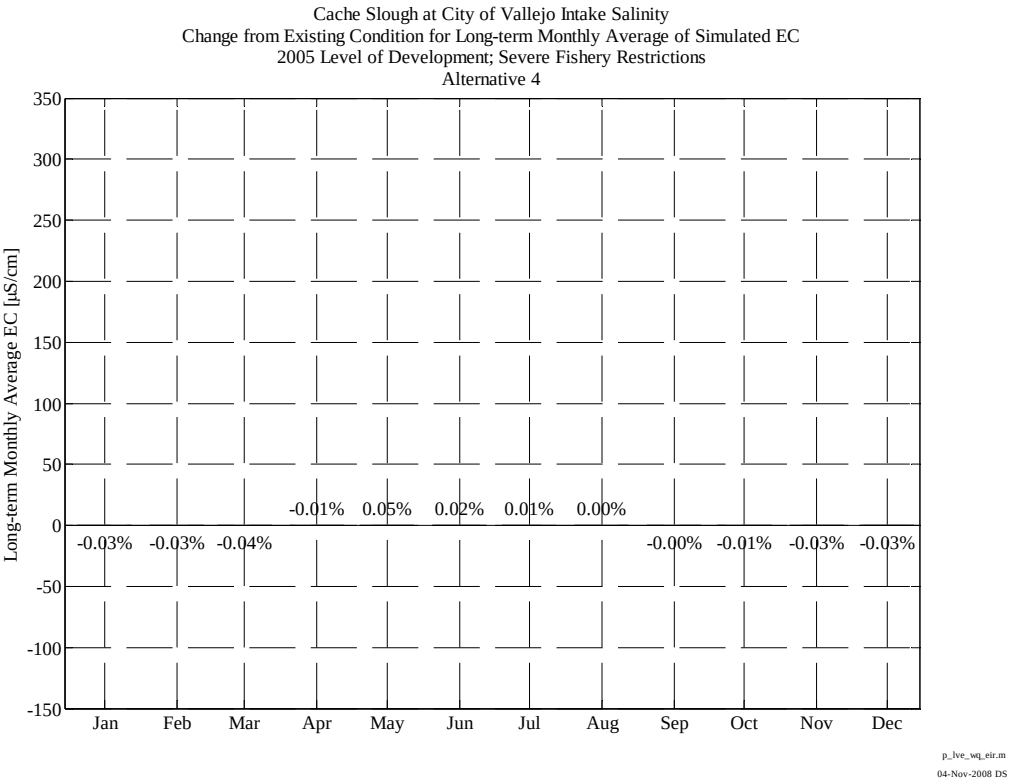
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

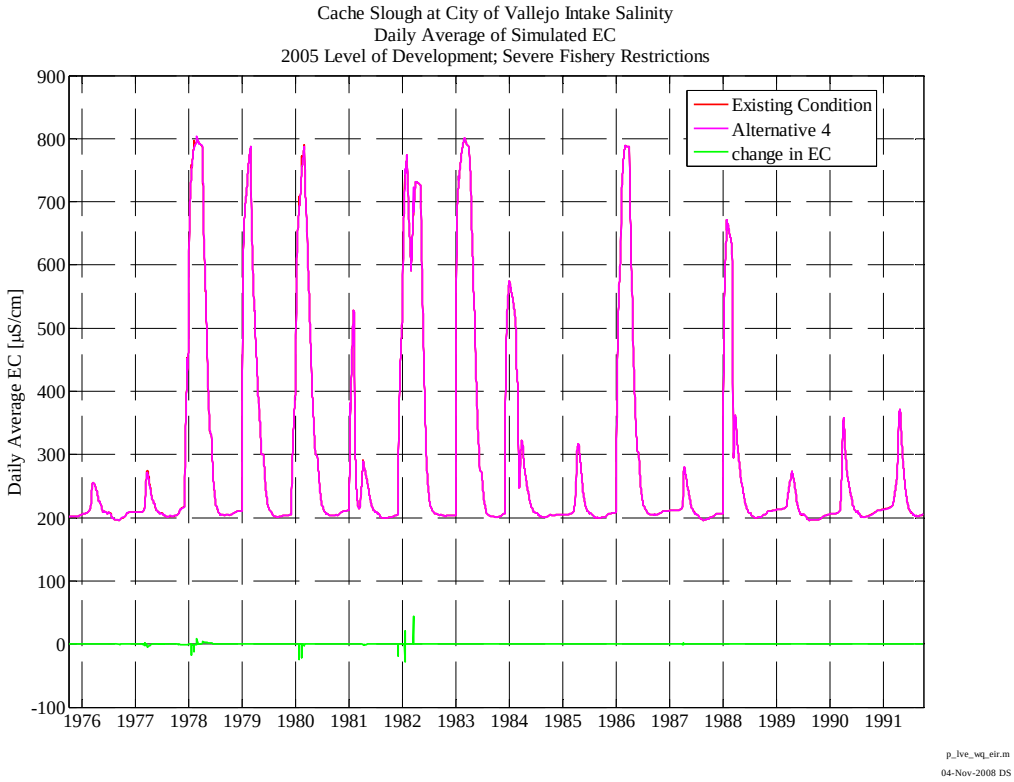
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	211	248	236	215	208	205	197	197
1977	202	208	209	209	210	253	240	218	208	204	202	203
1978	206	214	386	727	791	793	637	388	272	213	205	205
1979	205	208	210	647	763	589	412	307	236	209	202	202
1980	204	204	328	640	757	657	447	310	244	211	204	204
1981	205	209	211	425	314	230	276	240	213	207	200	200
1982	201	203	427	710	667	678	730	561	287	217	206	204
1983	203	203	204	705	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	293	276	231	211	205	201	202
1985	204	204	205	205	206	218	303	249	213	206	200	200
1986	202	206	208	508	743	788	587	349	259	215	206	205
1987	206	210	211	211	212	214	264	232	210	203	197	198
1988	201	205	207	574	648	392	298	242	213	204	200	201
1989	206	210	212	213	214	233	264	232	207	203	197	197
1990	197	201	205	206	207	249	308	246	215	207	201	202
1991	205	210	212	214	216	235	327	288	224	207	203	204
Avg	203	207	258	435	463	429	393	297	231	209	202	201
W/AN/BN	203	206	323	642	710	656	539	370	256	213	204	203
D/C	203	207	208	274	271	252	280	240	212	205	200	200

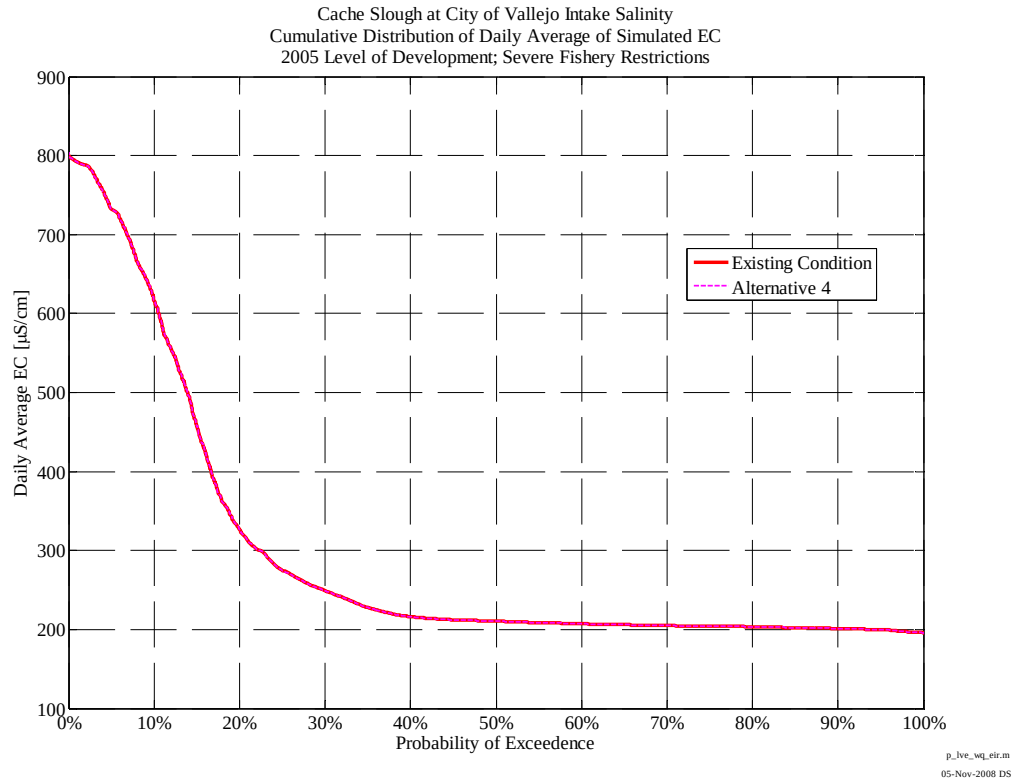
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1977	0.1%	0.1%	0.1%	-0.1%	-0.1%	-0.9%	-0.6%	0.2%	-0.1%	0.0%	0.1%	0.2%
1978	-0.1%	-0.4%	-0.2%	-0.2%	-0.1%	0.0%	0.4%	0.5%	0.3%	0.1%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	-0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	-0.2%
1991	-0.2%	-0.2%	-0.2%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Existing Condition
Alternative 4
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.03%
-0.03%
-0.04%
-0.01%
0.05%
0.02%
0.01%
0.00%
-0.00%
-0.01%
-0.03%
-0.03%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Old River near Tracy Road Bridge

Existing Condition

Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	951	1,011	652	576	712	707	682	676
1977	676	713	837	913	999	1,019	749	641	721	677	625	680
1978	780	788	876	827	775	717	398	328	421	563	519	497
1979	593	567	764	726	413	359	406	318	463	656	577	581
1980	538	595	786	455	373	414	377	374	391	471	481	531
1981	500	537	744	786	938	932	534	460	692	688	664	664
1982	612	671	808	799	316	336	228	218	374	428	364	276
1983	217	297	386	394	344	285	305	269	246	232	199	258
1984	359	224	314	349	258	399	389	378	542	640	567	512
1985	461	542	796	807	868	946	589	513	700	706	647	627
1986	601	626	781	852	512	326	258	237	398	613	521	489
1987	455	475	728	805	989	990	648	560	712	707	686	684
1988	669	700	835	904	997	1,017	722	652	715	726	727	713
1989	756	752	850	955	1,175	1,031	716	635	717	697	687	670
1990	700	733	853	965	1,168	1,039	766	662	758	736	670	698
1991	723	733	869	1,002	1,248	1,037	748	666	724	641	630	690
Avg	568	593	750	771	770	741	530	468	581	618	578	578
W/AN/BN	528	538	674	629	427	405	337	303	405	515	461	449
D/C	599	636	810	882	1,037	1,002	680	596	717	698	669	678

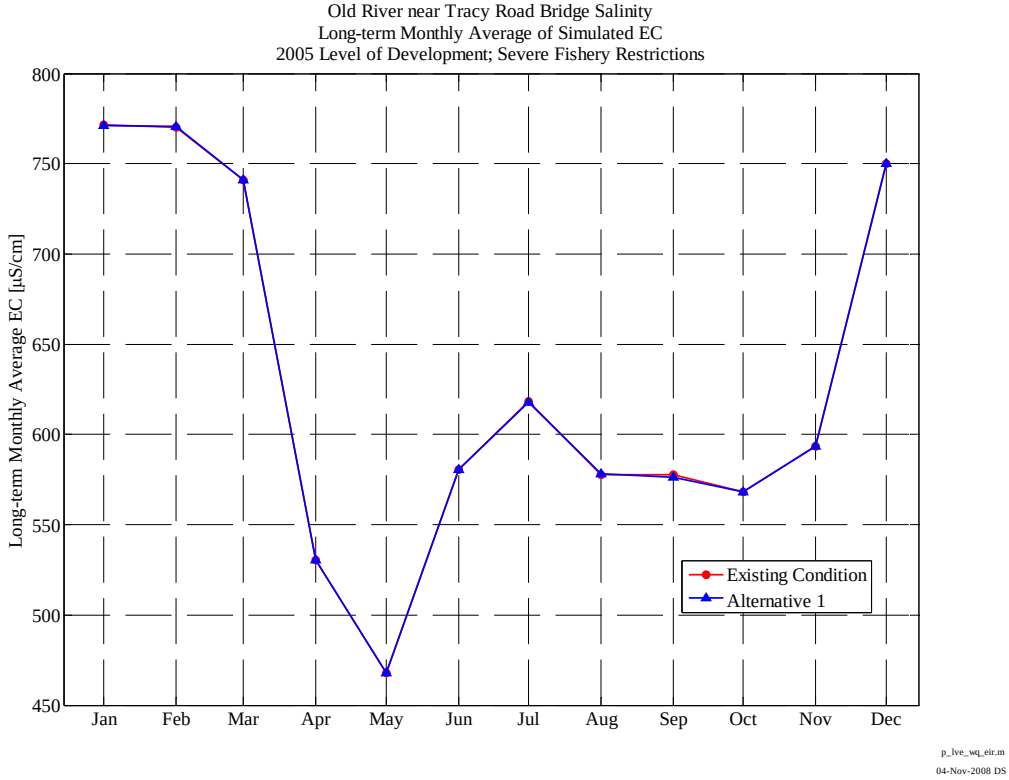
Alternative 1

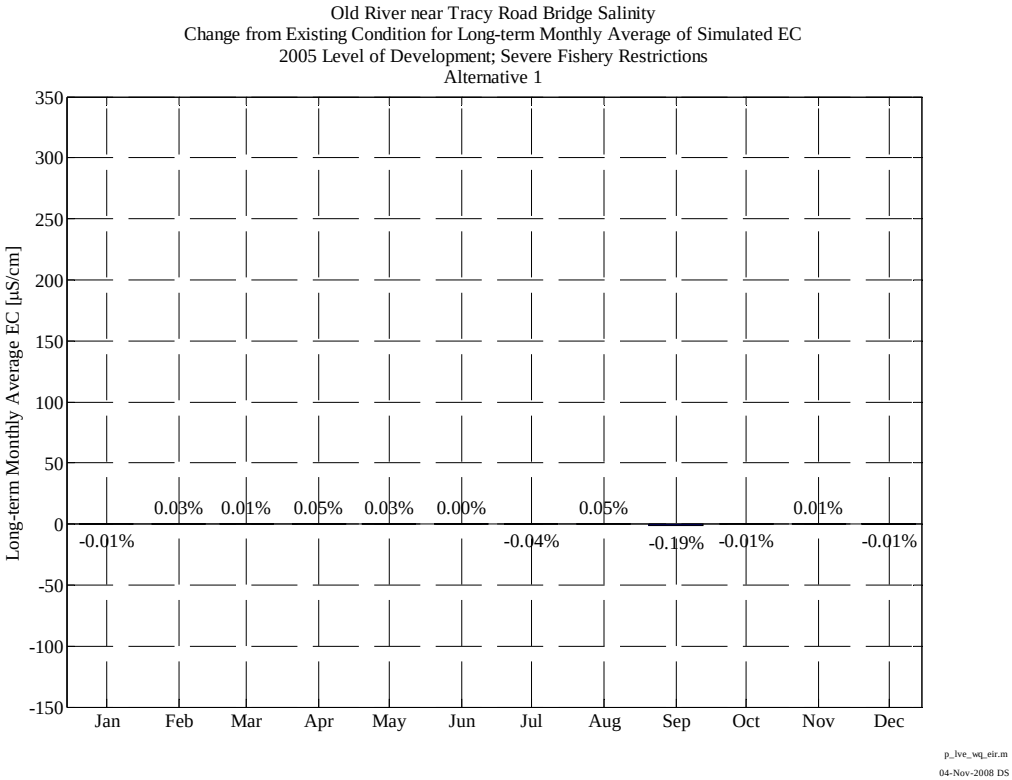
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

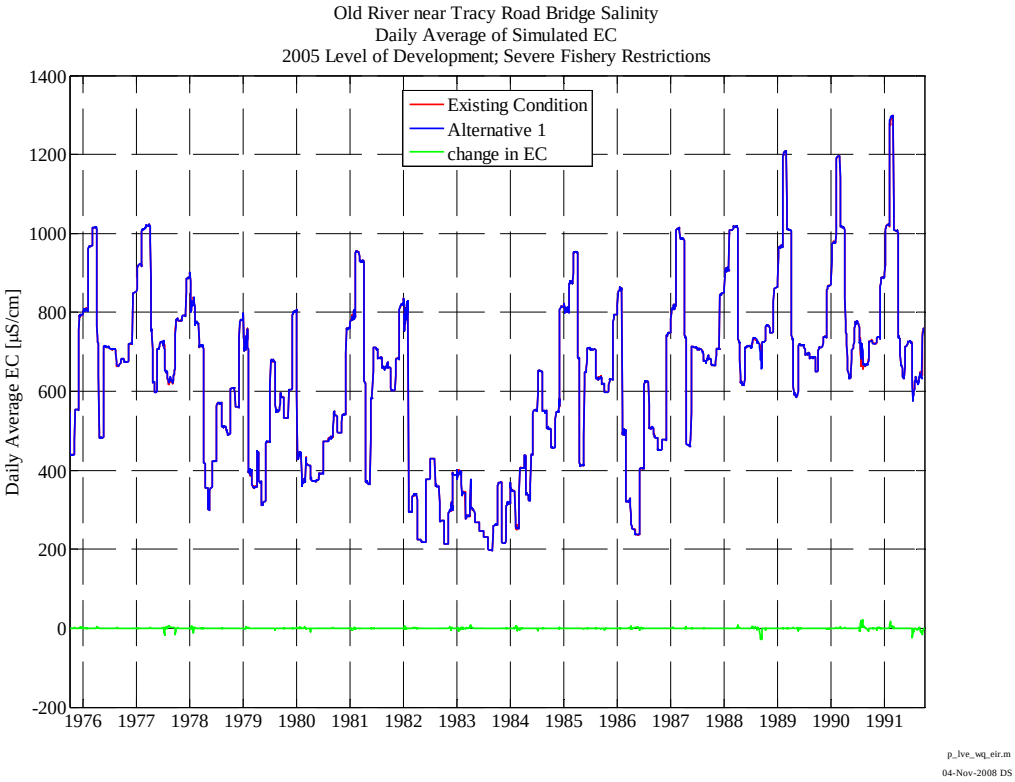
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	950	1,011	653	576	712	707	683	676
1977	676	713	837	913	999	1,019	750	640	722	674	629	679
1978	781	788	876	827	775	718	398	328	421	563	519	497
1979	593	567	764	726	413	359	406	318	463	656	576	581
1980	538	595	786	455	374	414	377	374	391	471	481	531
1981	501	537	744	786	939	932	534	460	692	689	664	664
1982	612	671	808	800	316	337	228	218	374	428	364	276
1983	217	297	386	393	343	285	306	269	246	232	199	258
1984	359	224	314	349	259	398	389	378	542	640	567	512
1985	461	542	796	807	868	946	589	513	700	706	646	627
1986	600	626	780	852	512	326	258	238	399	613	521	489
1987	455	475	728	806	989	989	649	560	712	707	686	684
1988	669	700	835	904	997	1,017	724	652	715	727	726	699
1989	755	752	850	955	1,175	1,031	716	634	717	697	687	669
1990	700	733	852	964	1,168	1,040	766	662	757	739	675	696
1991	723	733	869	1,001	1,255	1,037	748	666	724	637	628	685
Avg	568	593	750	771	771	741	531	468	581	618	578	576
W/AN/BN	528	538	674	629	427	405	338	303	405	515	461	449
D/C	599	636	810	882	1,038	1,002	681	596	717	698	669	676

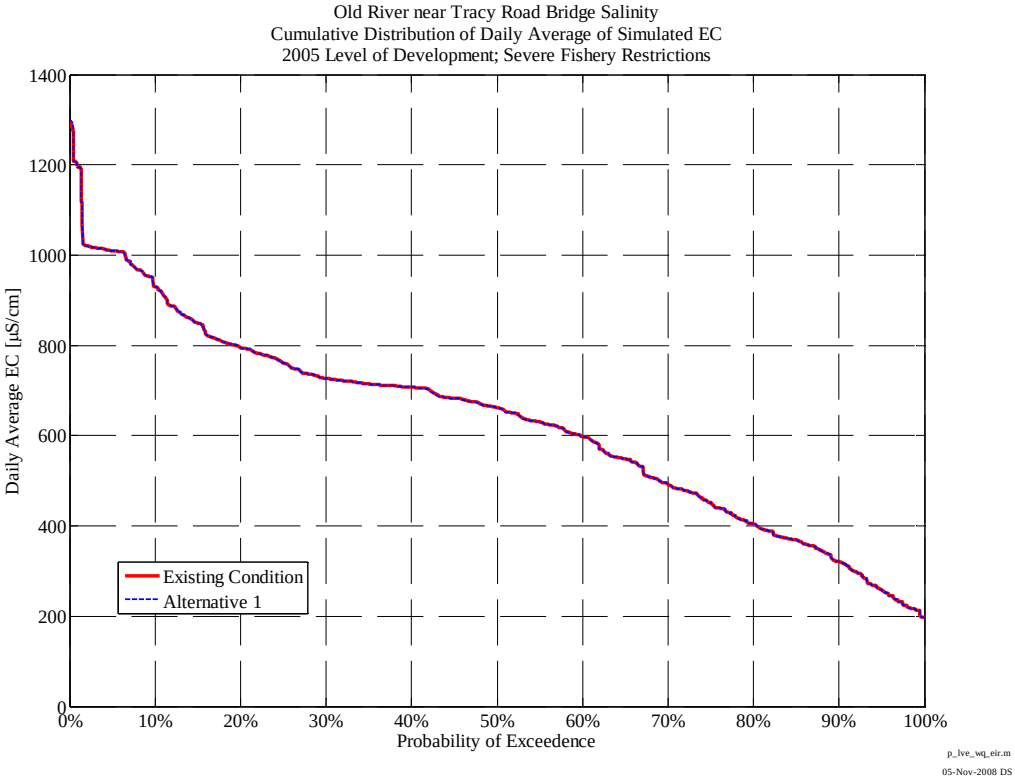
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.6%	-0.1%
1978	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
1980	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.3%	-0.2%	0.2%	0.5%	0.0%	0.0%	0.0%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.2%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	-0.1%	-1.8%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	0.3%	0.8%	-0.3%
1991	-0.1%	0.0%	0.0%	-0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	-0.6%	-0.3%	-0.7%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	-0.3%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
-0.01%
0.03%
0.01%
0.05%
0.03%
0.00%
-0.04%
0.05%
-0.19%
-0.01%
0.01%
-0.01%
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

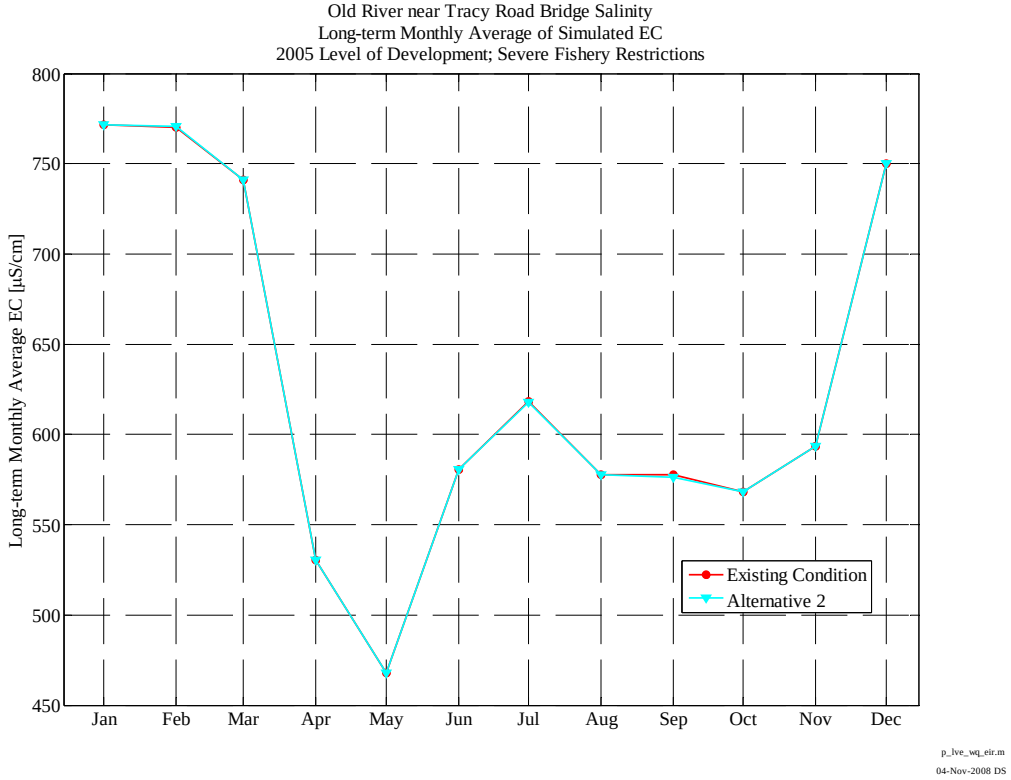
Alternative 2

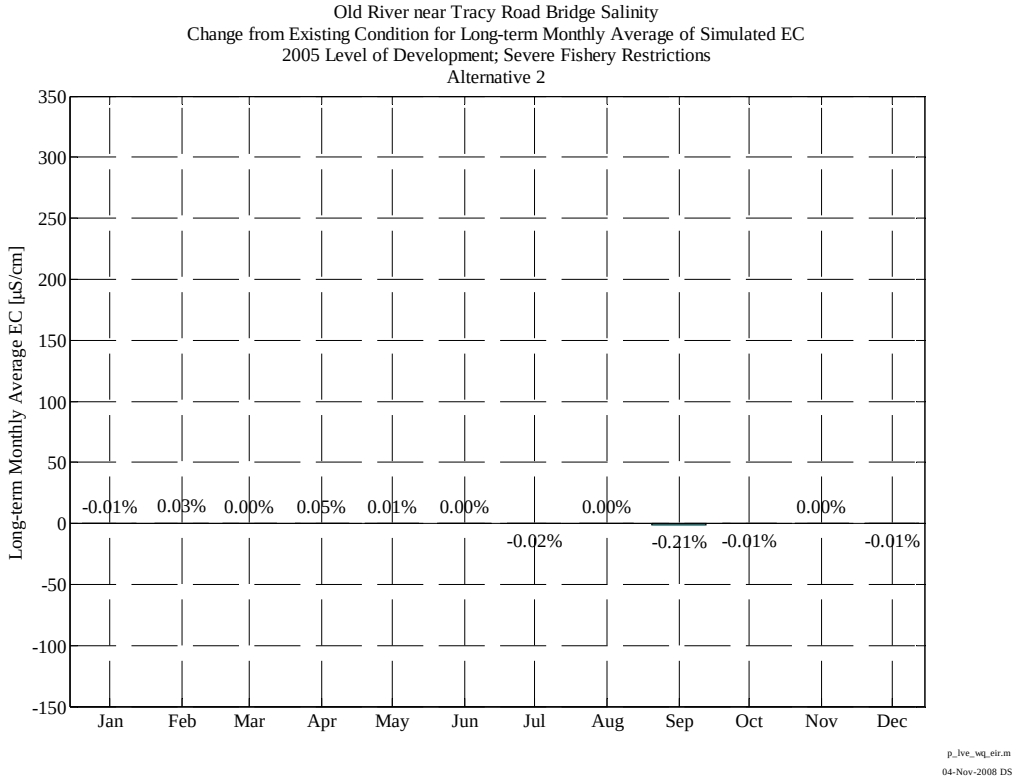
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

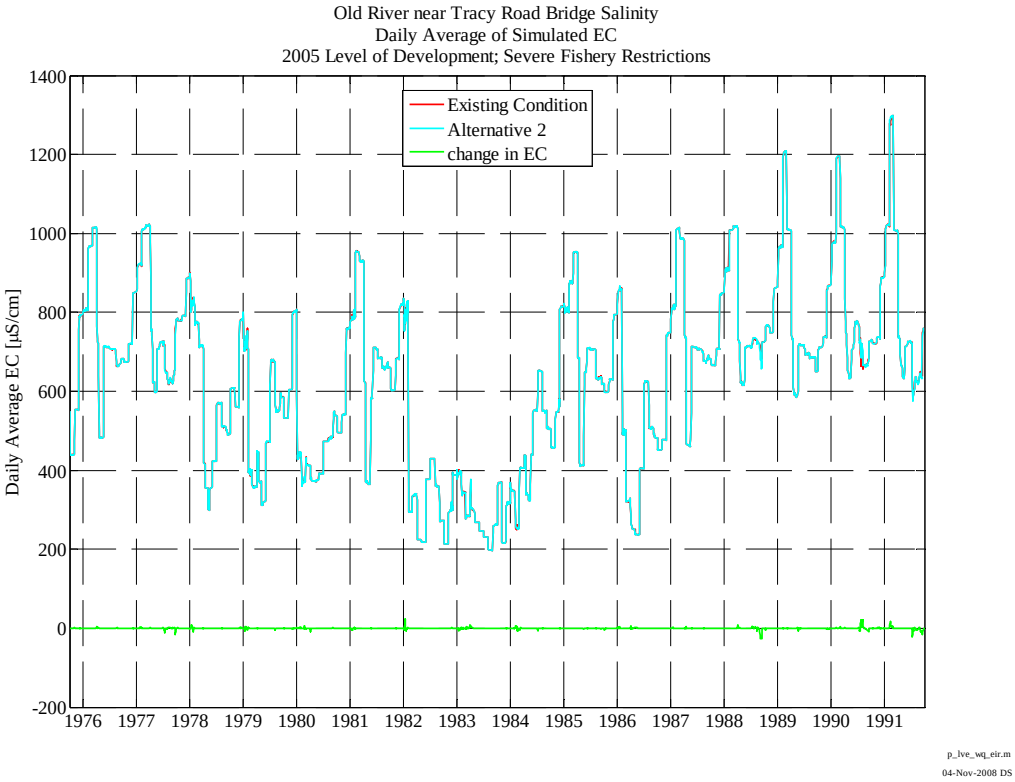
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	951	1,011	653	576	712	707	683	676
1977	676	713	837	913	999	1,019	750	640	722	674	626	678
1978	781	788	876	828	775	718	398	328	421	563	519	497
1979	593	567	765	725	413	359	406	318	463	656	576	581
1980	538	595	786	455	374	414	377	374	391	471	481	531
1981	501	537	744	786	939	932	534	460	692	689	664	664
1982	612	671	808	800	316	336	228	218	374	428	364	276
1983	217	297	386	393	343	285	306	269	246	232	199	258
1984	359	224	314	349	259	398	389	378	542	640	567	512
1985	461	541	796	807	868	946	589	513	700	706	646	627
1986	600	626	780	853	512	326	258	238	398	613	521	489
1987	455	475	728	806	989	989	649	560	712	707	686	684
1988	669	700	835	904	997	1,017	724	652	715	727	726	699
1989	755	752	850	955	1,175	1,031	716	634	717	697	687	669
1990	700	733	852	964	1,168	1,040	766	662	757	739	673	695
1991	723	733	869	1,001	1,255	1,037	748	666	724	638	629	685
Avg	568	593	750	771	771	741	531	468	581	618	578	576
W/AN/BN	528	538	674	629	427	405	338	303	405	515	461	449
D/C	599	636	810	882	1,038	1,002	681	596	717	698	669	675

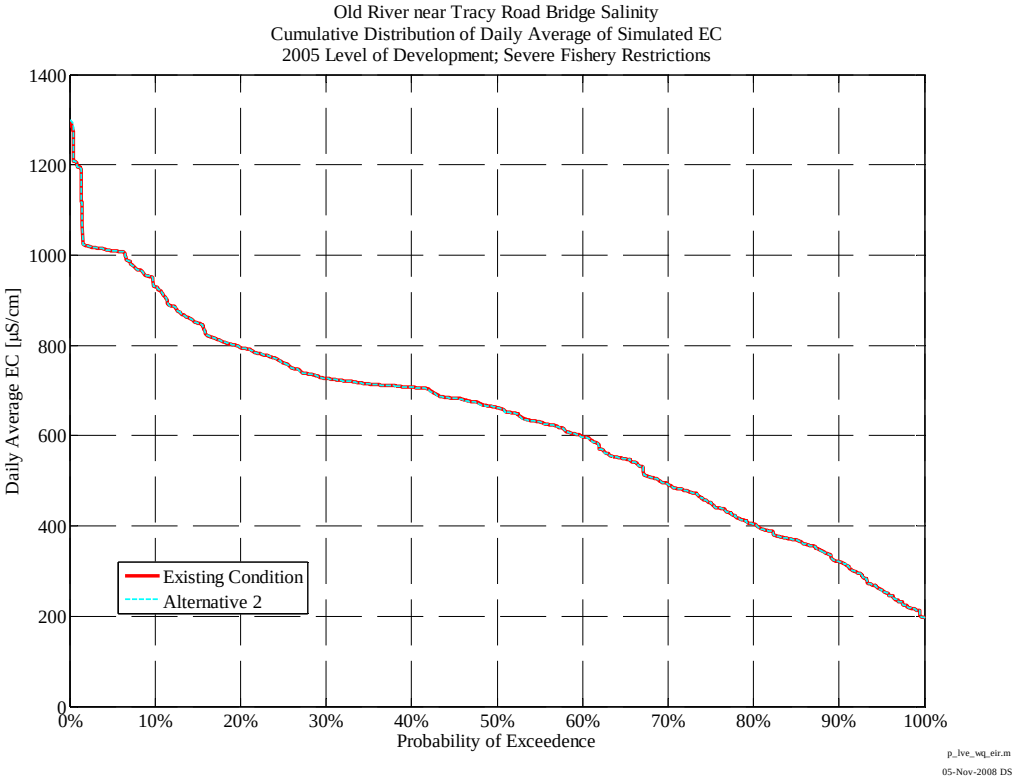
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.2%	-0.2%
1978	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
1980	0.0%	0.0%	0.0%	0.1%	0.1%	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.3%	-0.2%	0.1%	0.6%	0.0%	0.0%	0.0%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
1986	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	-0.1%	-1.9%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	0.4%	0.5%	-0.4%
1991	-0.1%	0.0%	0.0%	-0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.3%	-0.7%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.01%
0.03%
0.00%
0.05%
0.01%
0.00%
-0.02%
0.00%
-0.21%
-0.01%
0.00%
-0.01%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

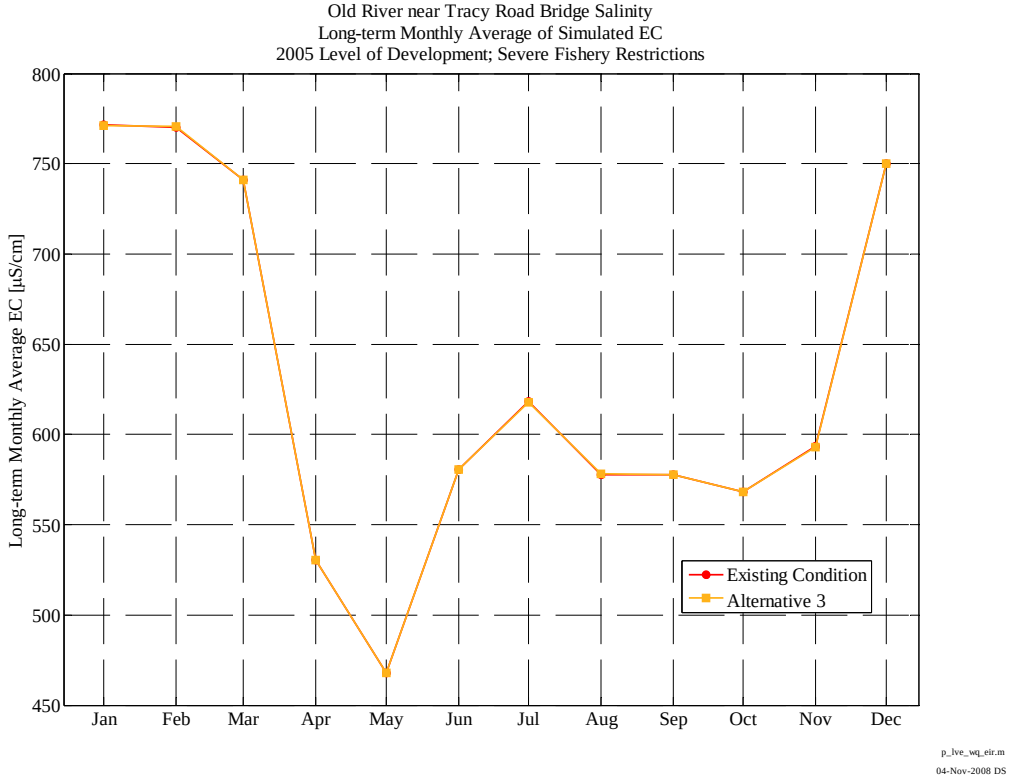
Alternative 3

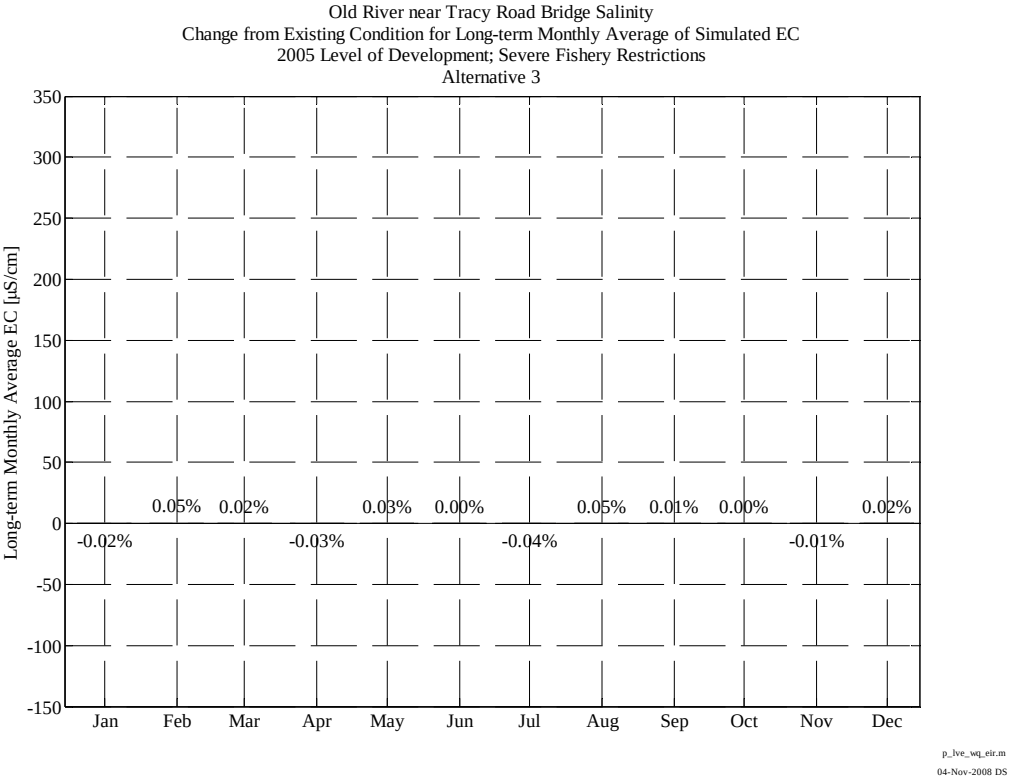
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

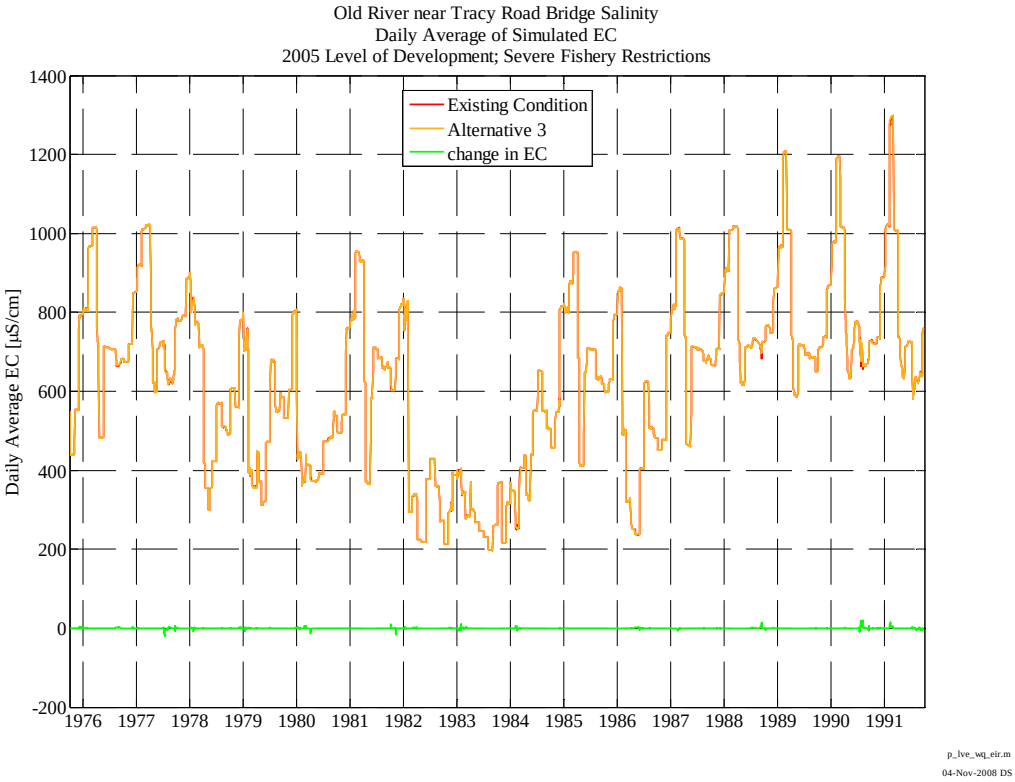
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	950	1,011	652	576	712	707	683	677
1977	676	713	837	913	999	1,019	749	640	722	671	627	680
1978	780	788	876	827	775	718	398	328	421	563	519	497
1979	593	567	765	725	413	358	406	318	463	656	577	581
1980	538	595	786	455	374	415	375	374	391	471	481	531
1981	500	537	744	786	938	932	534	460	692	689	664	664
1982	612	670	808	800	316	337	228	218	374	428	364	276
1983	217	297	386	393	345	285	305	269	246	232	200	258
1984	359	224	314	349	259	399	389	378	542	640	567	512
1985	461	542	796	807	868	946	589	513	700	706	647	627
1986	601	626	781	852	512	326	258	238	399	613	521	489
1987	455	475	728	805	987	990	648	560	712	707	686	684
1988	669	700	835	904	997	1,017	722	652	715	726	727	716
1989	755	752	850	955	1,175	1,031	716	635	717	697	687	670
1990	700	733	853	965	1,168	1,039	766	662	758	738	673	697
1991	723	733	869	1,001	1,255	1,037	748	666	724	641	629	688
Avg	568	593	750	771	771	741	530	468	581	618	578	578
W/AN/BN	529	538	674	629	428	405	337	303	405	515	461	449
D/C	599	636	810	882	1,038	1,002	680	596	717	698	669	678

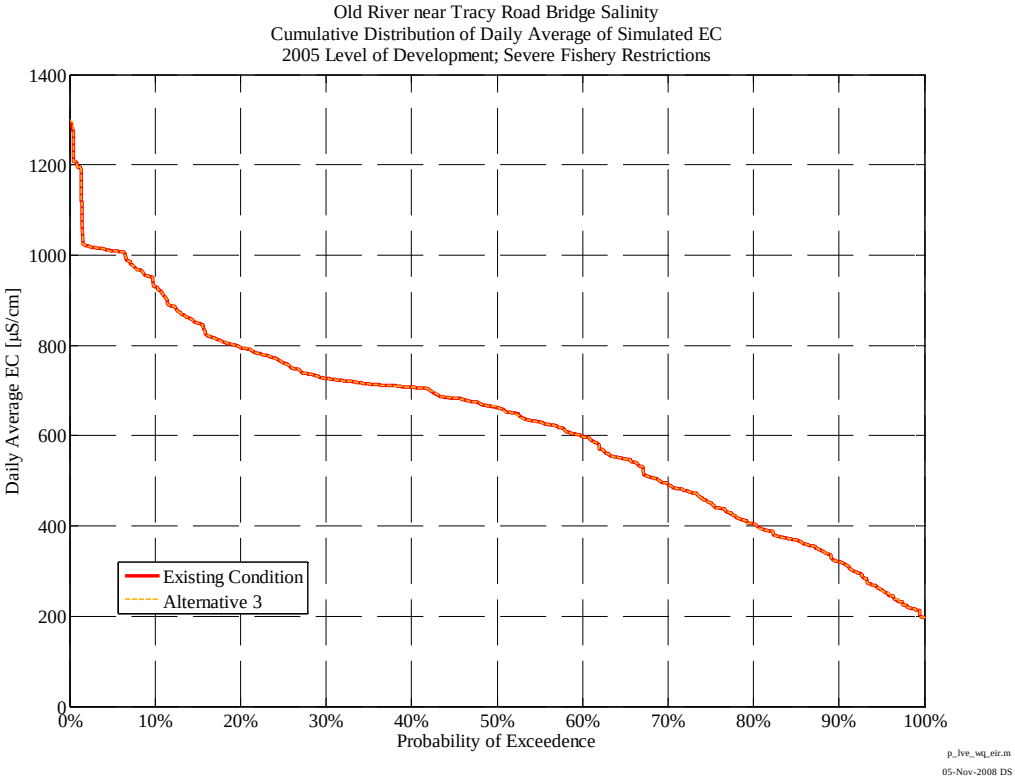
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.9%	0.3%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.1%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.1%	-0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.5%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.6%	-0.1%
1991	-0.1%	0.0%	0.0%	-0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.3%
Avg	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.05%
0.02%
0.03%
0.00%
0.05%
0.01%
0.00%
0.02%
-0.02%
-0.03%
-0.04%
-0.01%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

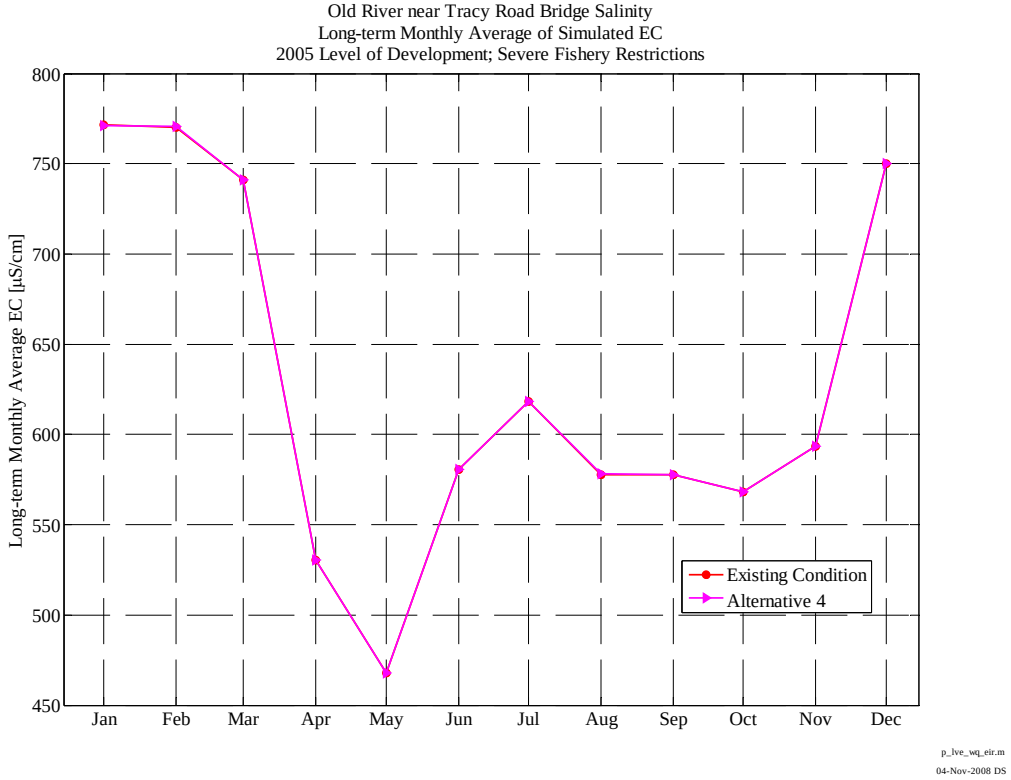
Alternative 4

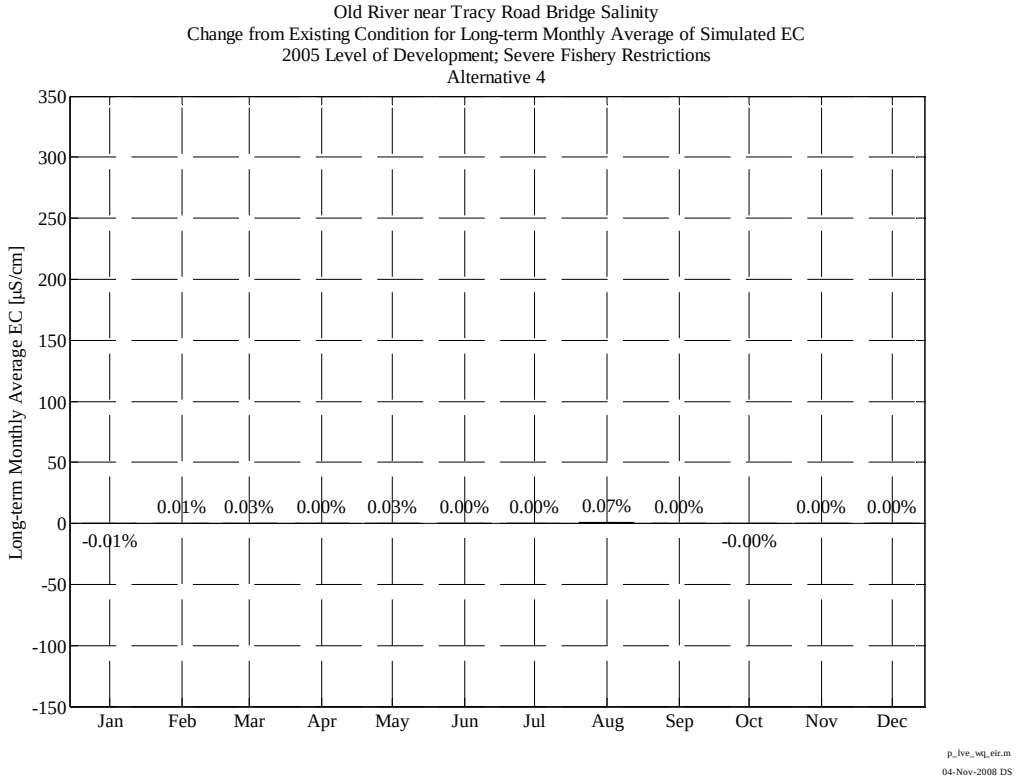
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

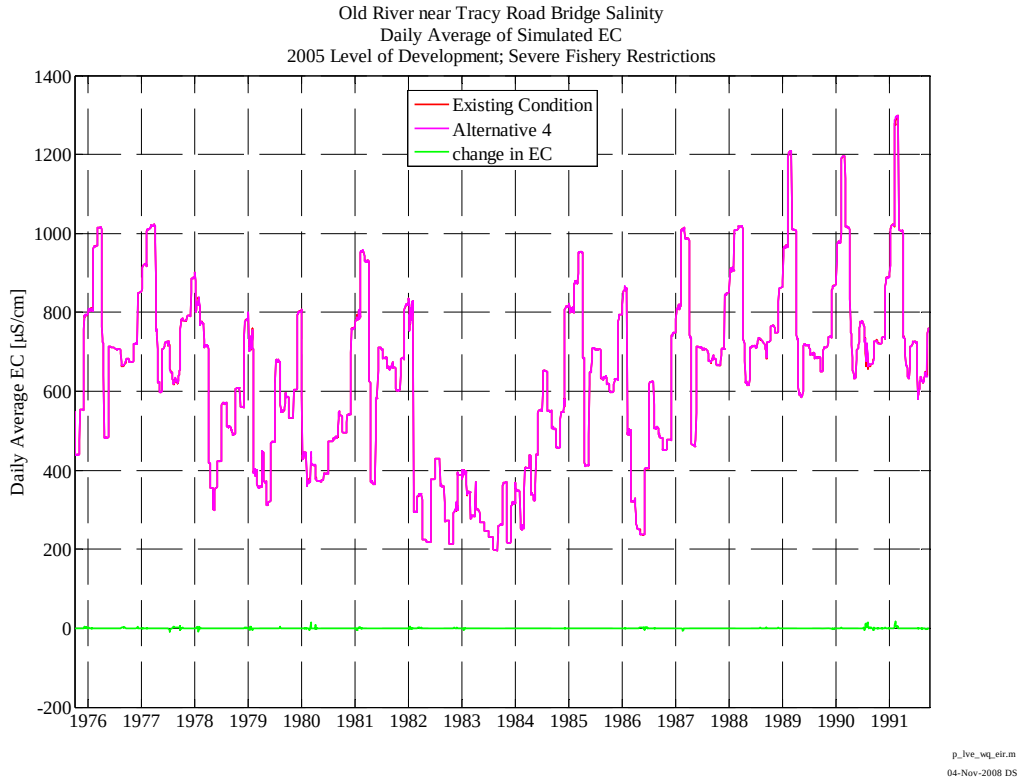
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	950	1,011	652	576	712	707	683	677
1977	676	713	837	913	999	1,019	749	641	721	675	627	681
1978	780	788	876	827	775	717	398	328	421	563	519	497
1979	593	567	765	726	413	359	406	318	463	656	577	581
1980	538	595	786	455	373	415	377	374	391	471	481	531
1981	500	537	744	786	939	932	534	460	692	688	664	664
1982	612	671	808	800	316	337	228	218	374	428	364	276
1983	217	297	386	394	344	285	305	269	246	232	199	258
1984	359	224	314	349	258	399	389	378	542	640	567	512
1985	461	542	796	806	868	946	589	513	700	706	647	627
1986	601	626	780	852	512	326	258	238	399	613	521	489
1987	455	475	728	805	987	990	648	560	712	707	686	684
1988	669	700	835	904	997	1,017	722	652	715	726	727	713
1989	756	752	850	955	1,175	1,031	716	635	717	698	687	670
1990	700	733	852	964	1,168	1,039	766	662	758	738	674	697
1991	723	733	869	1,001	1,255	1,037	748	666	724	641	630	689
Avg	568	593	750	771	771	741	530	468	581	618	578	578
W/AN/BN	529	538	674	629	427	405	337	303	405	515	461	449
D/C	599	636	810	882	1,038	1,002	680	596	717	698	669	678

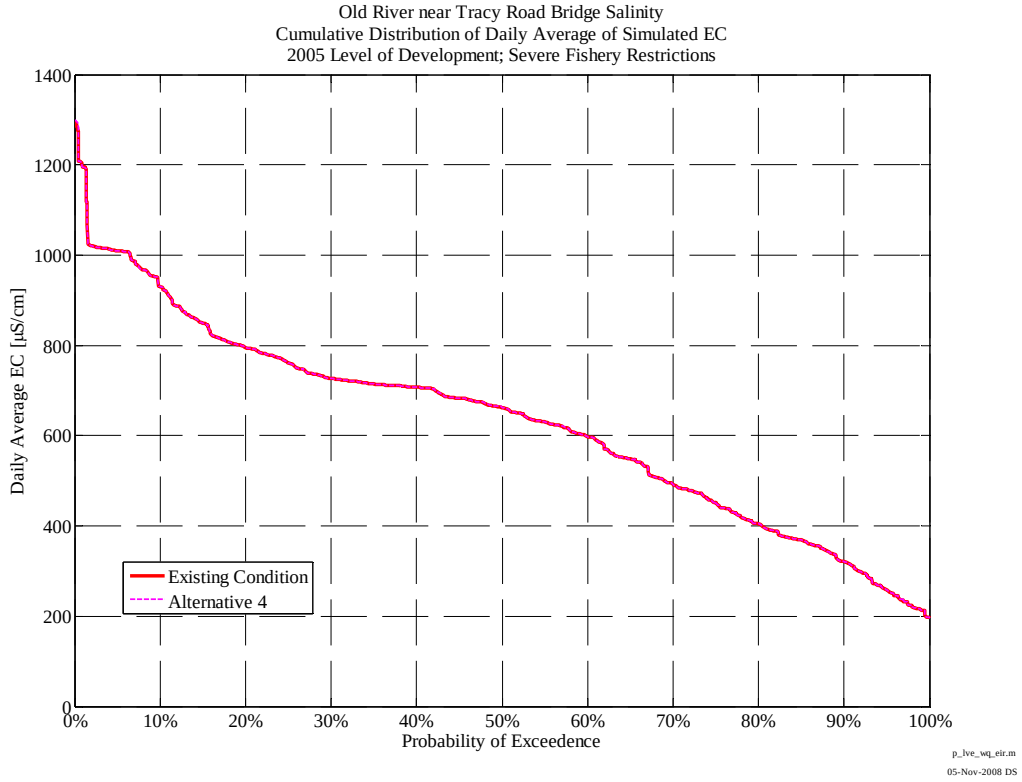
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.4%	0.1%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	-0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	-0.1%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.6%	-0.1%
1991	-0.1%	0.0%	0.0%	-0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.01%
0.01%
0.03%
0.00%
0.03%
0.00%
0.00%
0.07%
0.00%
-0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Old River near Middle River

Existing Condition

Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	706	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	700	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	543	577
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	462	698	681	652	656
1982	601	674	810	738	300	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	517	701	702	625	613
1986	593	623	786	838	468	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	690	678	649
1990	704	733	861	960	1,181	1,015	700	663	773	721	700	722
1991	715	729	881	1,003	1,282	1,016	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	622	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

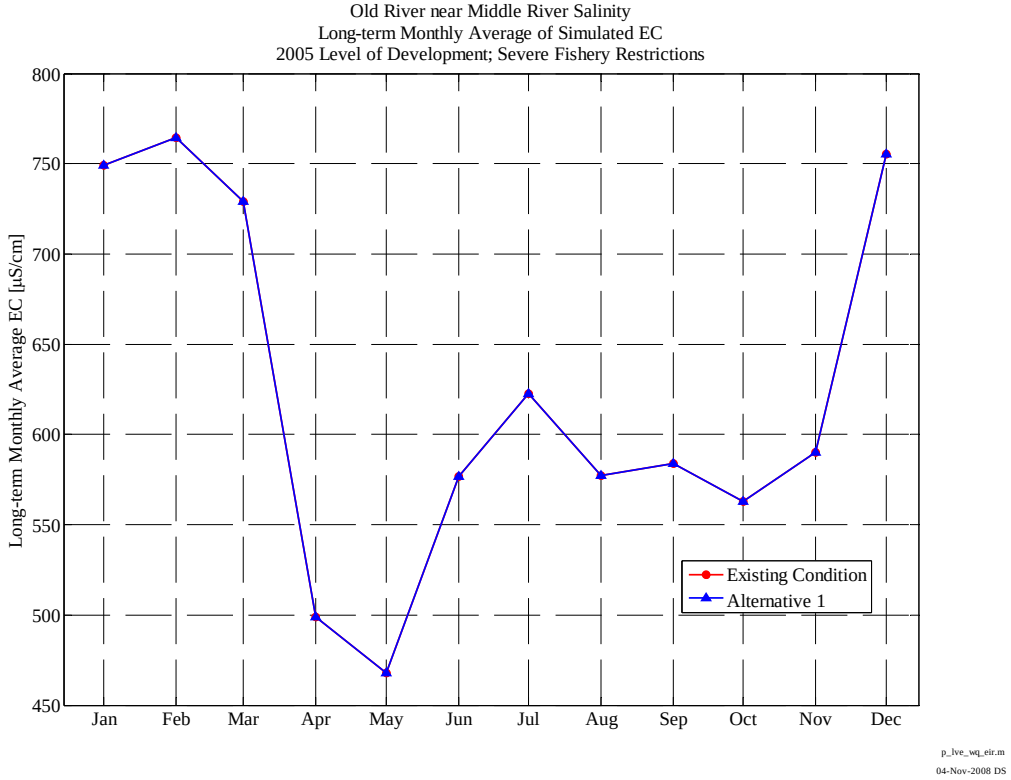
Alternative 1

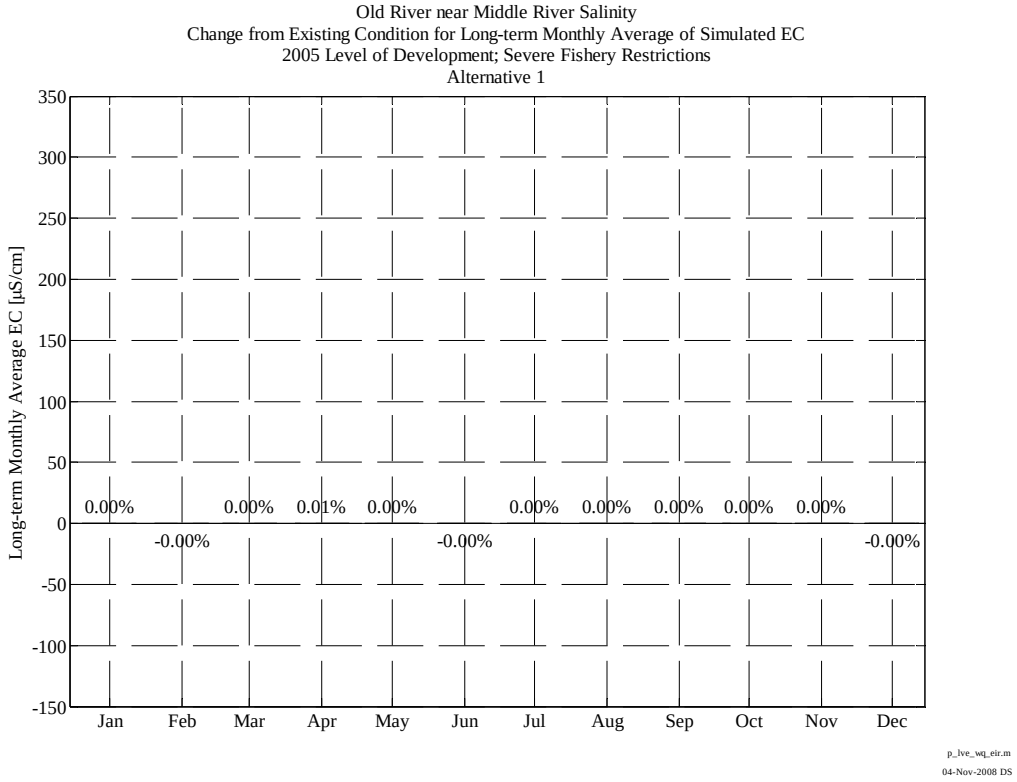
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

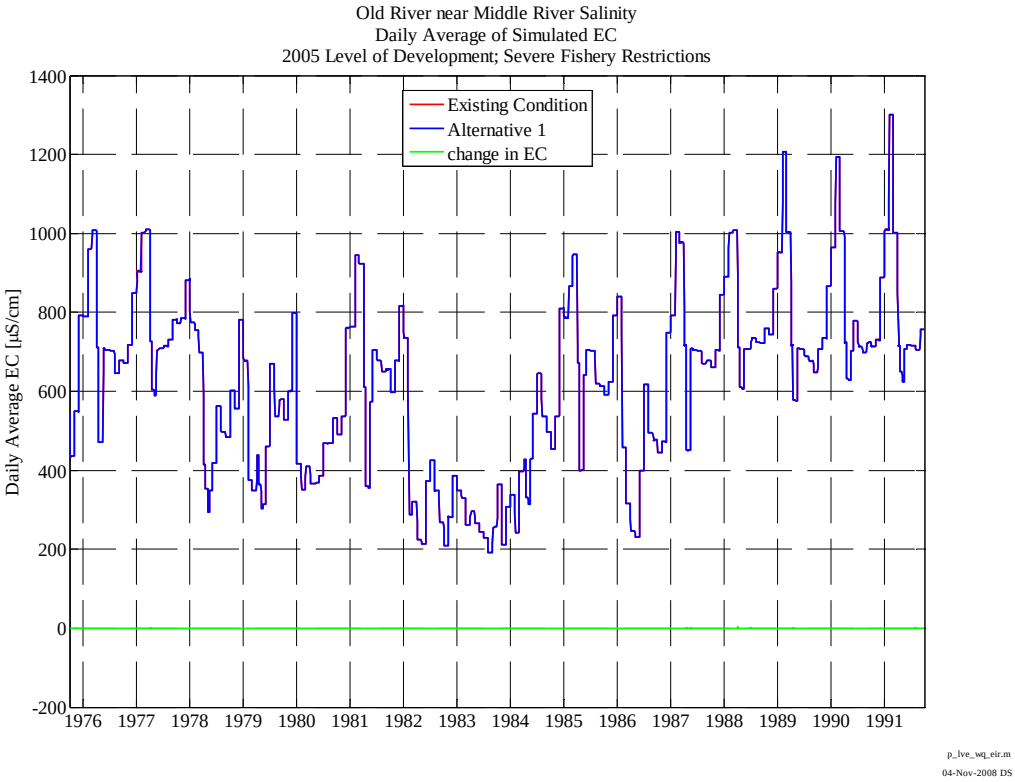
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	706	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	700	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	543	577
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	462	698	681	652	656
1982	601	674	810	738	300	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	517	701	702	625	613
1986	593	623	786	838	468	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	680	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	690	678	649
1990	704	733	861	960	1,181	1,015	700	663	773	721	700	722
1991	715	729	881	1,003	1,282	1,016	699	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	622	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

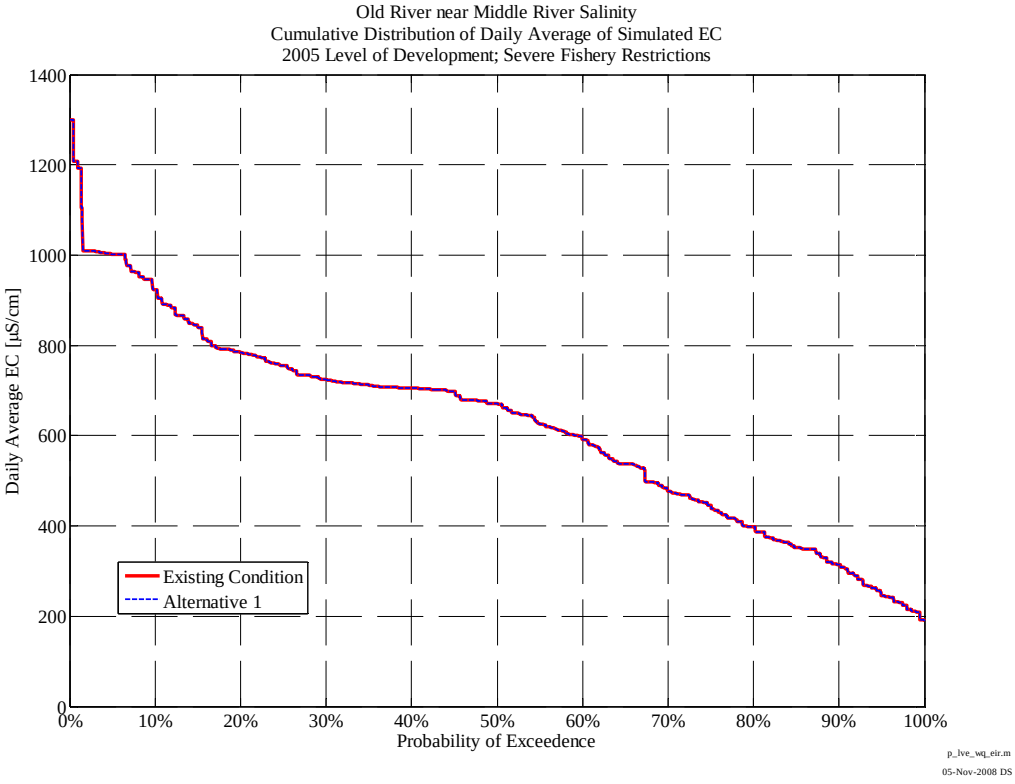
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
0.00%
0.01%
0.00%
-0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

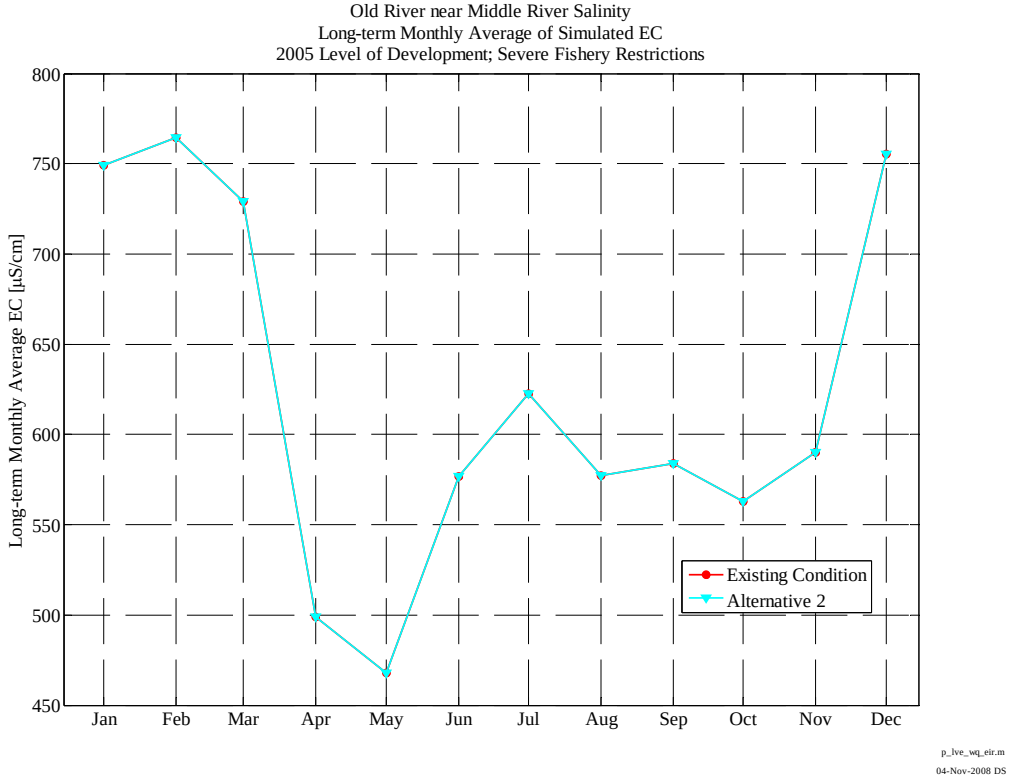
Alternative 2

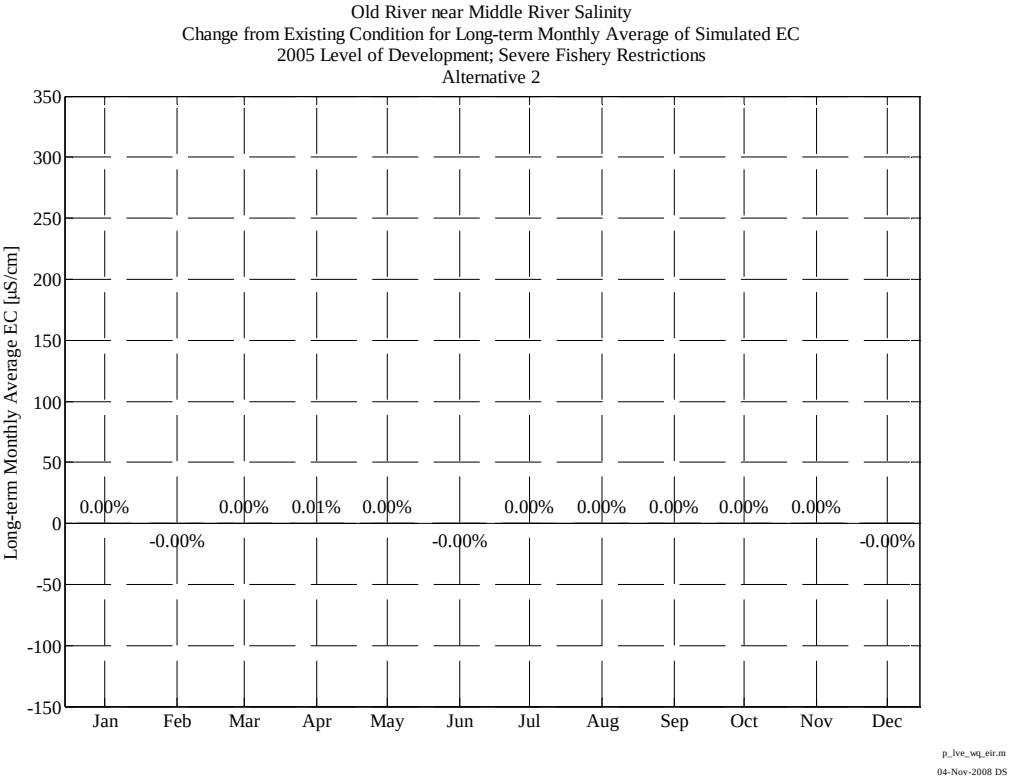
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

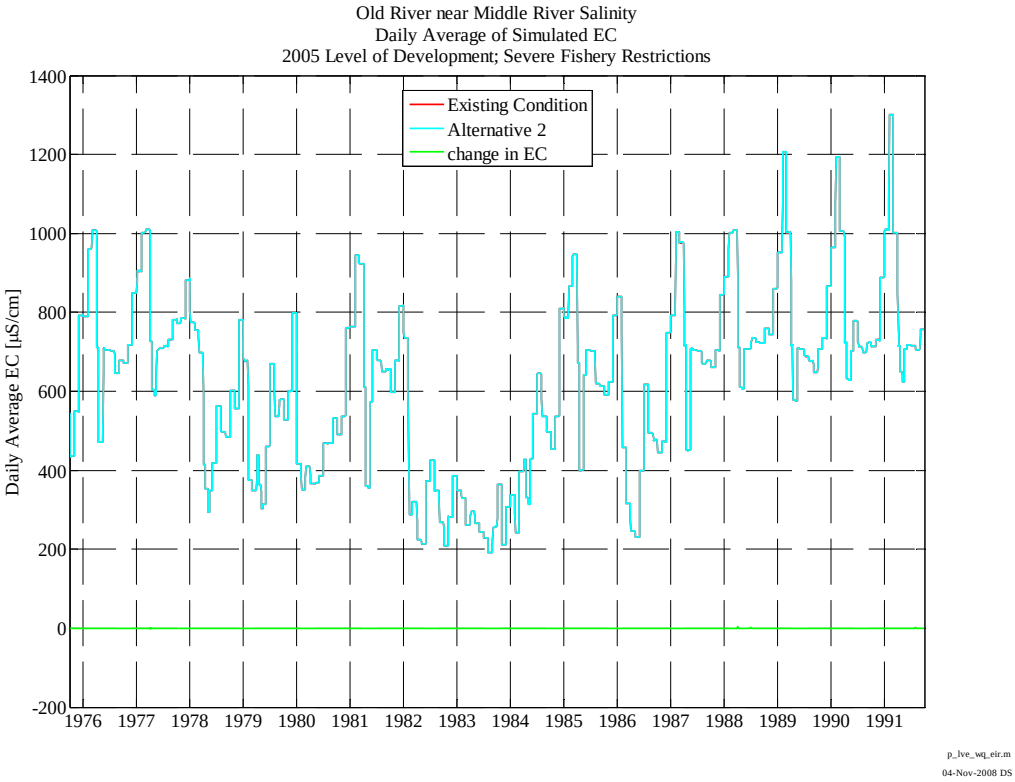
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	706	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	700	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	543	577
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	462	698	681	652	656
1982	601	674	810	738	300	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	517	701	702	625	613
1986	593	623	786	838	468	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	680	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	690	678	649
1990	704	733	861	960	1,181	1,015	700	663	773	721	700	722
1991	715	729	881	1,003	1,282	1,016	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	622	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

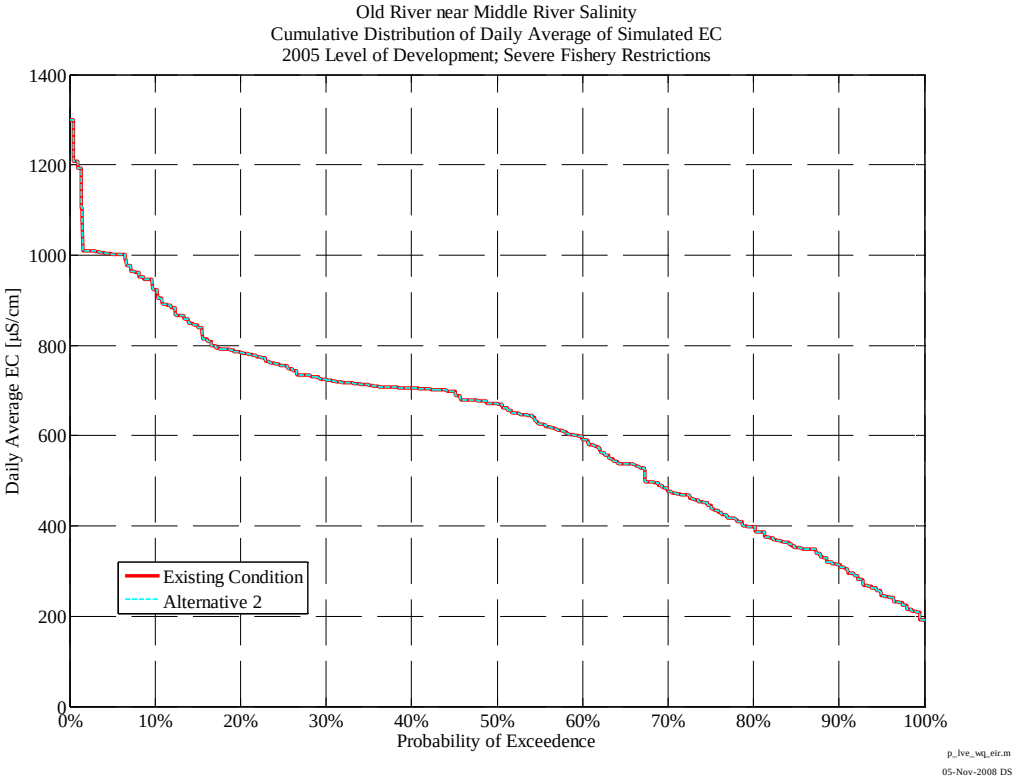
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
0.00%
0.01%
0.00%
-0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

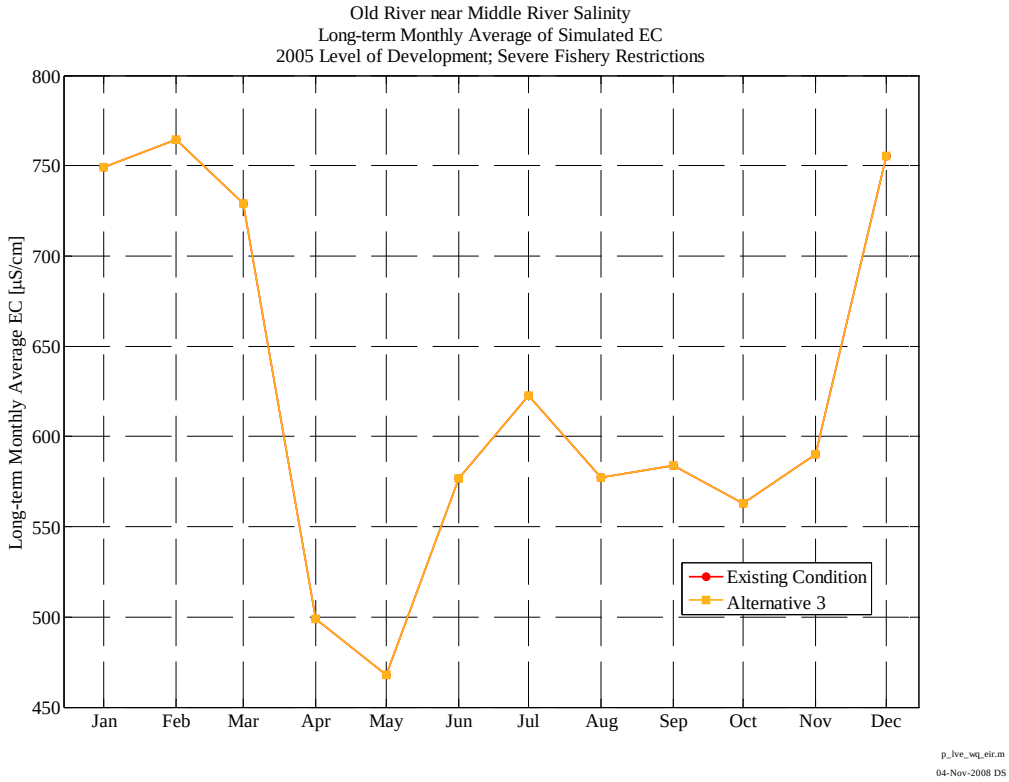
Alternative 3

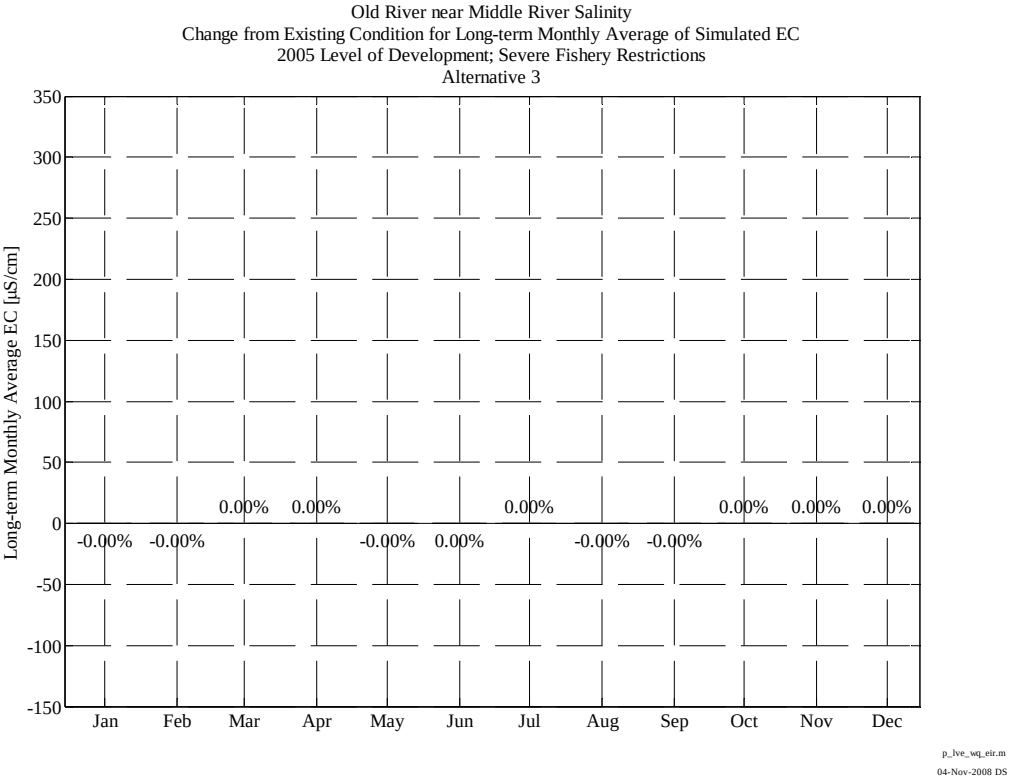
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

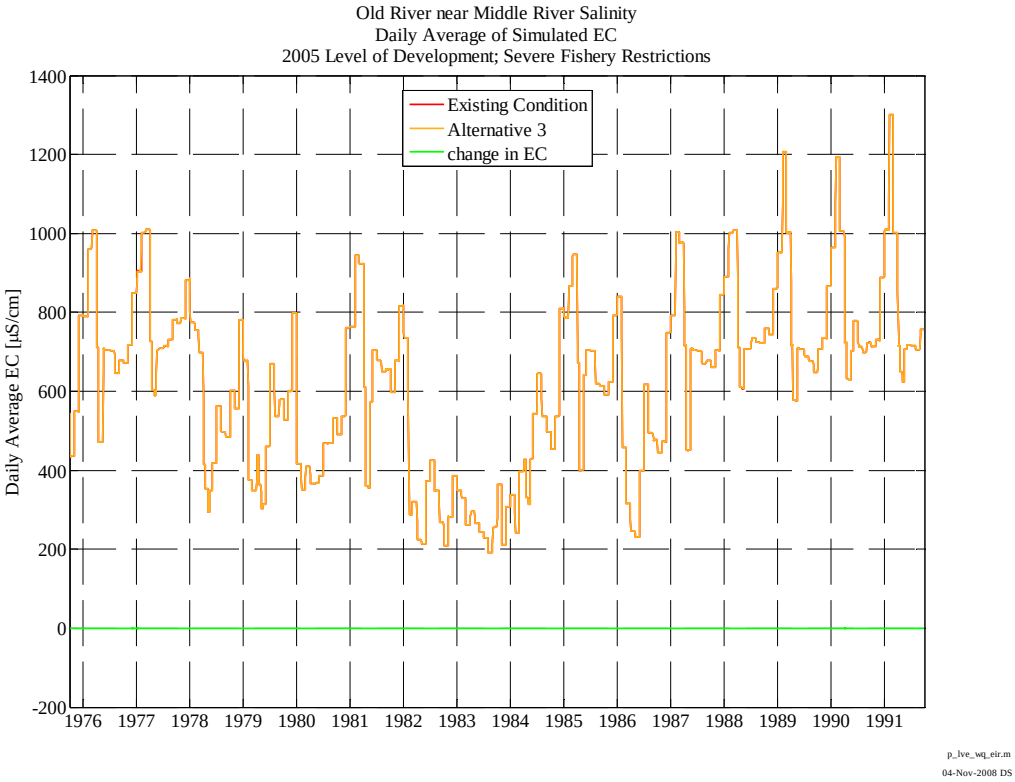
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	706	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	700	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	543	577
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	462	698	681	652	656
1982	601	674	810	738	300	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	517	701	702	625	613
1986	593	623	786	838	468	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	690	678	649
1990	704	733	861	960	1,181	1,015	700	663	773	721	700	722
1991	715	729	881	1,003	1,282	1,016	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	622	577	584
W/AN/BN	524	533	676	593	405	394	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

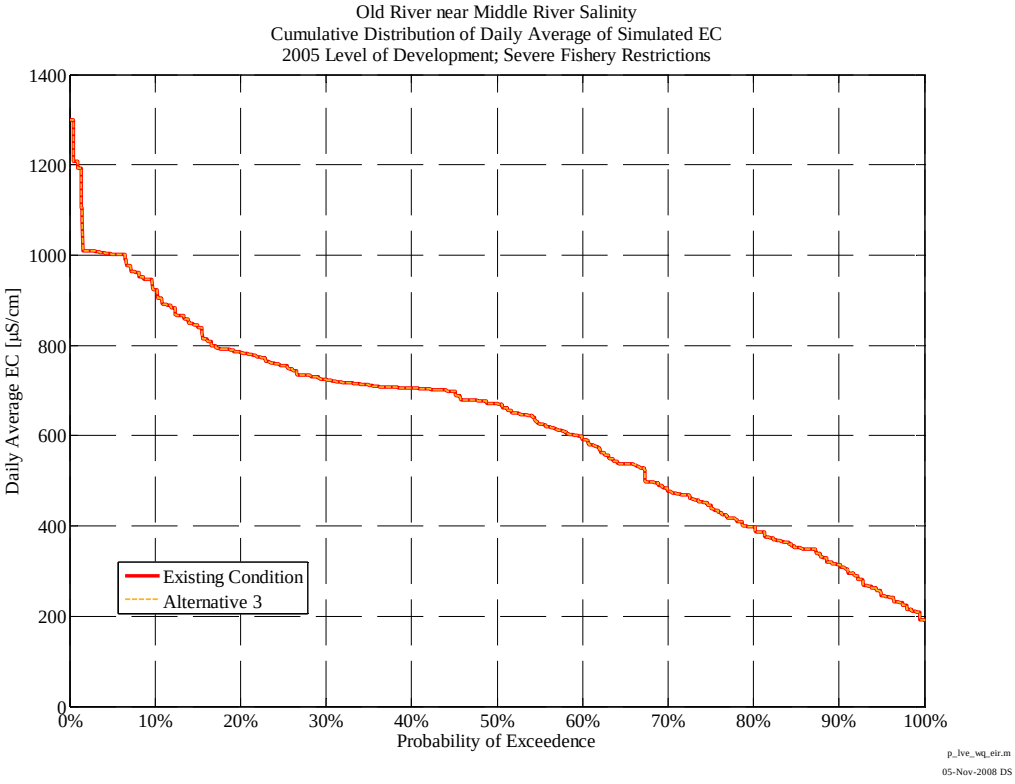
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

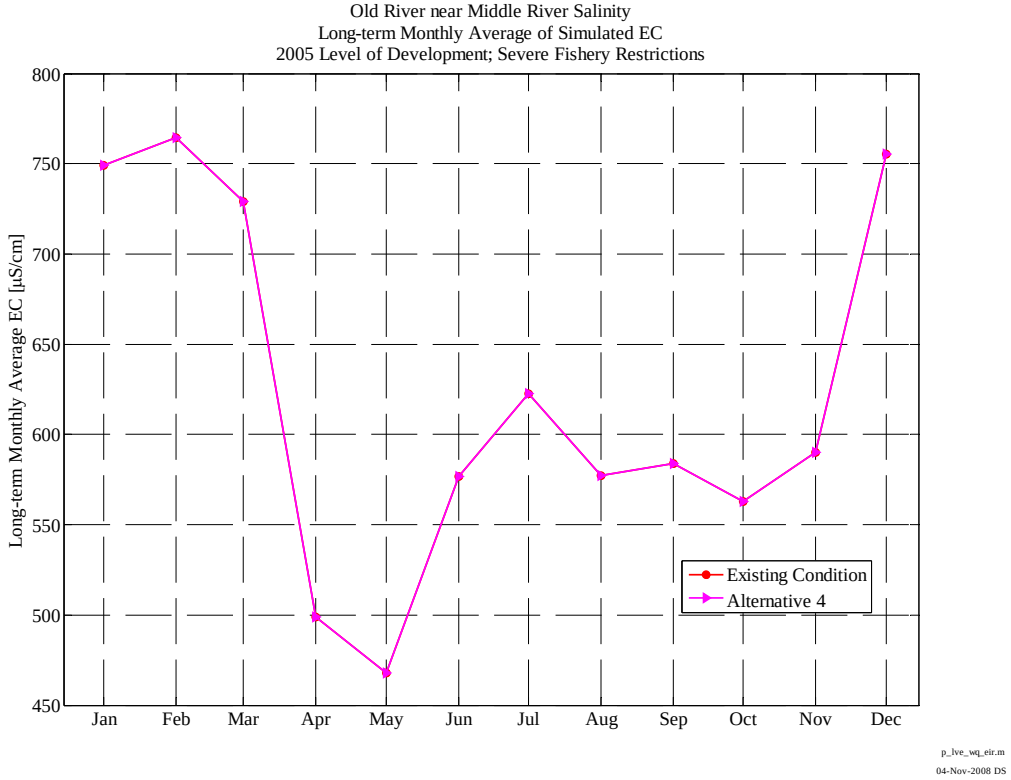
Alternative 4

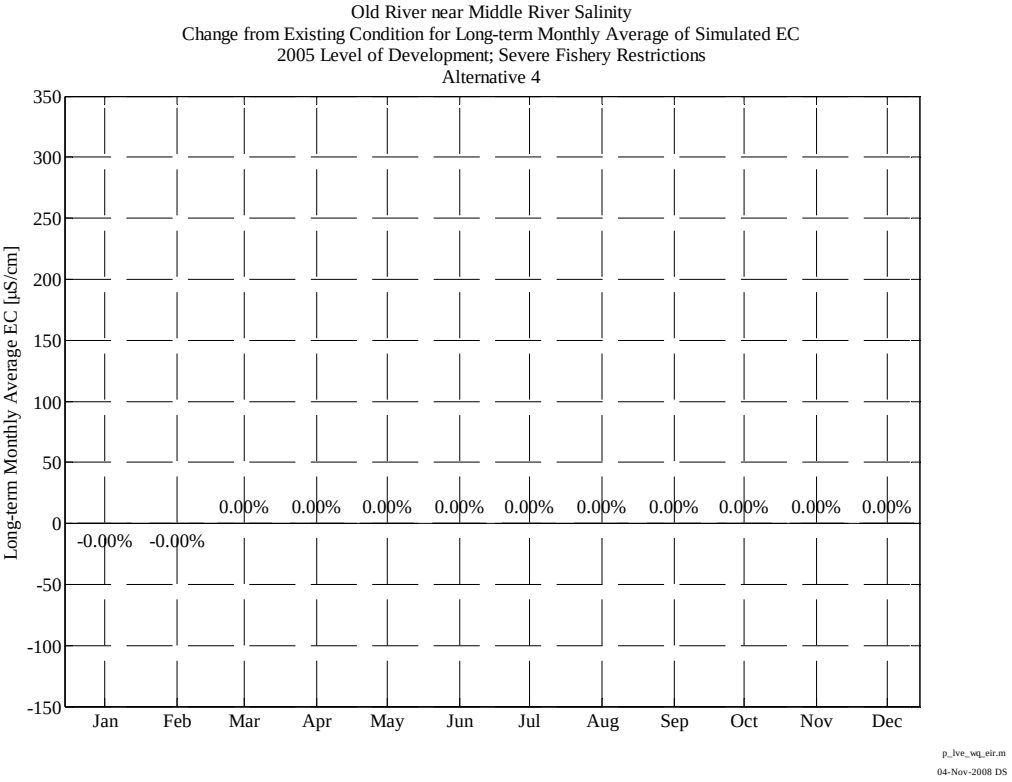
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

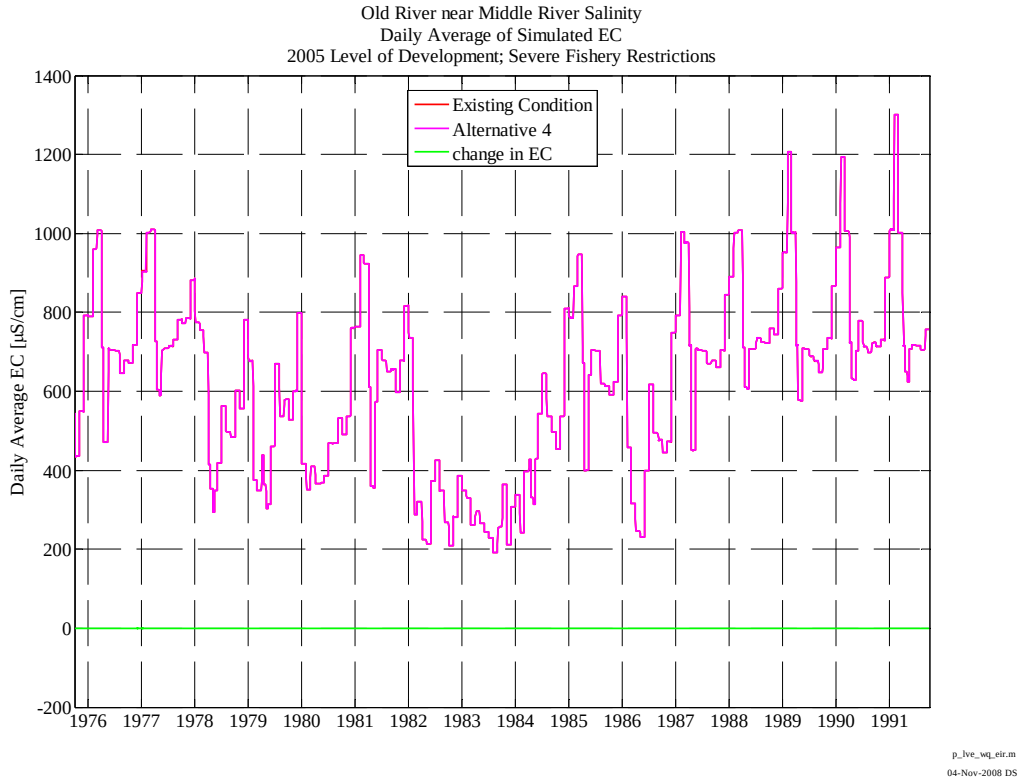
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	706	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	700	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	543	577
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	462	698	681	652	656
1982	601	674	810	738	300	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	517	701	702	625	613
1986	593	623	786	838	468	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	690	678	649
1990	704	733	861	960	1,181	1,015	700	663	773	721	700	722
1991	715	729	881	1,003	1,282	1,016	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	622	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

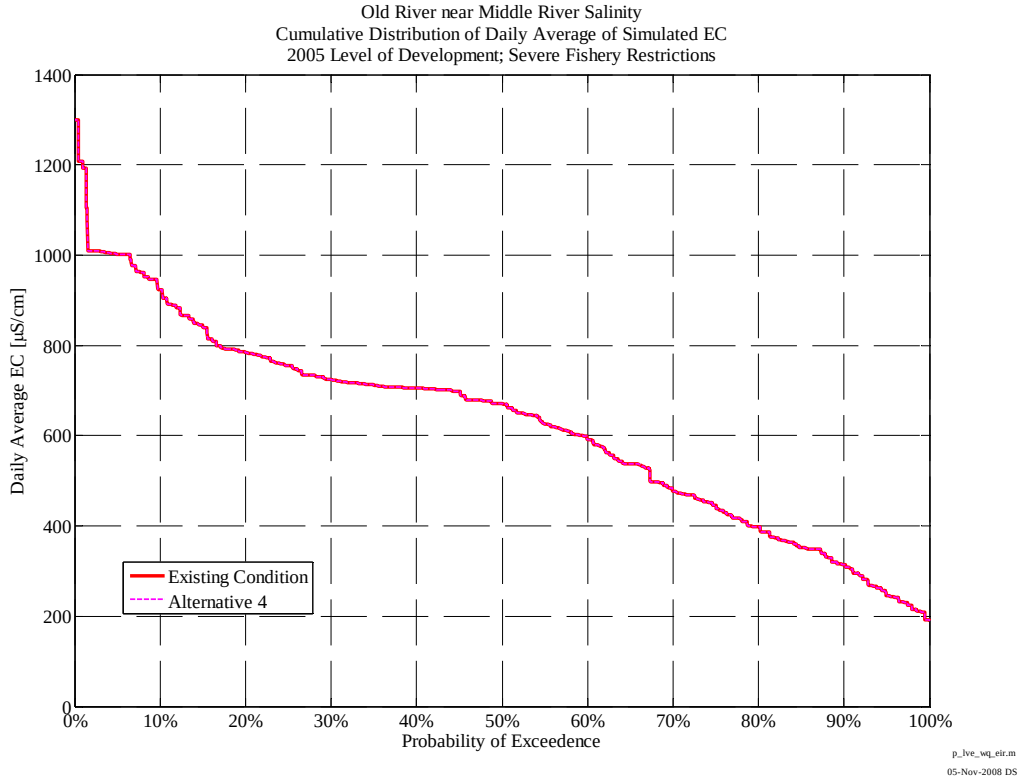
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.00%
-0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

San Joaquin River at Brandt Bridge

Existing Condition

San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	615	580	706	703	651	677
1977	670	714	839	899	995	1,009	702	642	711	714	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	352	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	501	461	695	682	652	655
1982	600	673	809	737	300	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	515	699	702	625	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	608	566	706	703	673	677
1988	661	700	832	887	994	1,008	687	652	708	731	725	721
1989	756	744	852	944	1,188	1,015	675	633	709	702	680	649
1990	703	732	857	957	1,176	1,019	719	662	763	730	701	721
1991	713	728	876	998	1,275	1,021	708	663	718	717	707	752
Avg	562	589	752	748	762	729	504	466	576	623	577	583
W/AN/BN	522	532	674	592	404	393	328	298	400	512	442	441
D/C	592	633	813	868	1,040	991	641	597	713	709	683	693

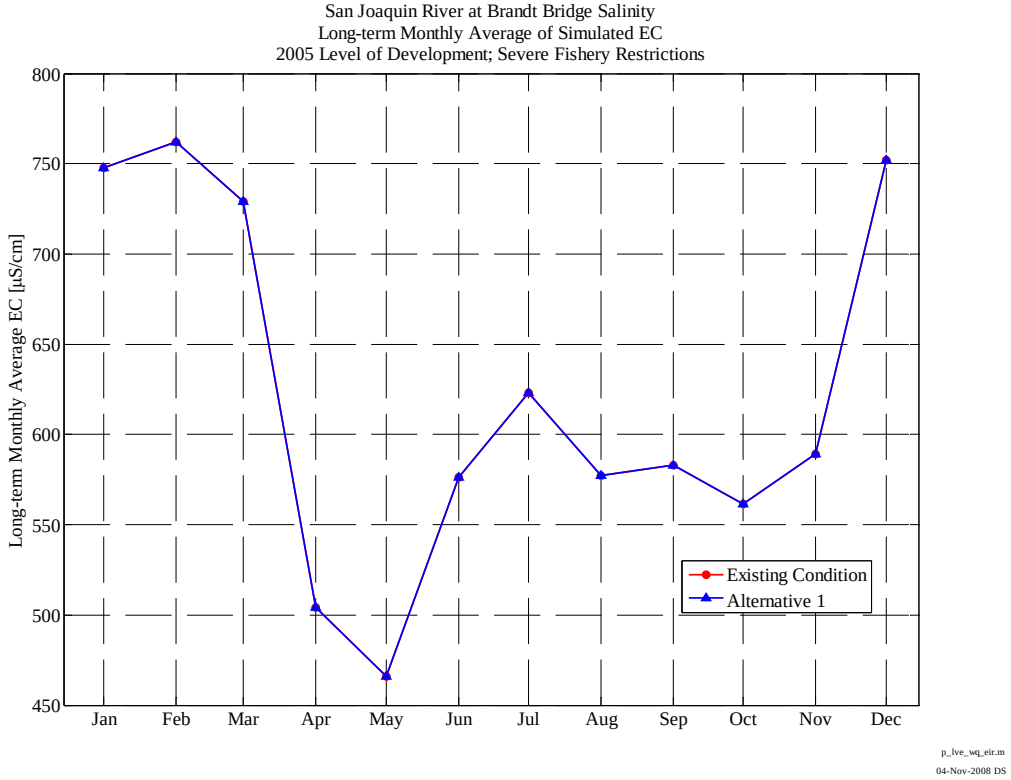
Alternative 1

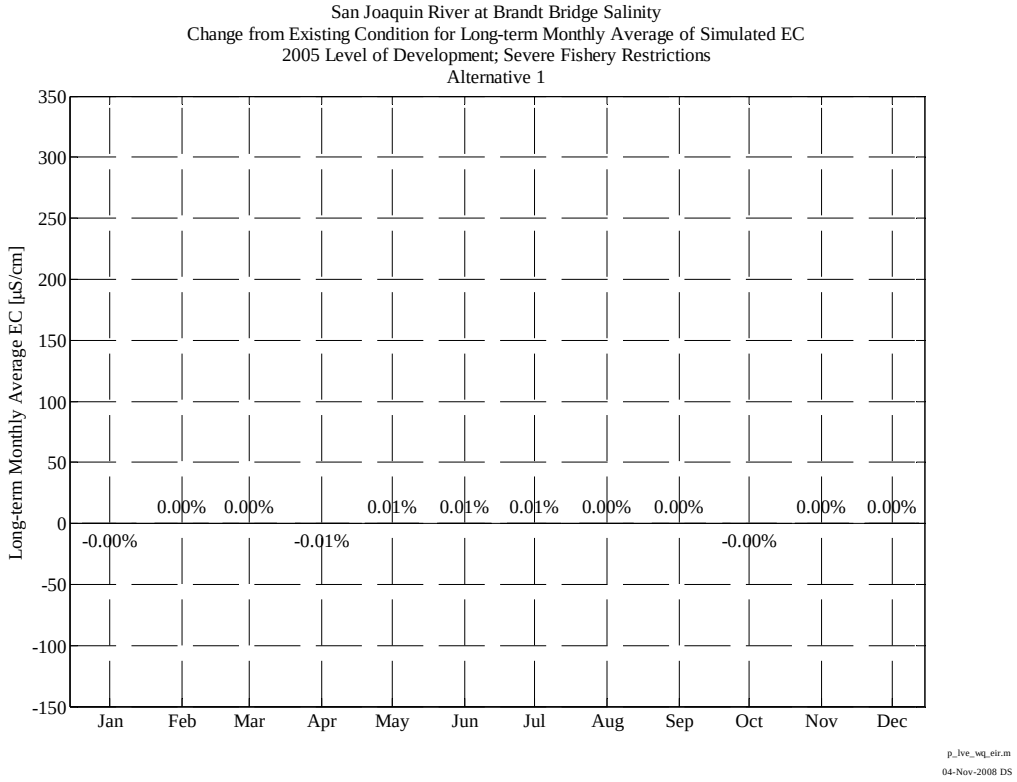
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

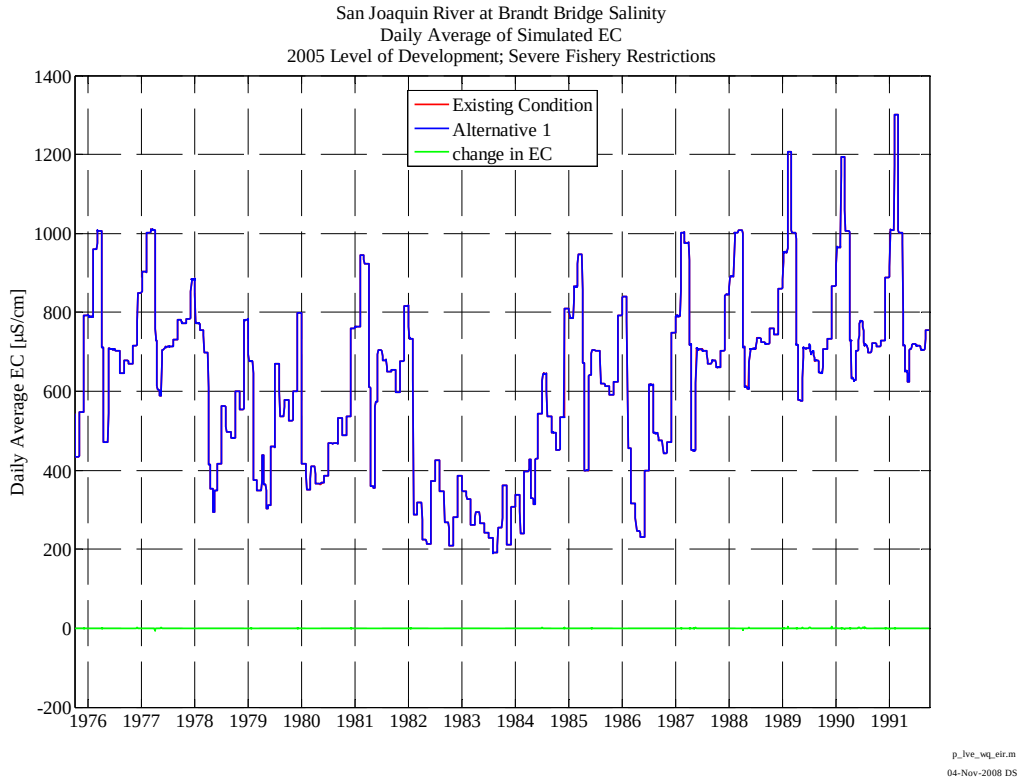
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	615	580	706	703	651	677
1977	670	714	839	899	995	1,009	702	642	711	714	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	352	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	501	461	695	682	652	655
1982	600	673	809	737	300	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	515	699	702	625	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	608	566	706	703	673	677
1988	661	700	832	887	994	1,008	687	652	708	731	725	721
1989	756	744	852	944	1,188	1,015	675	633	709	702	680	649
1990	703	732	857	957	1,176	1,019	719	662	763	731	701	721
1991	713	728	876	998	1,275	1,021	708	663	718	717	707	752
Avg	562	589	752	748	762	729	504	466	576	623	577	583
W/AN/BN	522	532	674	592	404	393	328	298	400	512	442	441
D/C	592	633	813	868	1,040	991	641	597	713	710	683	693

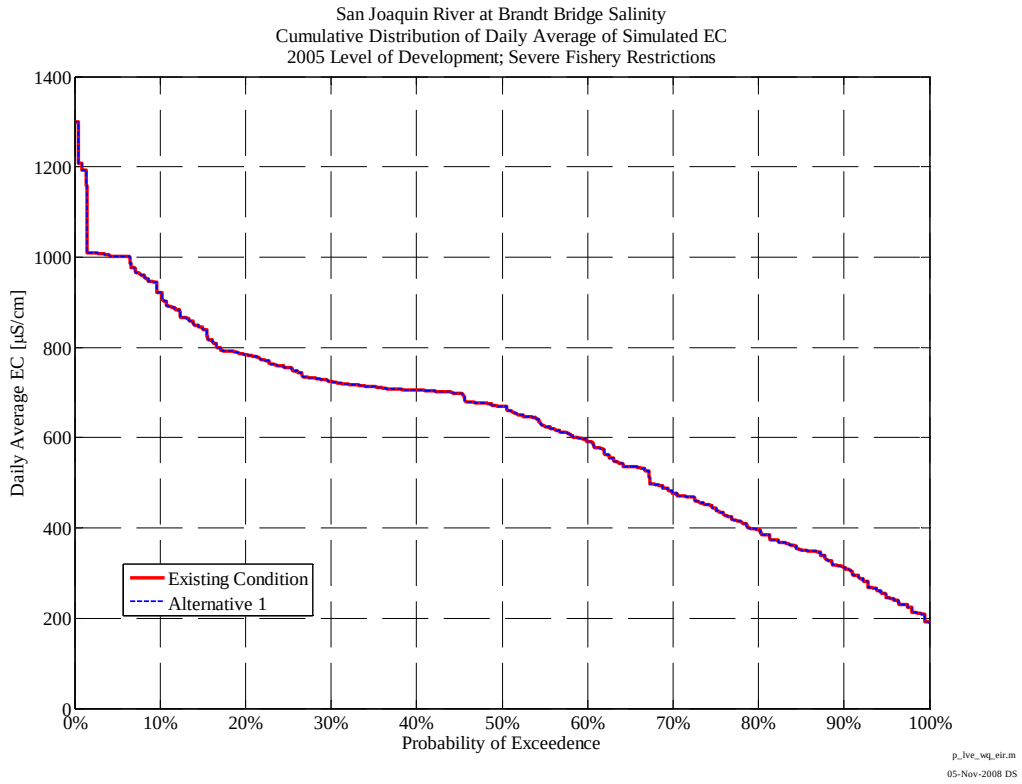
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.01%
0.01%
0.01%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.01%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

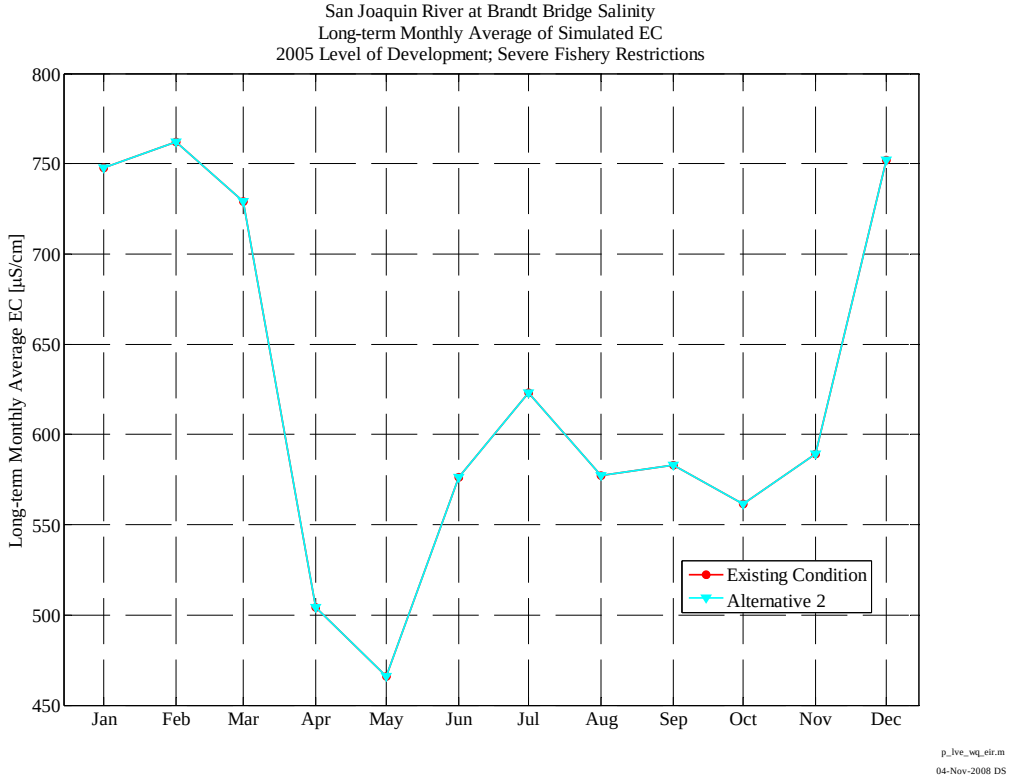
Alternative 2

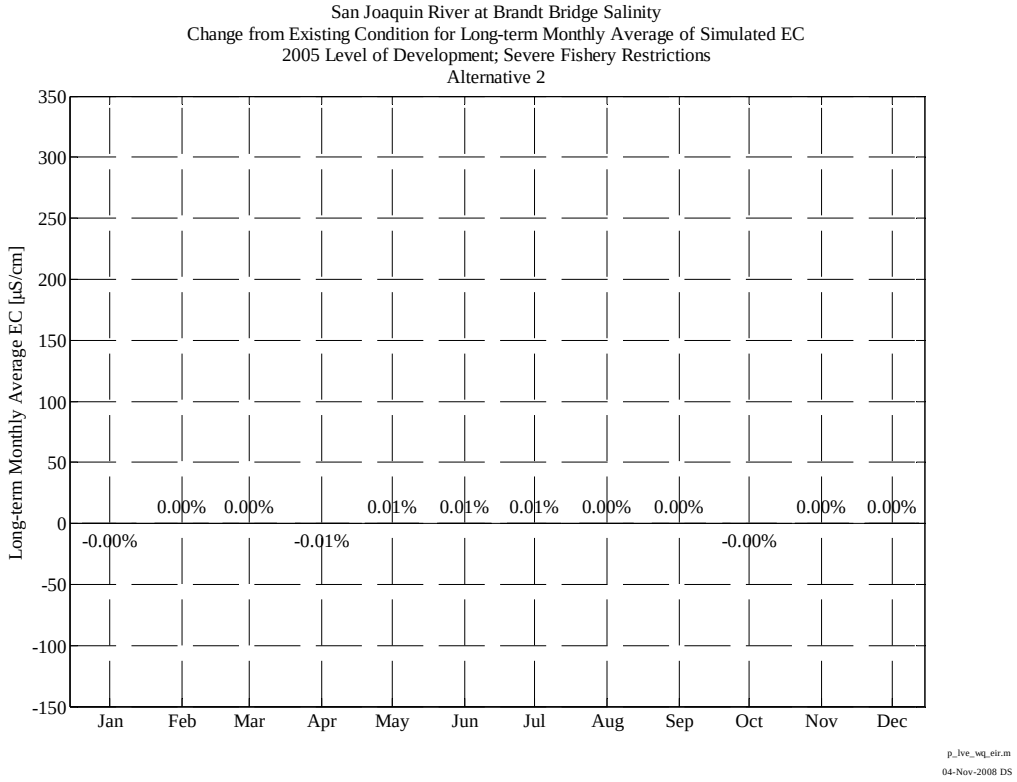
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

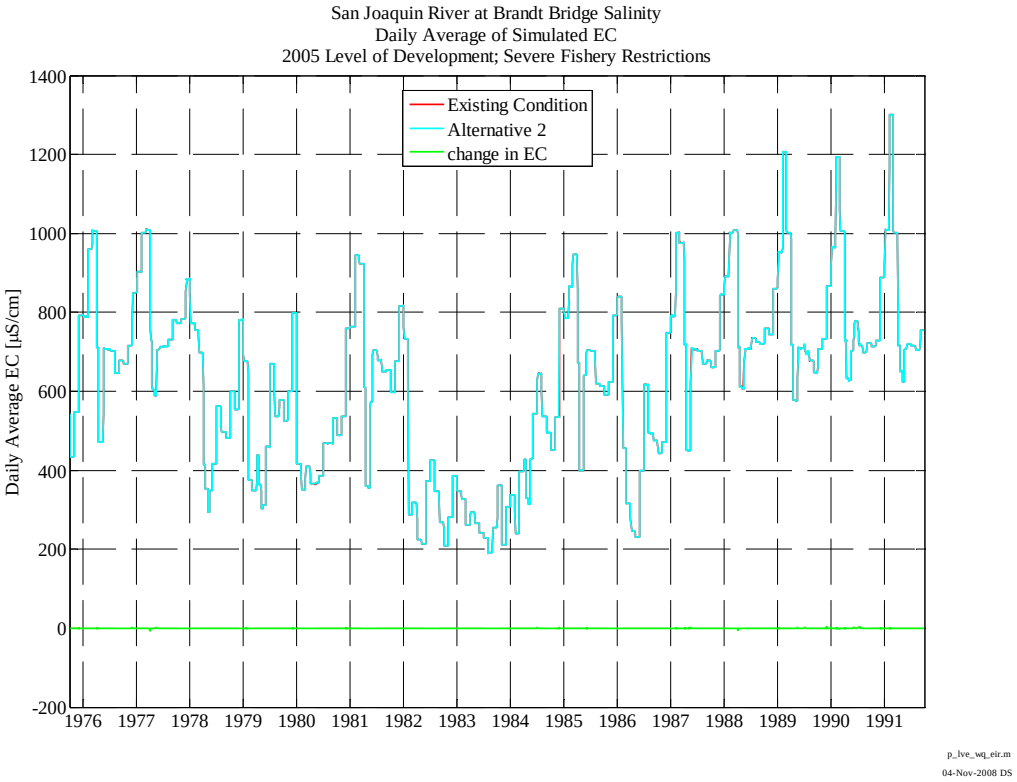
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	615	580	706	703	651	677
1977	670	714	839	899	995	1,009	702	642	711	714	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	352	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	501	461	695	682	652	655
1982	600	673	809	737	300	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	515	699	702	625	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	608	566	706	703	673	677
1988	661	700	832	887	994	1,008	687	652	708	731	725	721
1989	756	744	852	944	1,188	1,015	675	633	709	702	680	649
1990	703	732	857	957	1,176	1,019	719	662	763	731	701	721
1991	713	728	876	998	1,275	1,021	708	663	718	717	707	752
Avg	562	589	752	748	762	729	504	466	576	623	577	583
W/AN/BN	522	532	674	592	404	393	328	298	400	512	442	441
D/C	592	633	813	868	1,040	991	641	597	713	710	683	693

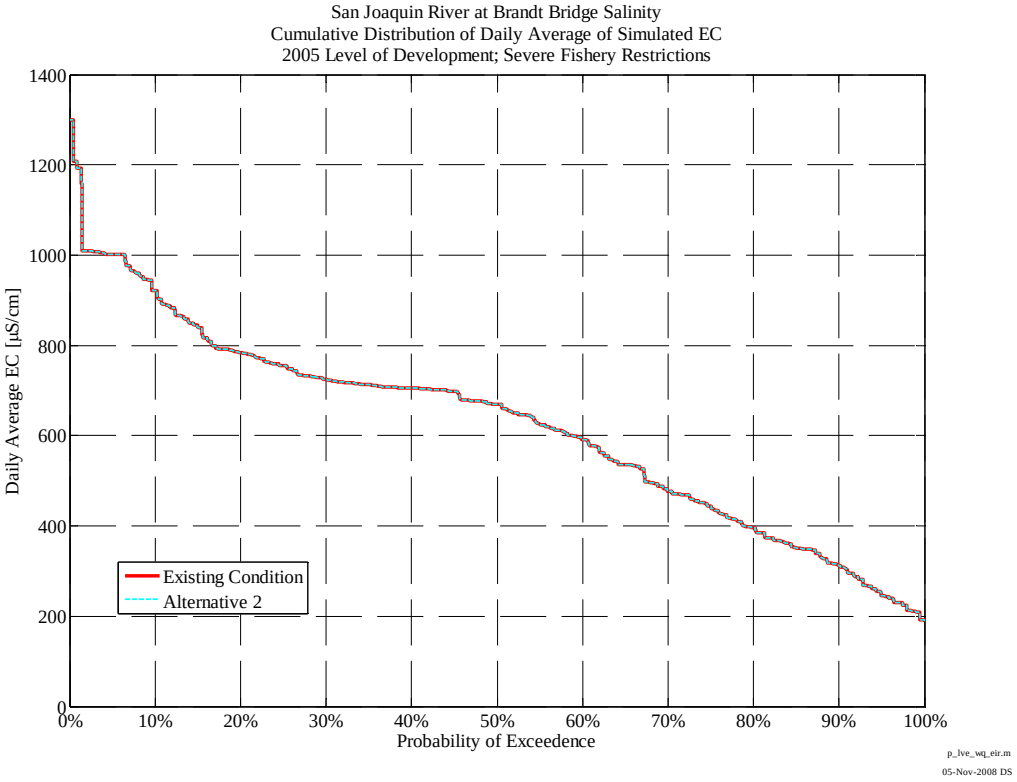
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.00%
0.00%
0.01%
0.01%
0.01%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.01%
-0.00%
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

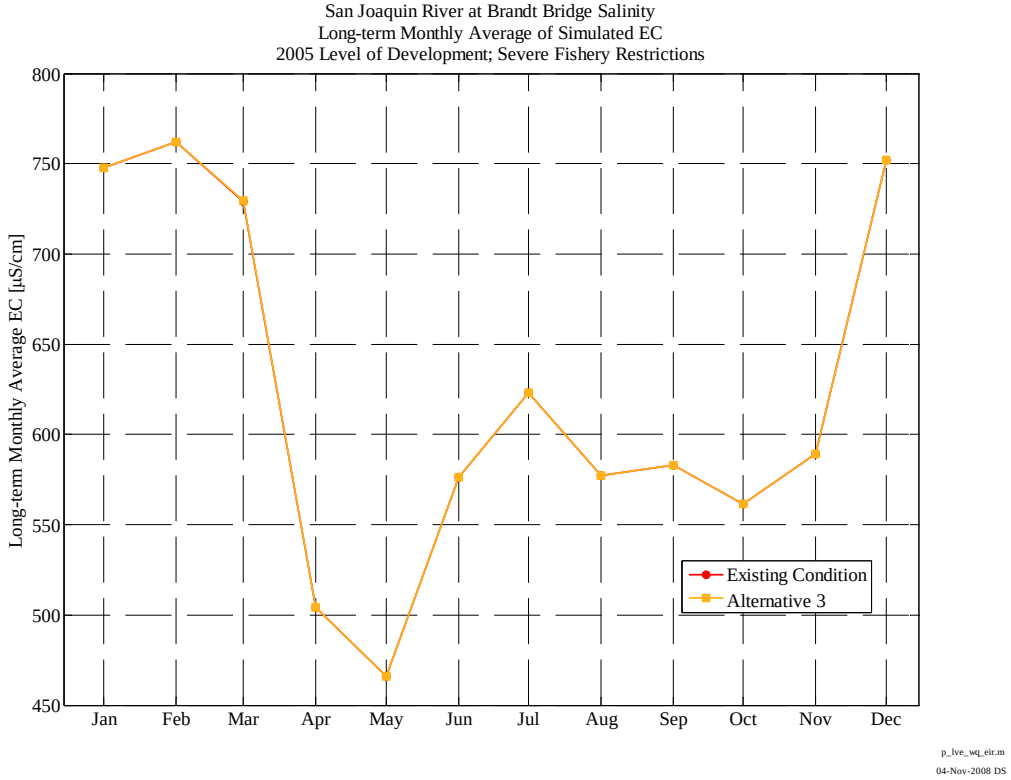
Alternative 3

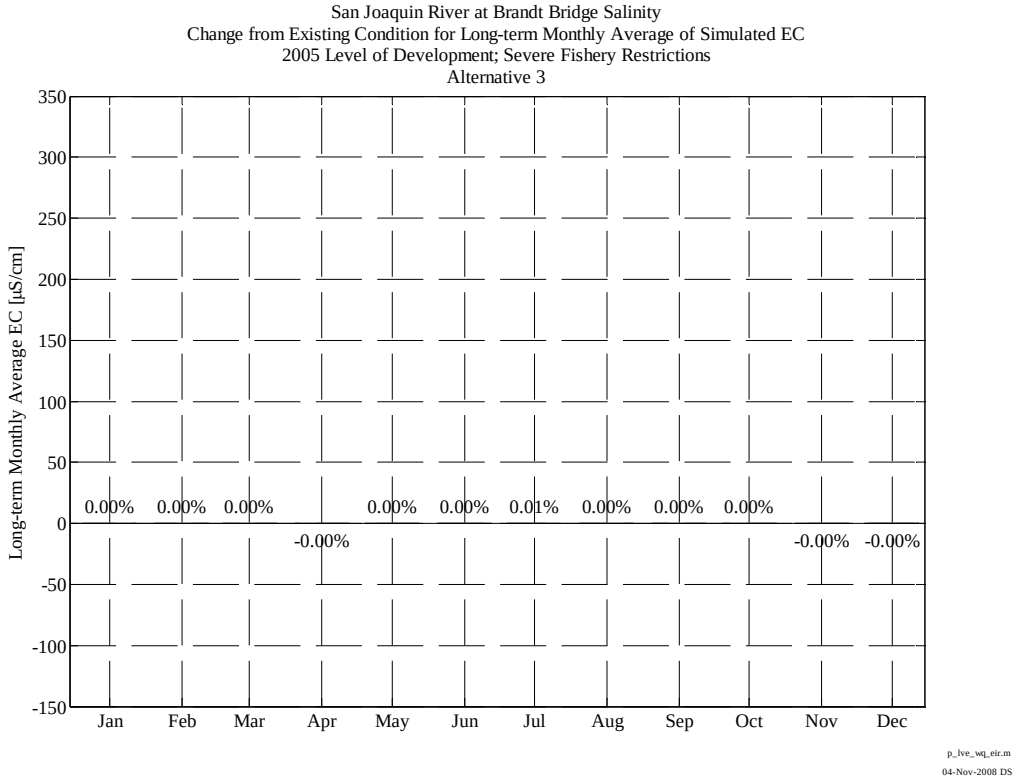
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

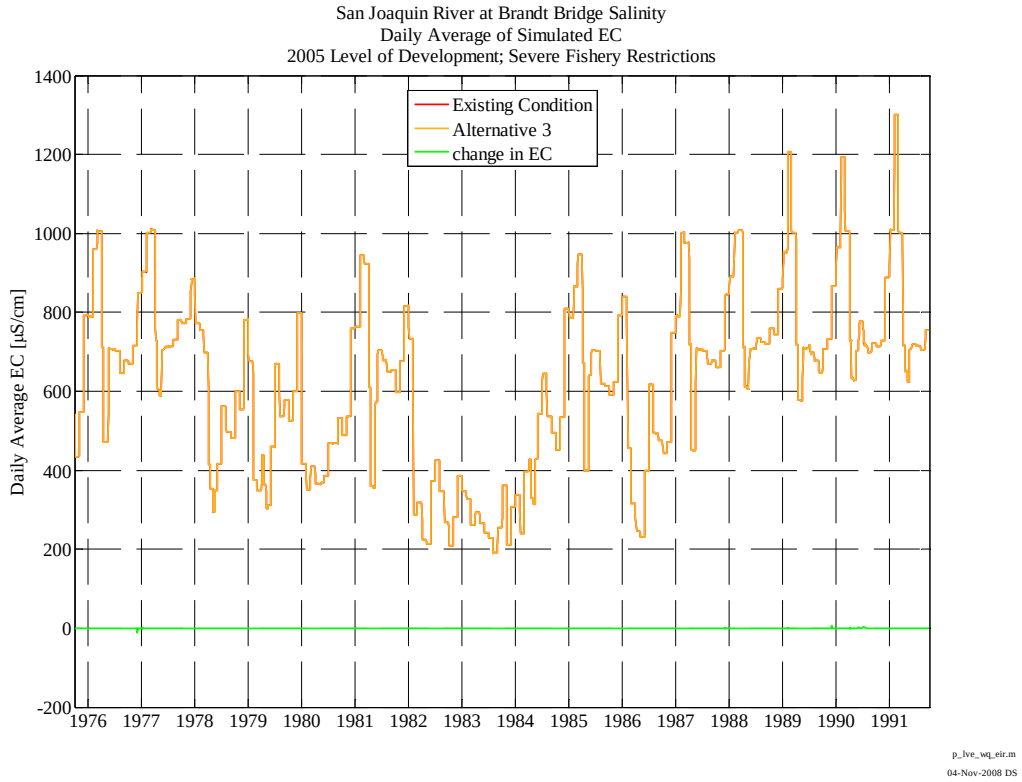
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	615	580	706	703	651	677
1977	670	714	838	899	995	1,009	702	642	711	714	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	352	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	501	461	695	682	652	655
1982	600	673	809	737	300	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	515	699	702	625	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	608	566	706	703	673	677
1988	661	700	832	887	994	1,008	687	652	708	731	725	721
1989	756	744	852	944	1,188	1,015	675	633	709	702	680	649
1990	703	732	857	957	1,176	1,019	719	662	763	731	701	721
1991	713	728	876	998	1,275	1,021	708	663	718	717	707	752
Avg	562	589	752	748	762	729	504	466	576	623	577	583
W/AN/BN	522	532	674	592	404	393	328	298	400	512	442	441
D/C	592	633	813	868	1,040	991	641	597	713	710	683	693

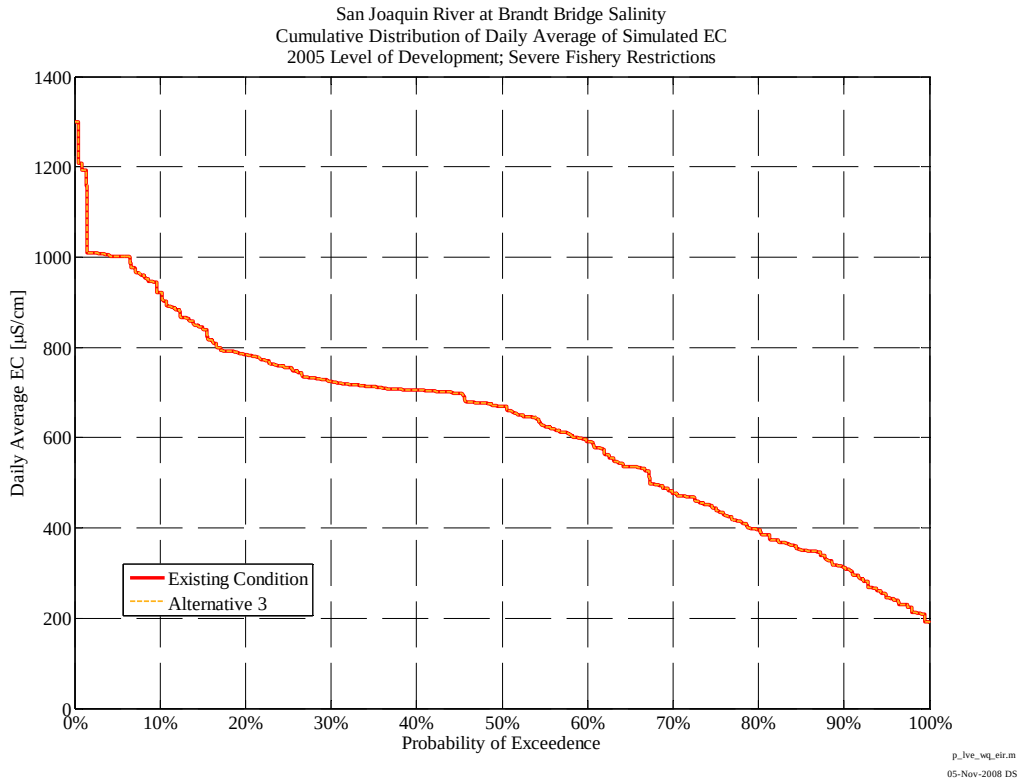
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
-0.00%
0.00%
0.00%
0.01%
0.00%
0.00%
0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

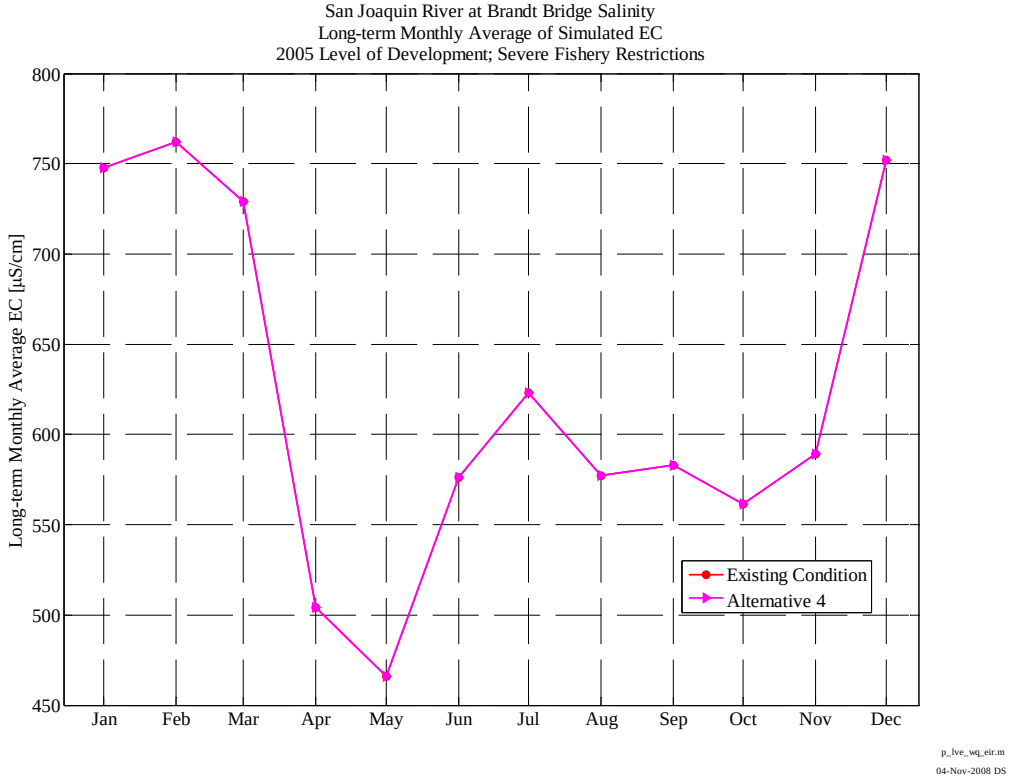
Alternative 4

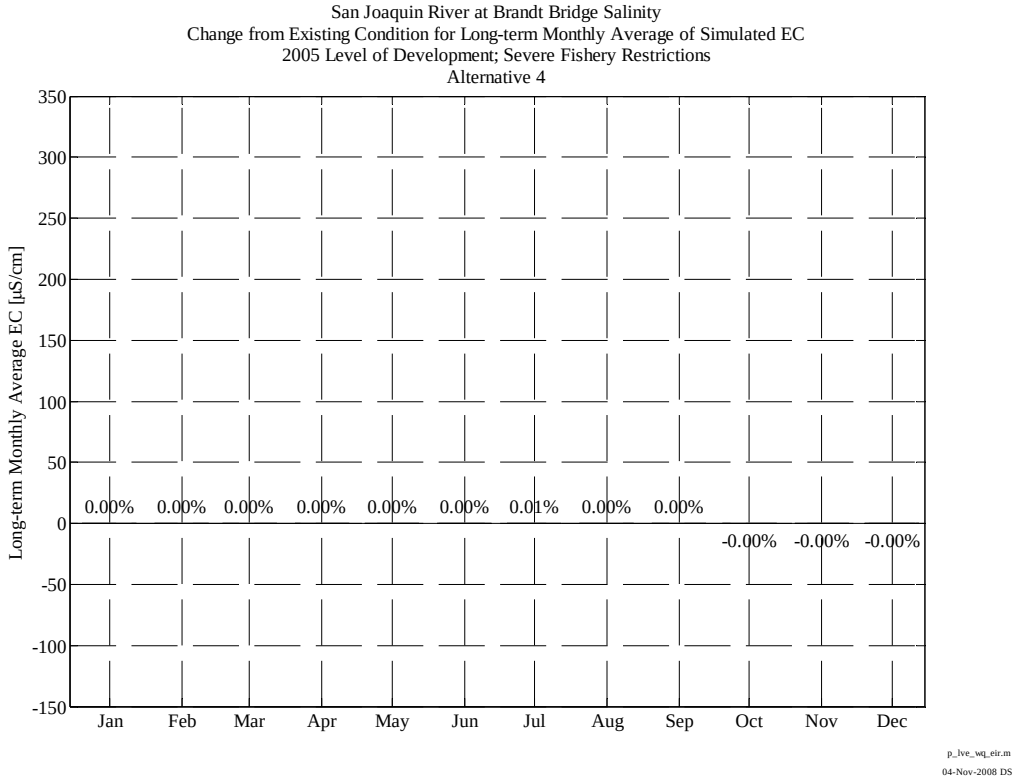
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

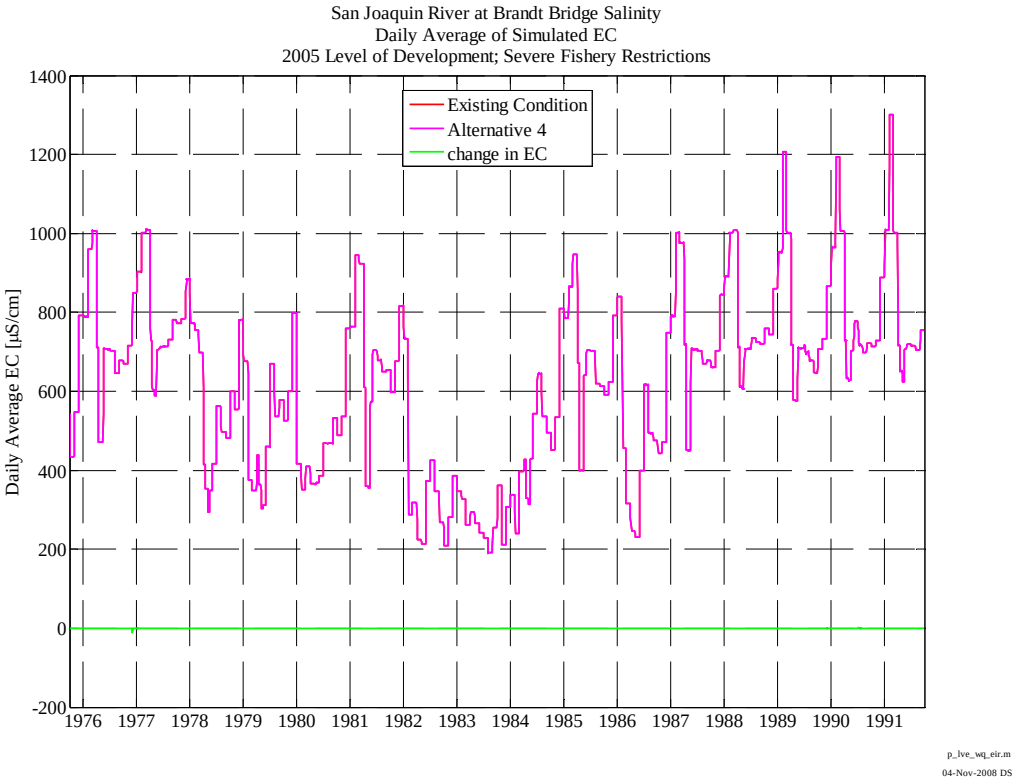
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	615	580	706	703	651	677
1977	670	714	838	899	995	1,009	702	642	711	714	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	352	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	501	461	695	682	652	655
1982	600	673	809	737	300	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	515	699	702	625	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	608	566	706	703	673	677
1988	661	700	832	887	994	1,008	687	652	708	731	725	721
1989	756	744	852	944	1,188	1,015	675	633	709	702	680	649
1990	703	732	857	957	1,176	1,019	719	662	763	730	701	721
1991	713	728	876	998	1,275	1,021	708	663	718	717	707	752
Avg	562	589	752	748	762	729	504	466	576	623	577	583
W/AN/BN	522	532	674	592	404	393	328	298	400	512	442	441
D/C	592	633	813	868	1,040	991	641	597	713	709	683	693

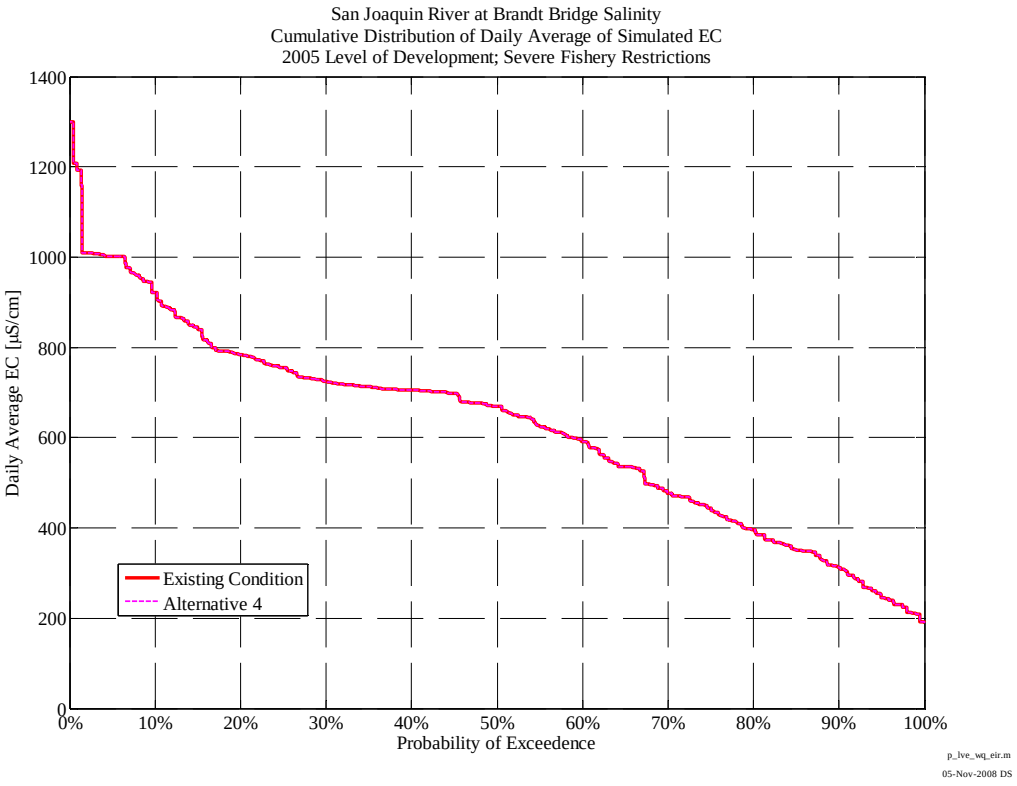
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.01%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

San Joaquin River at Vernalis

Existing Condition

San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	447	665	531	575
1980	526	598	797	414	348	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	674	646	652
1982	596	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	533	639	531	492
1985	451	532	805	783	864	945	519	515	698	699	616	610
1986	589	622	790	834	451	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	572	699	698	666	675
1988	659	702	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	681	674	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	464	572	619	571	582
W/AN/BN	521	532	678	583	397	389	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

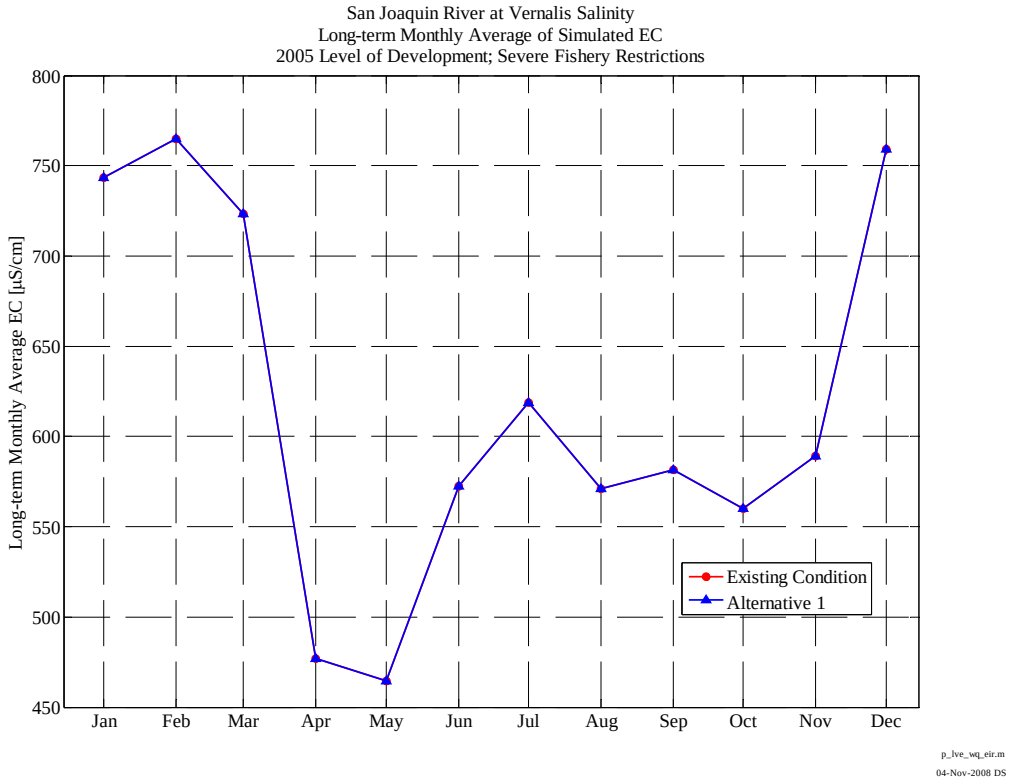
Alternative 1

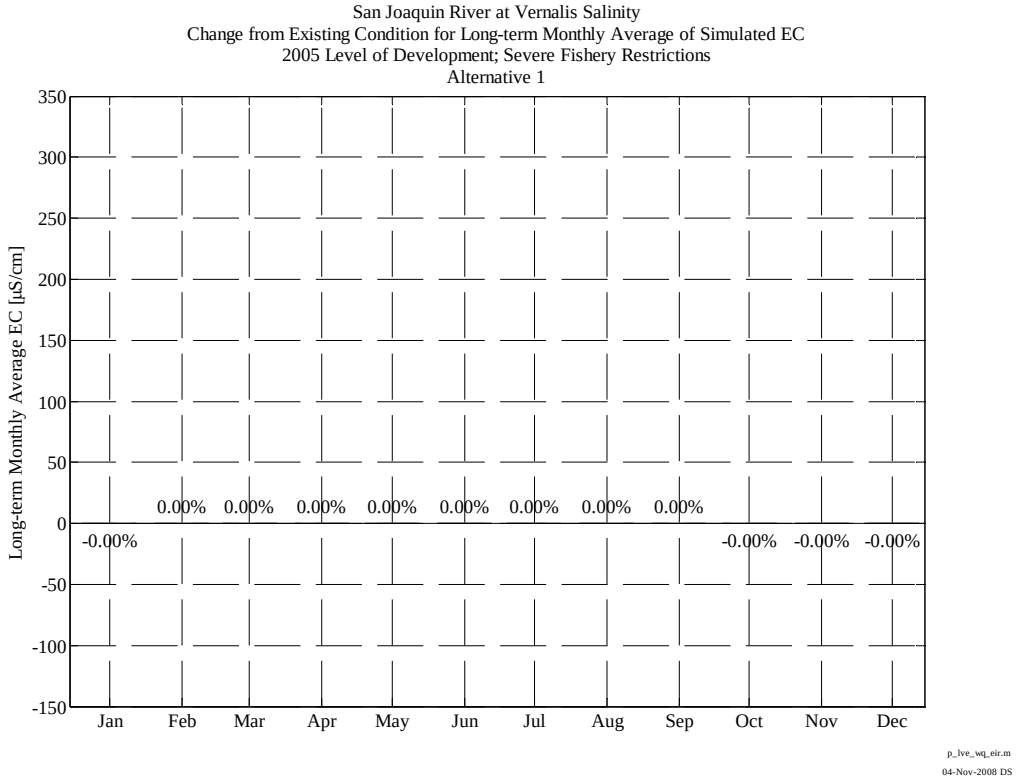
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Severe Fishery Restrictions

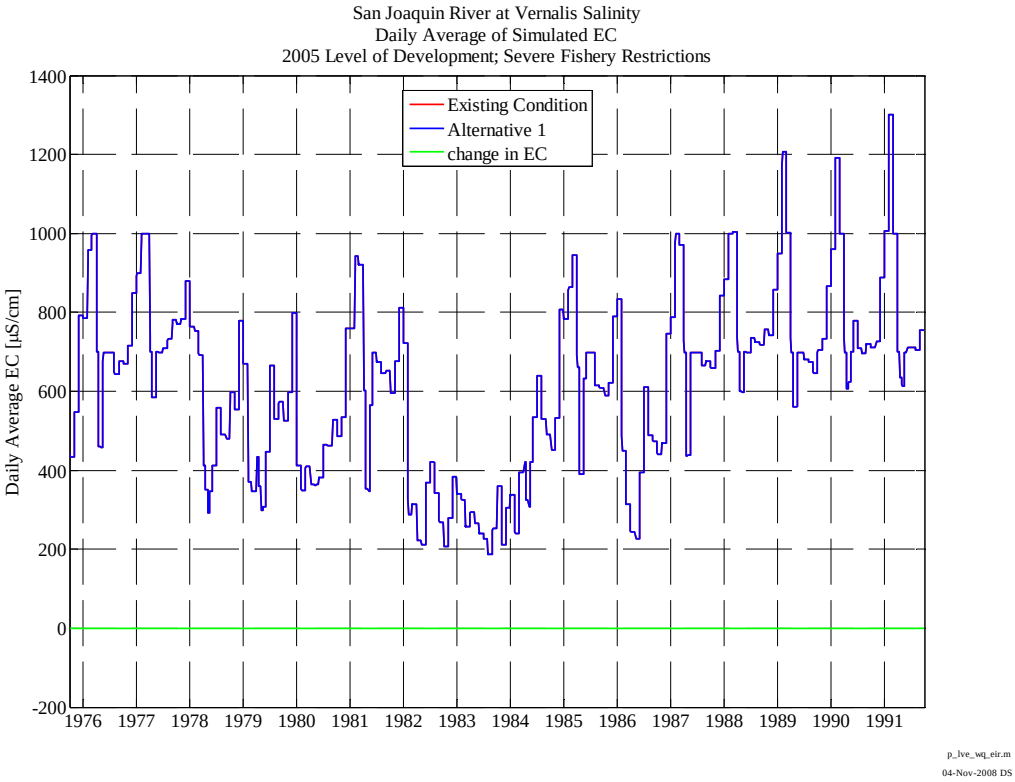
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	693	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	447	665	531	575
1980	526	598	797	414	348	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	674	646	652
1982	596	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	533	639	531	492
1985	451	532	805	783	864	945	519	515	698	699	616	610
1986	589	622	790	834	451	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	572	699	698	666	675
1988	659	702	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	681	674	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	464	572	619	571	582
W/AN/BN	521	532	678	583	397	390	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

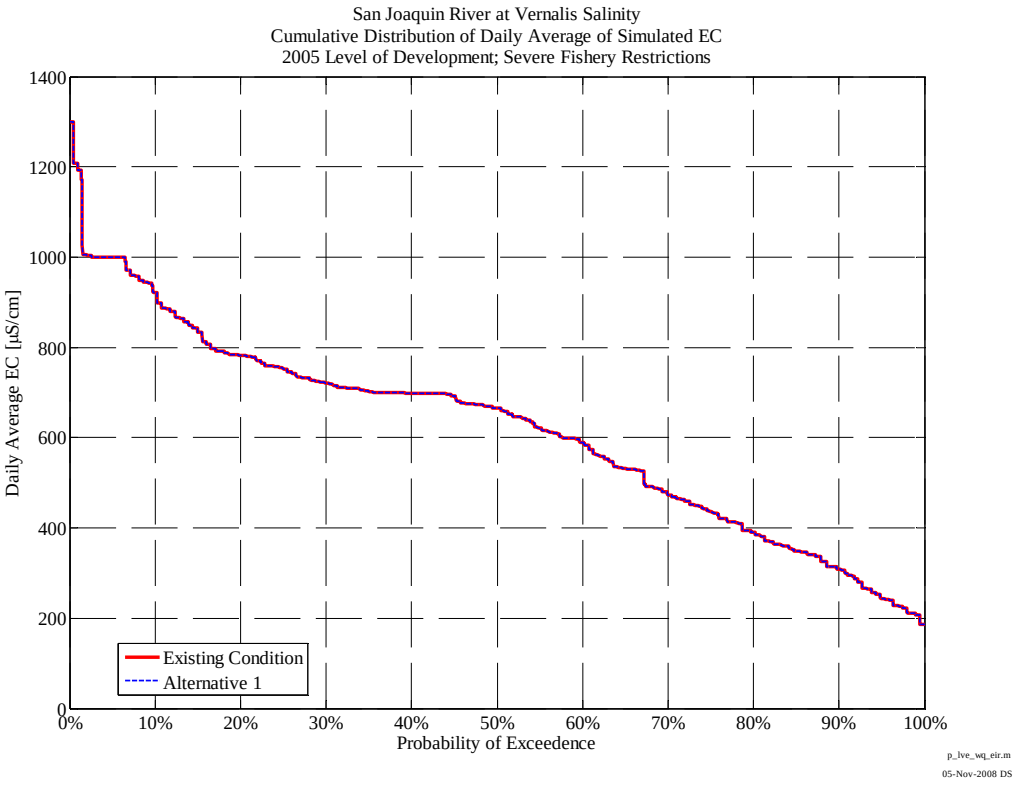
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

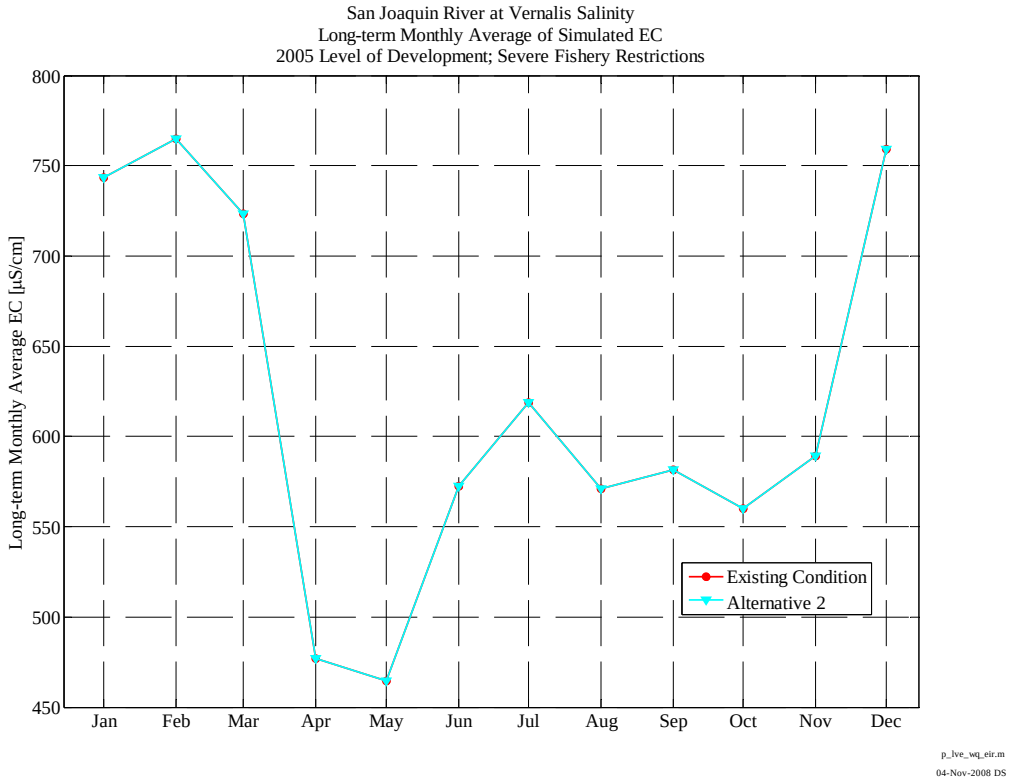
Alternative 2

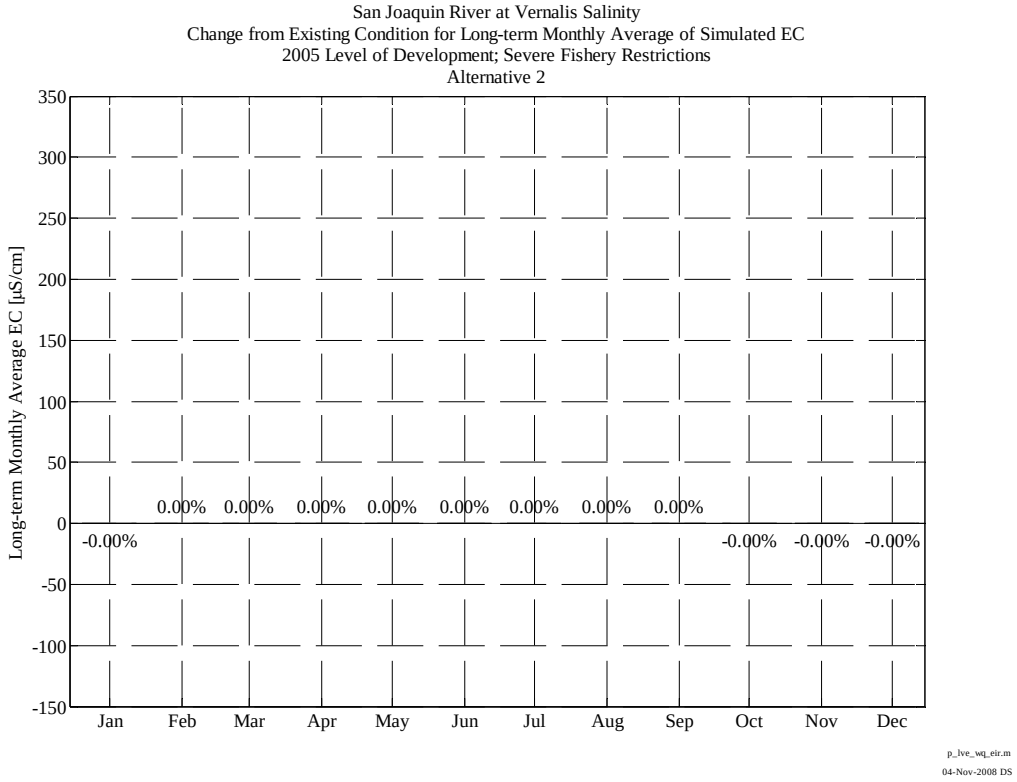
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Severe Fishery Restrictions

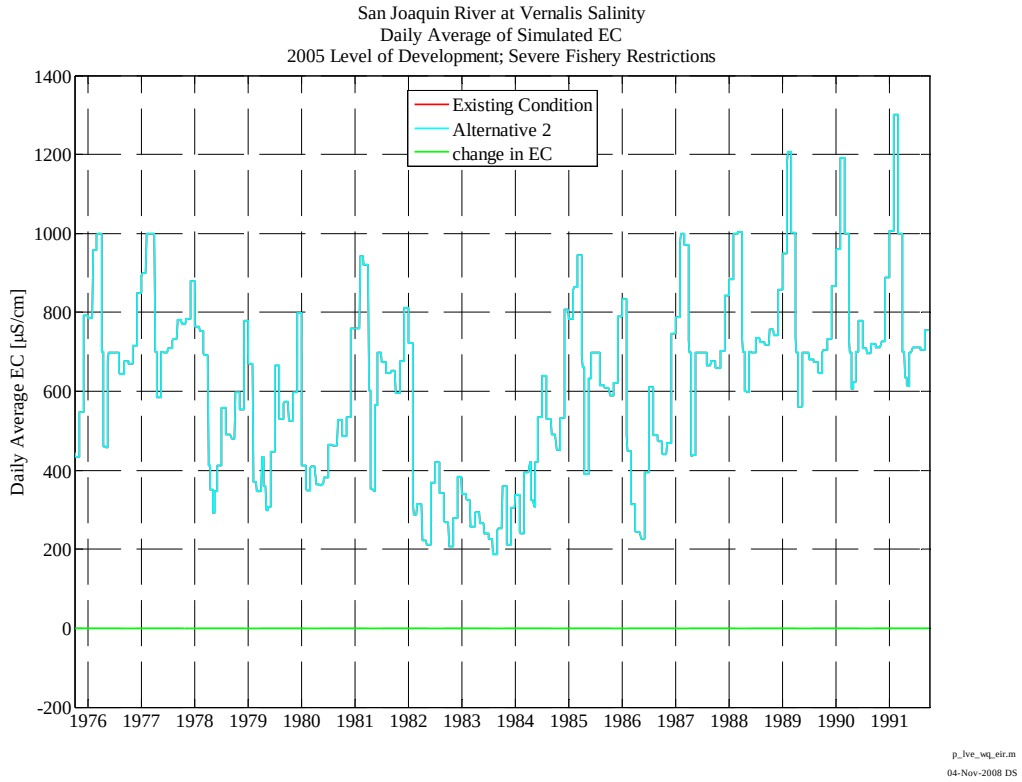
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	447	665	531	575
1980	526	598	797	414	348	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	674	646	652
1982	596	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	533	639	531	492
1985	451	532	805	783	864	945	519	515	698	699	616	610
1986	589	622	790	834	451	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	572	699	698	666	675
1988	659	702	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	681	674	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	464	572	619	571	582
W/AN/BN	521	532	678	583	397	390	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

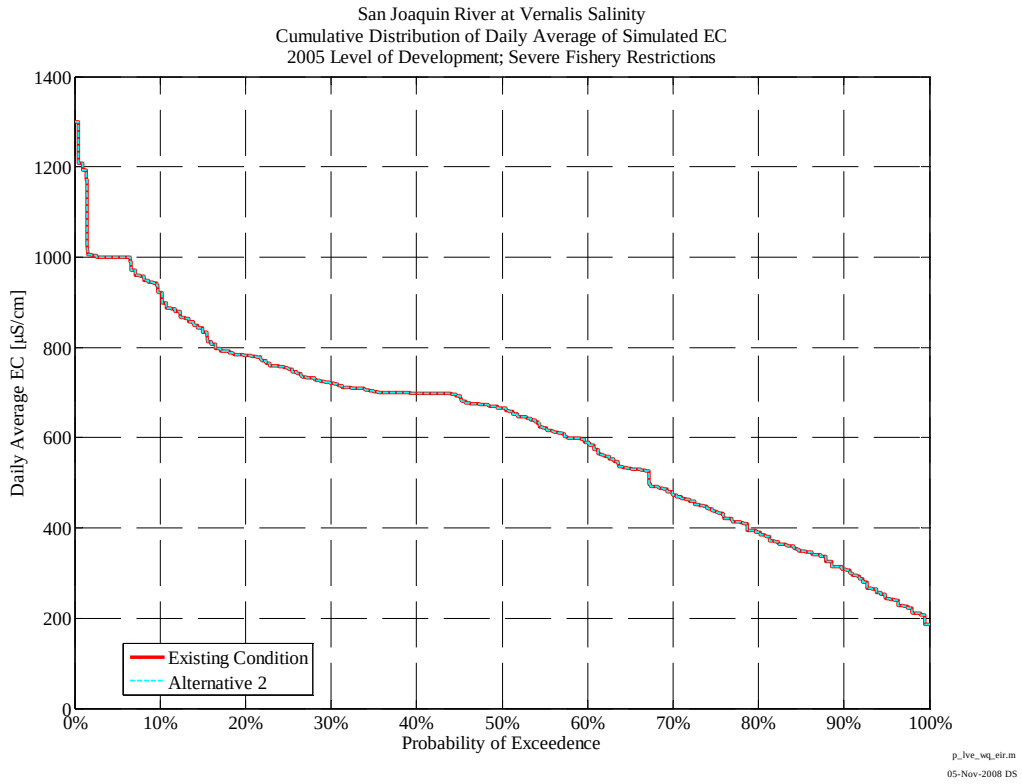
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
Existing Condition
Alternative 2
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

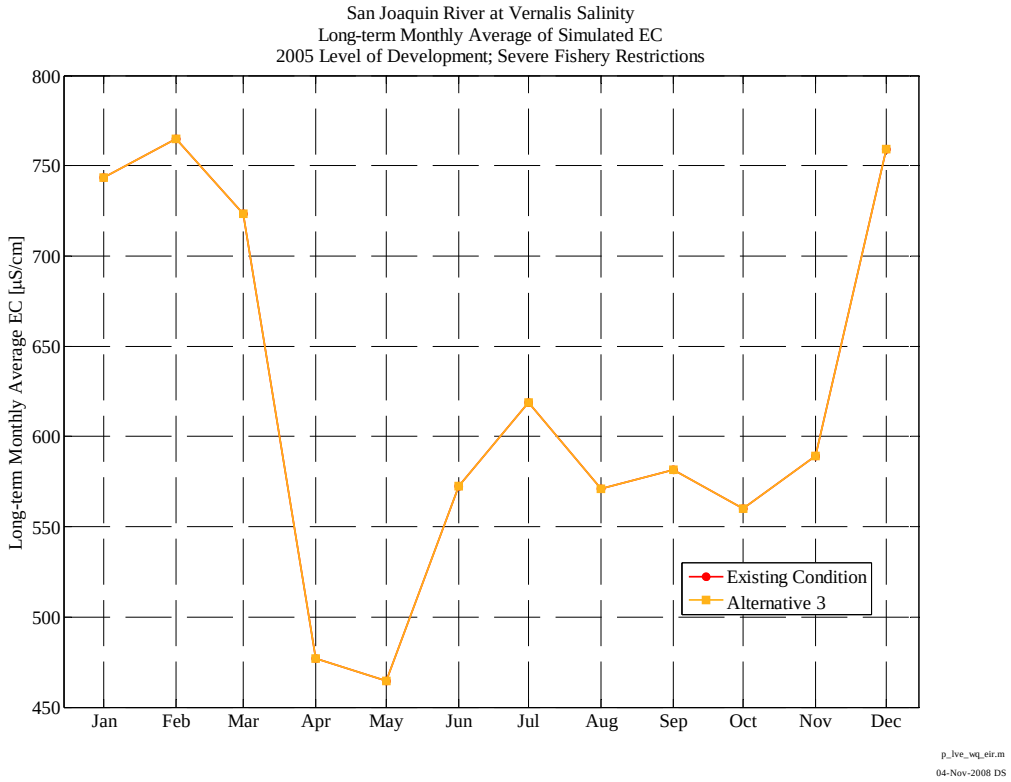
Alternative 3

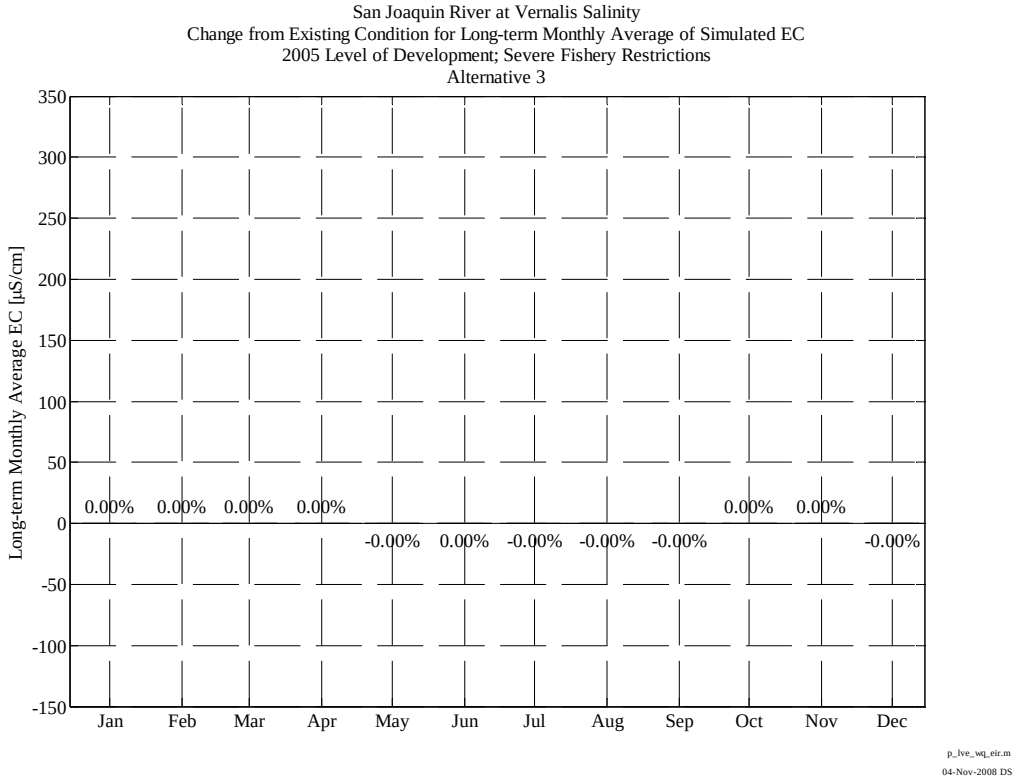
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Severe Fishery Restrictions

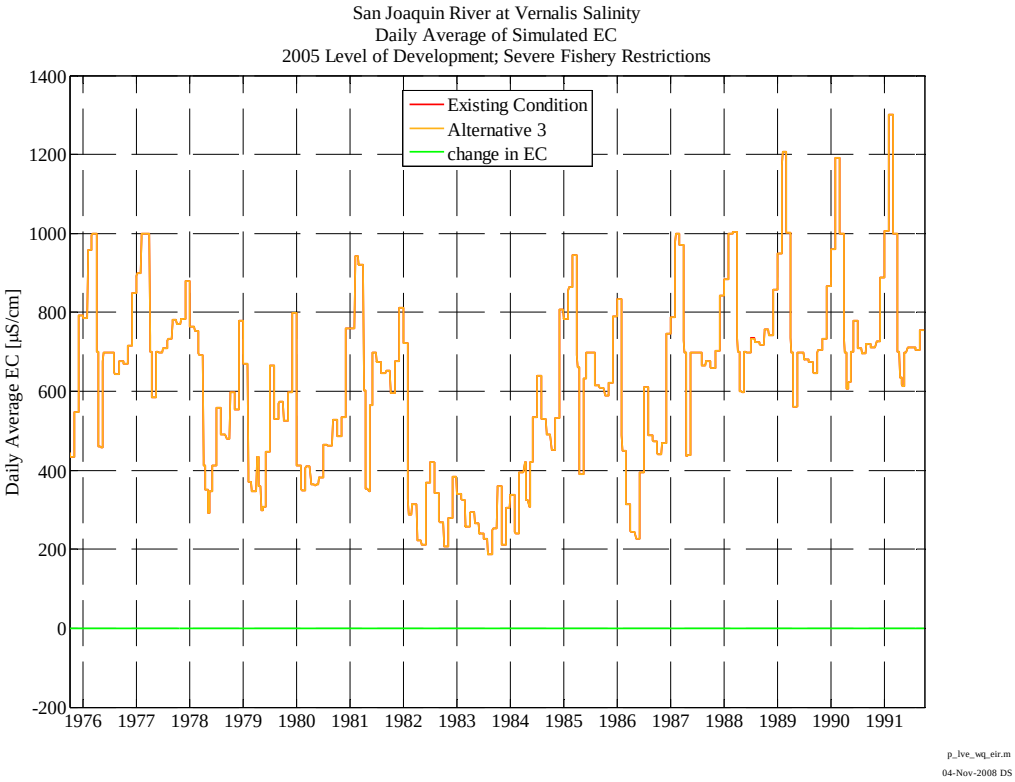
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	693	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	447	665	531	575
1980	526	598	797	414	348	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	674	646	652
1982	596	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	533	639	531	492
1985	451	532	805	783	864	945	519	515	698	699	616	610
1986	589	622	790	834	451	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	572	699	698	667	675
1988	659	702	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	681	674	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	464	572	619	571	582
W/AN/BN	521	532	678	583	397	390	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

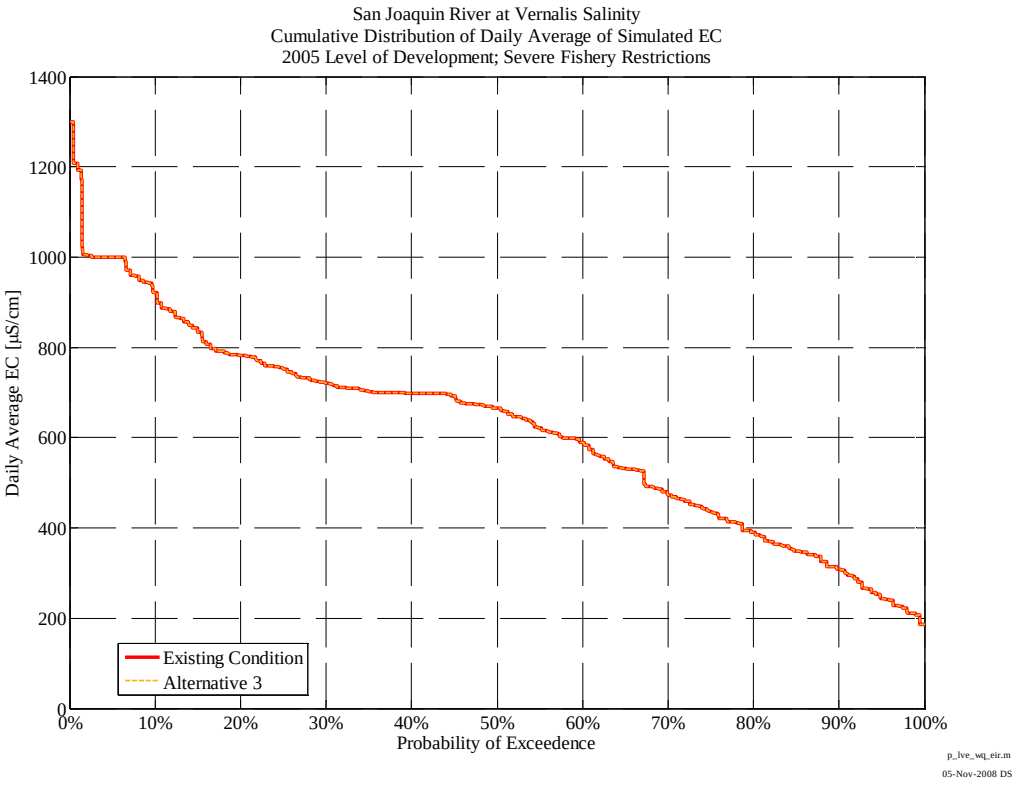
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
-0.00%
0.00%
-0.00%
-0.00%
-0.00%
0.00%
0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

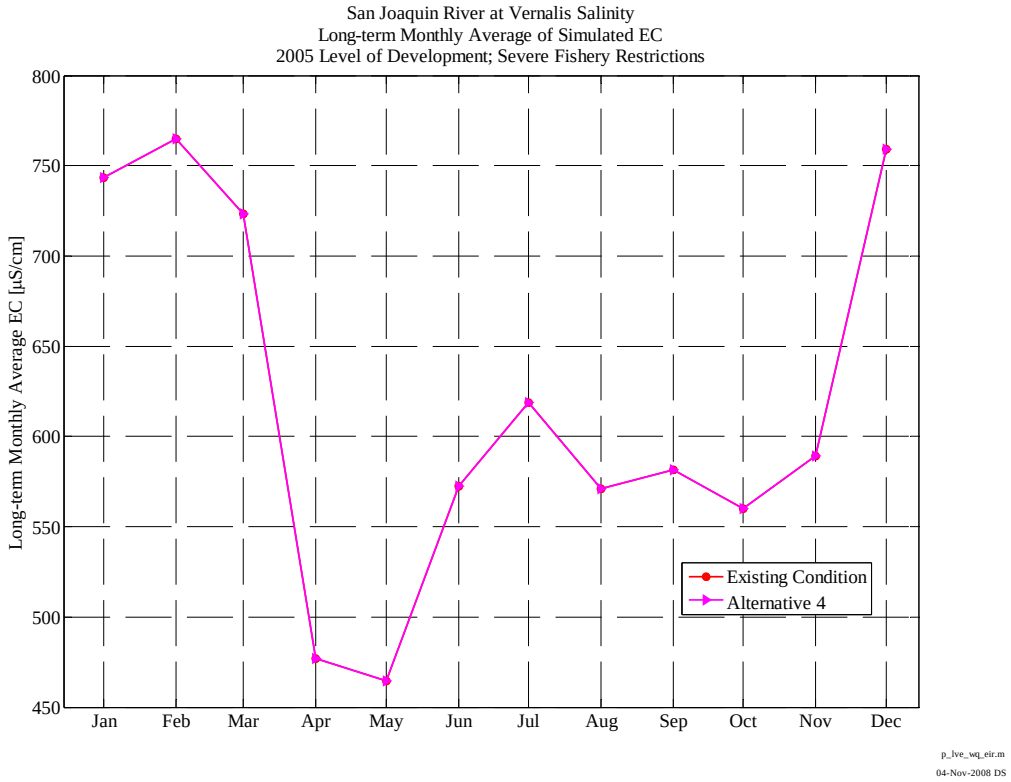
Alternative 4

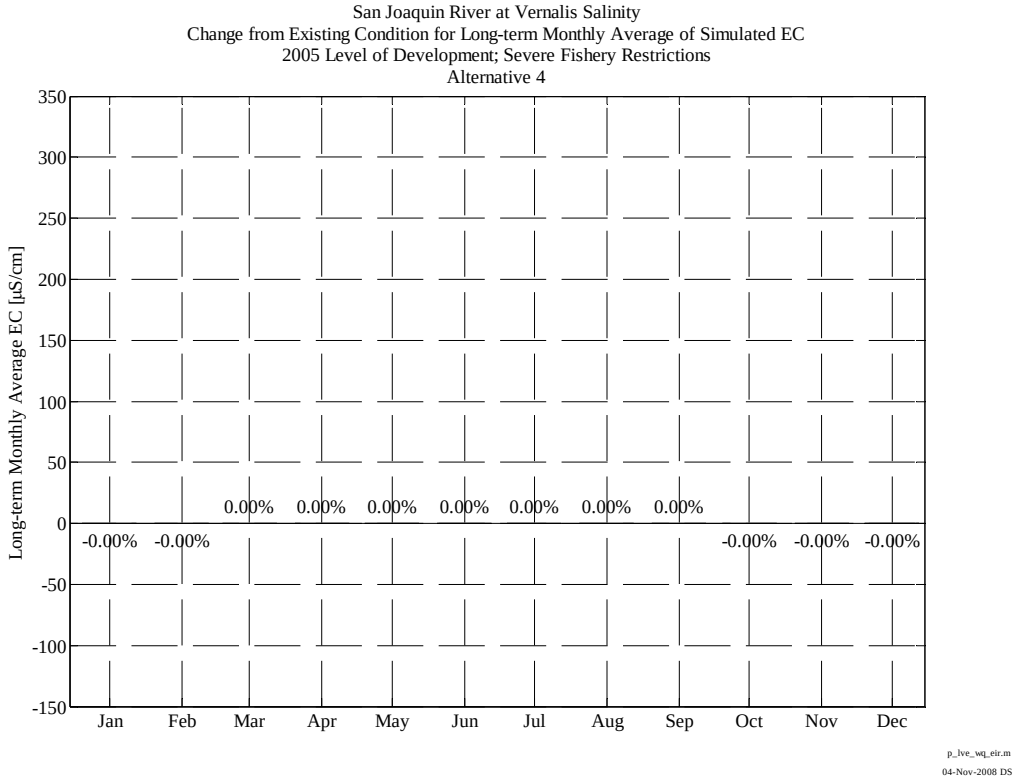
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Severe Fishery Restrictions

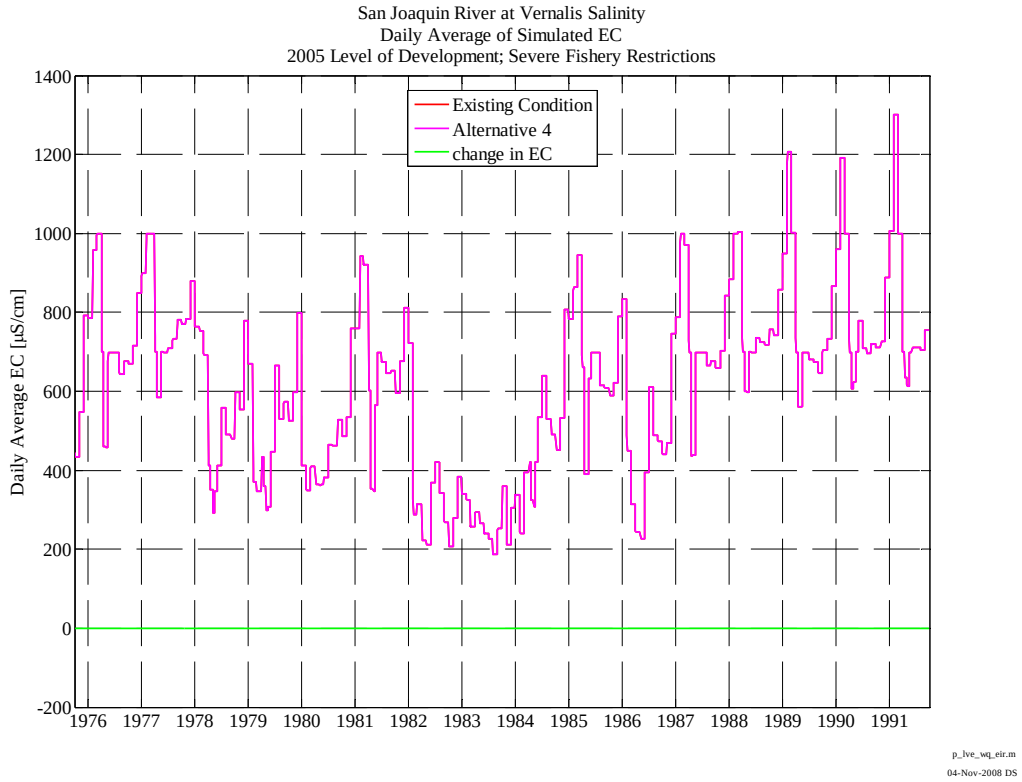
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	447	665	531	575
1980	526	598	797	414	348	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	674	646	652
1982	596	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	533	639	531	492
1985	451	532	805	783	864	945	519	515	698	699	616	610
1986	589	622	790	834	451	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	572	699	698	667	675
1988	659	702	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	681	674	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	464	572	619	571	582
W/AN/BN	521	532	678	583	397	389	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

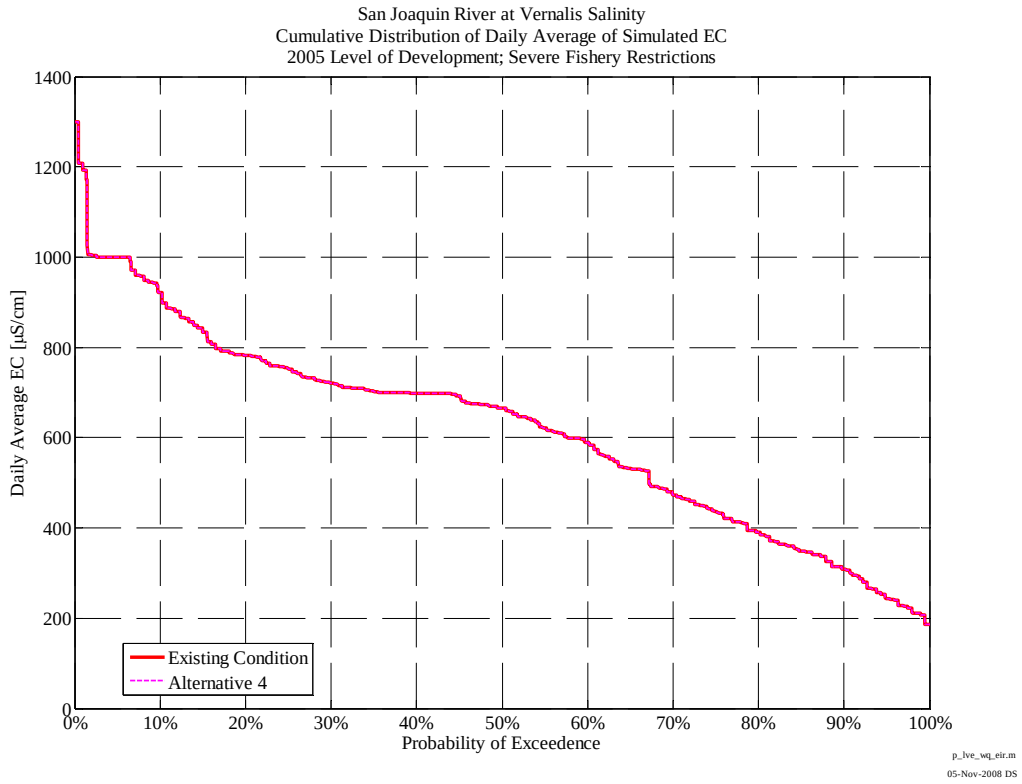
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Severe Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS

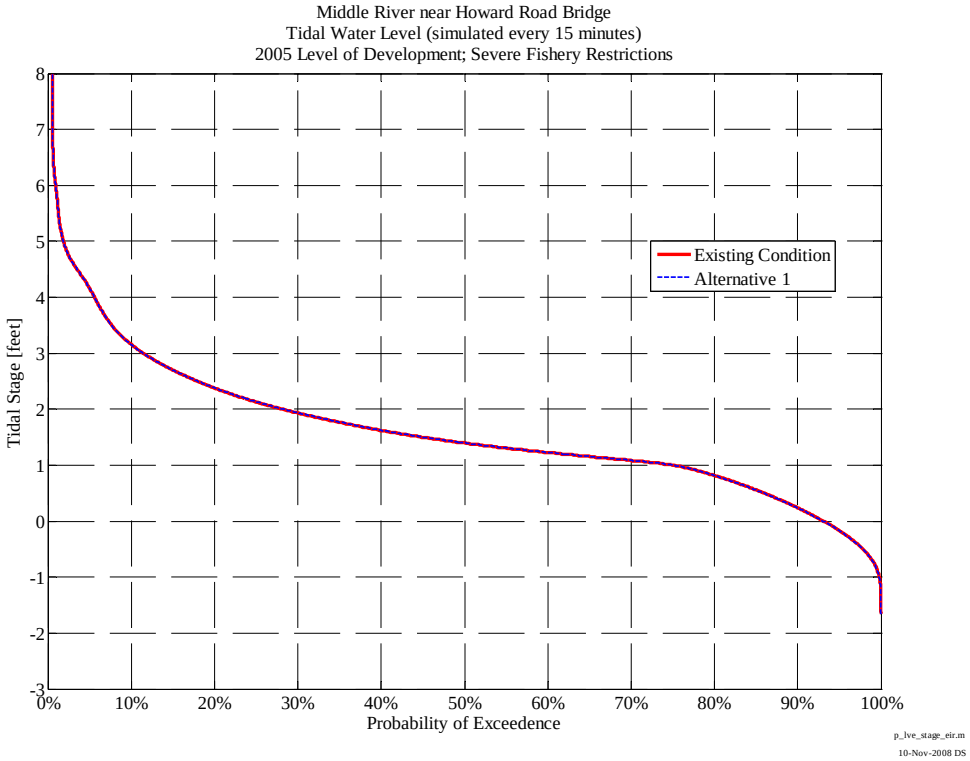

San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS

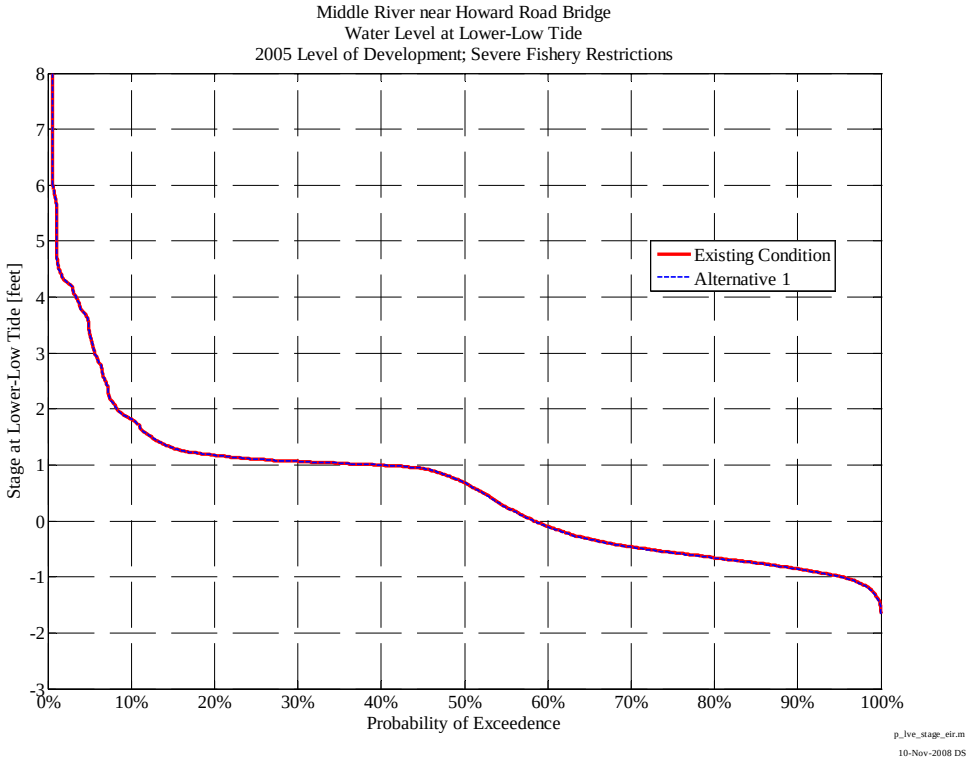

San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Severe Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

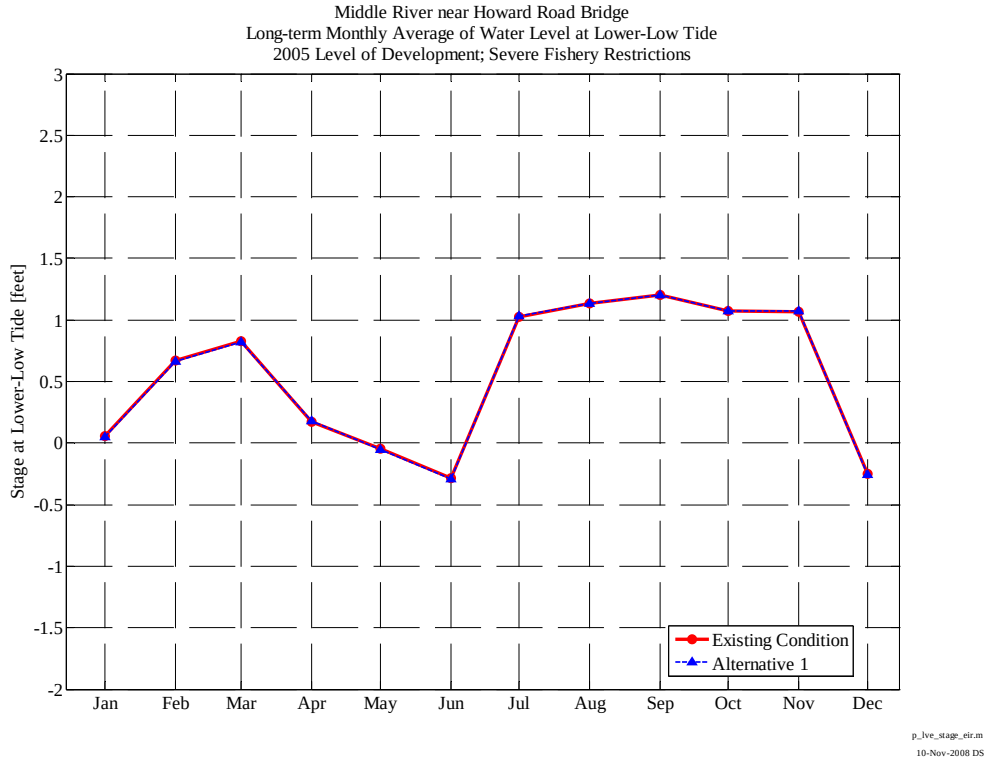
Water Level

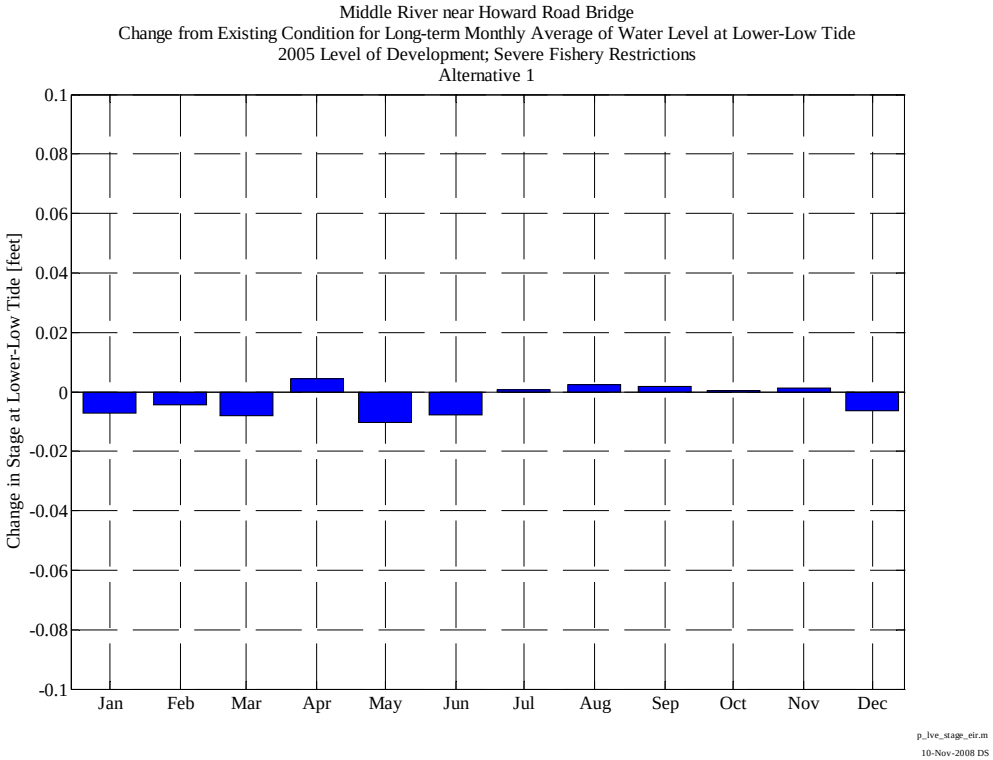
Middle River near Howard Road Bridge

Alternative 1

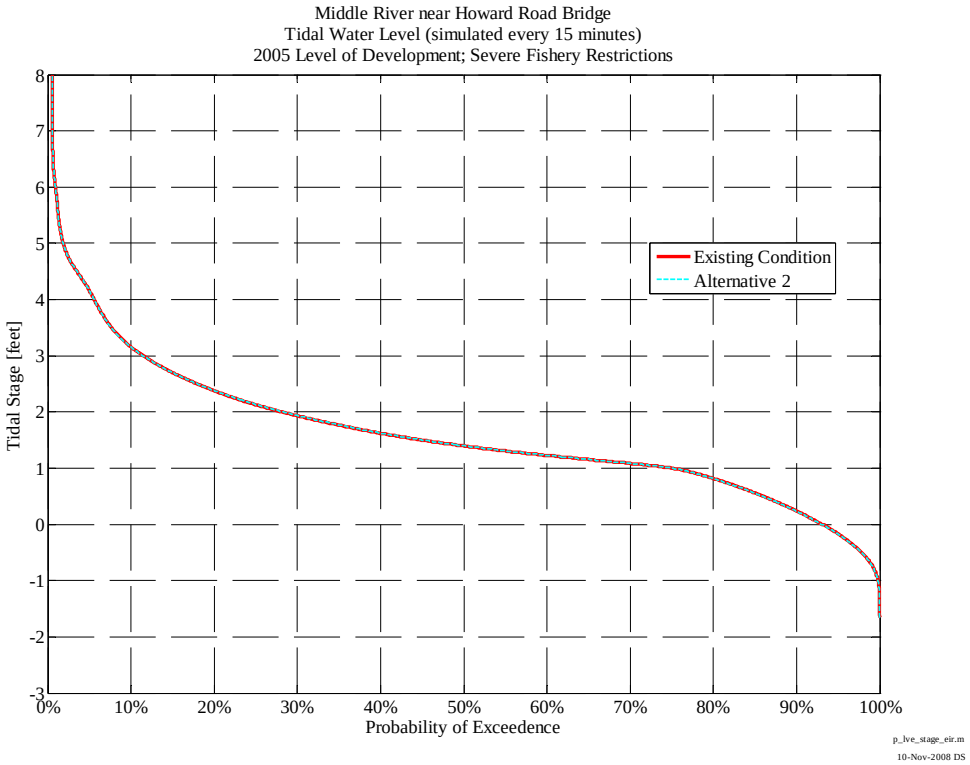


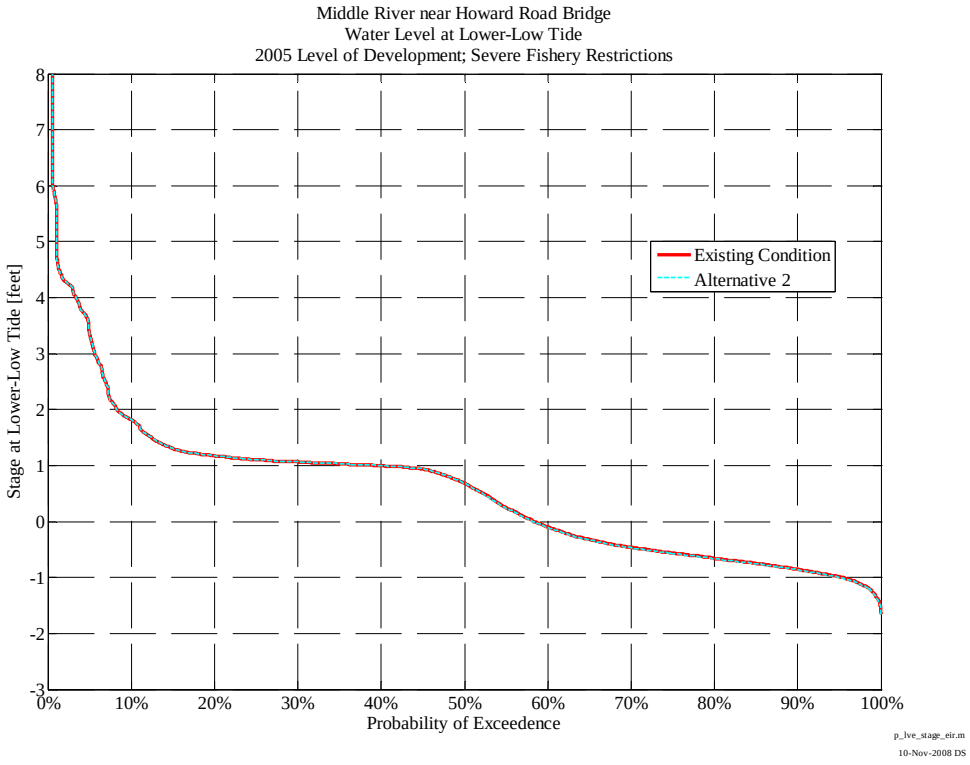


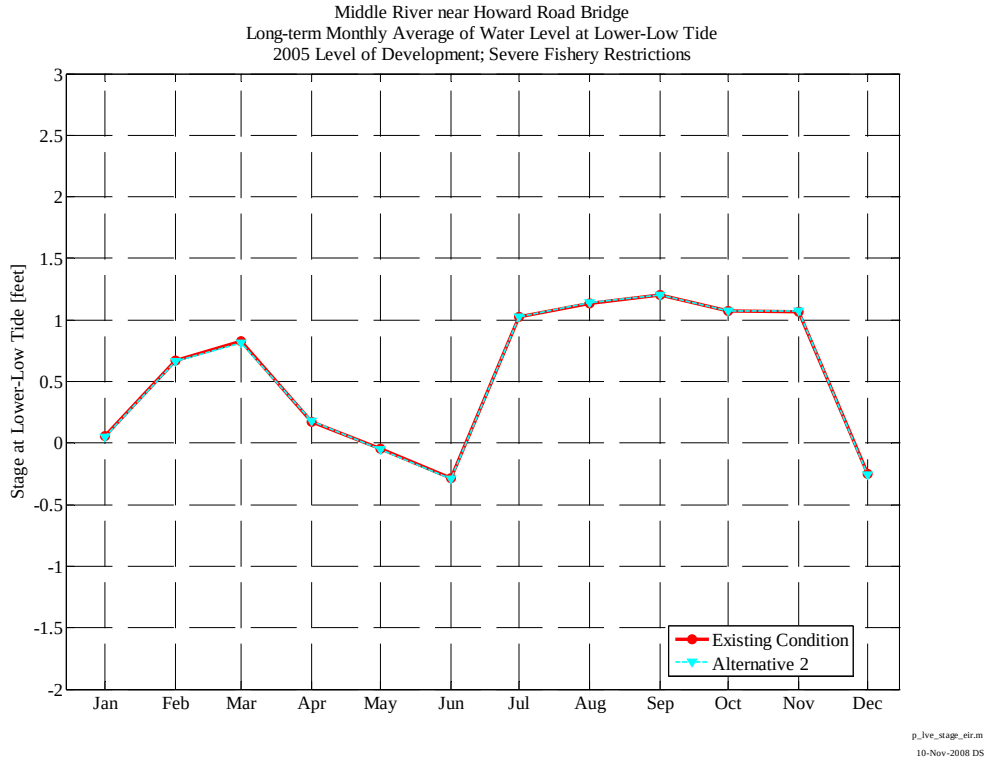

Middle River near Howard Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_stage_eir.m
10-Nov-2008 DS

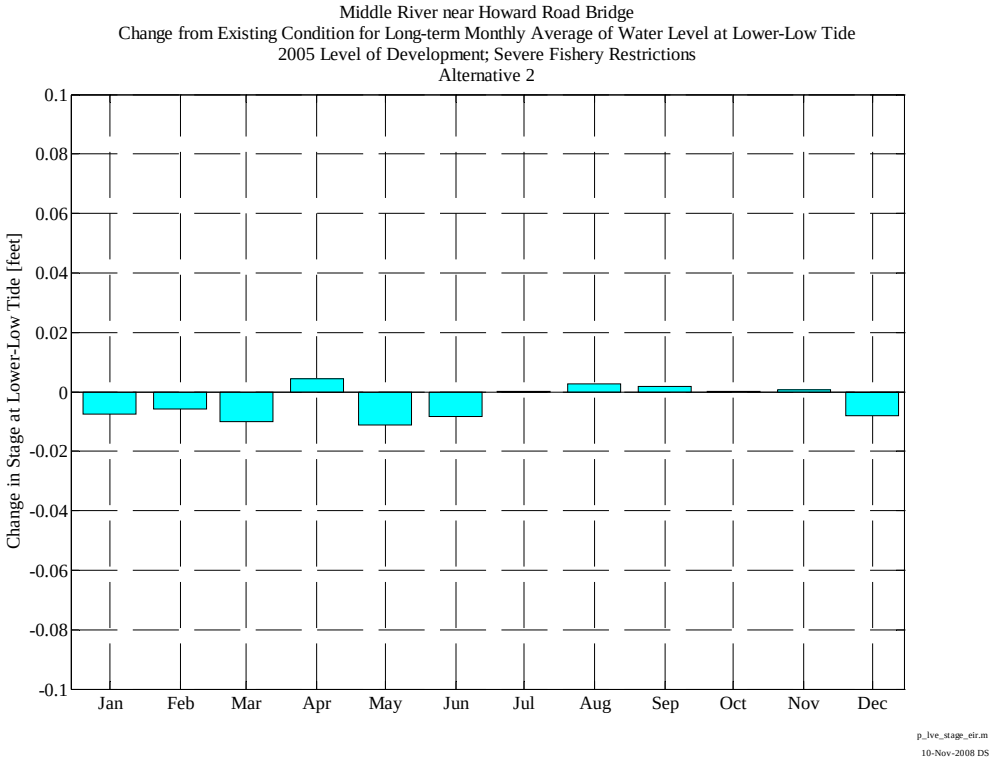

Middle River near Howard Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 2

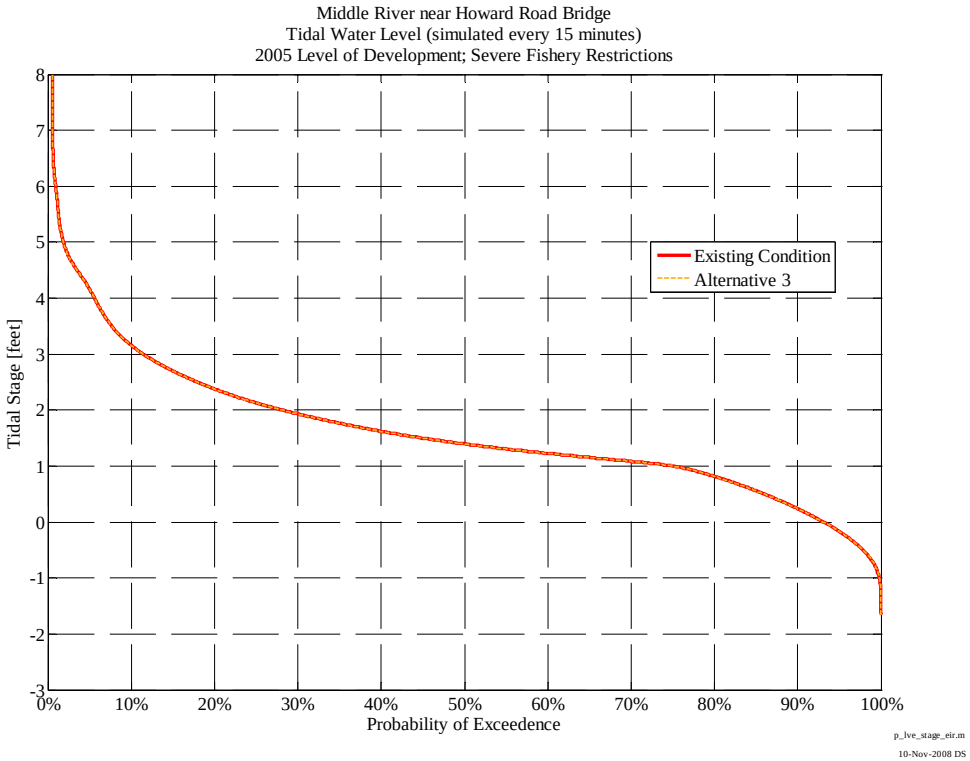


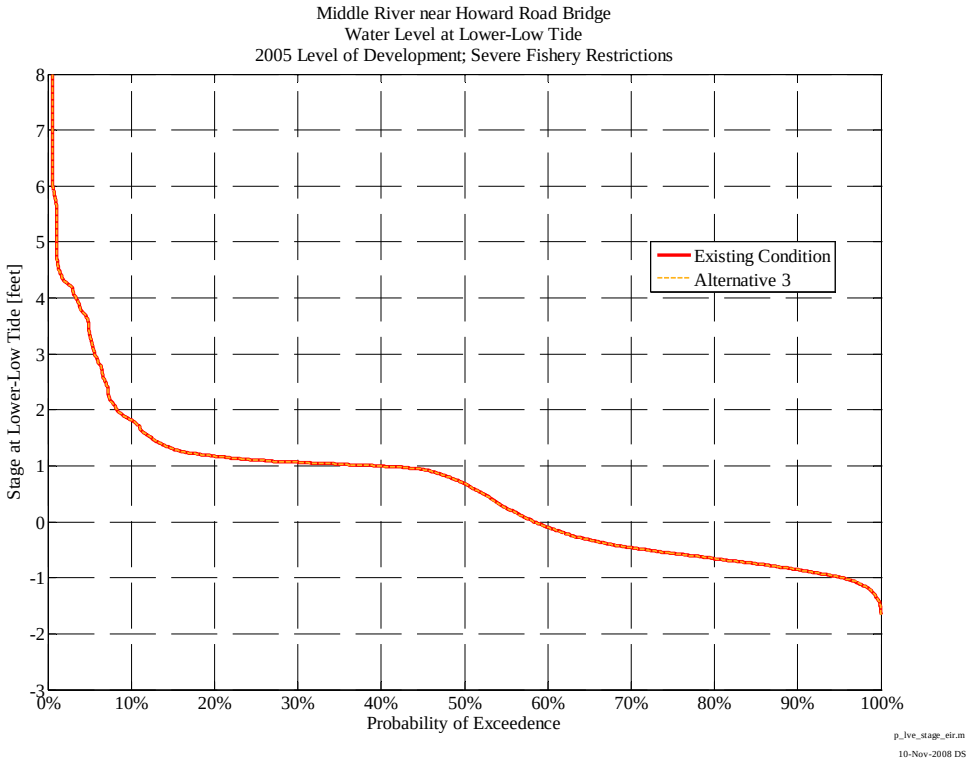


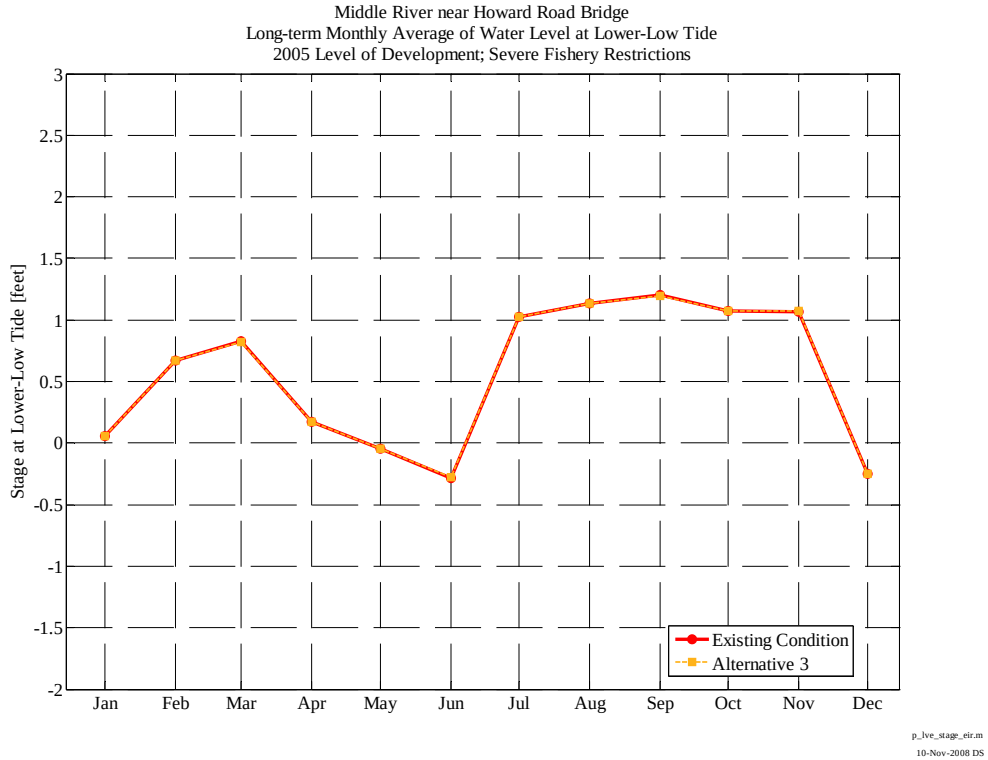

Middle River near Howard Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_stage_eir.m
10-Nov-2008 DS

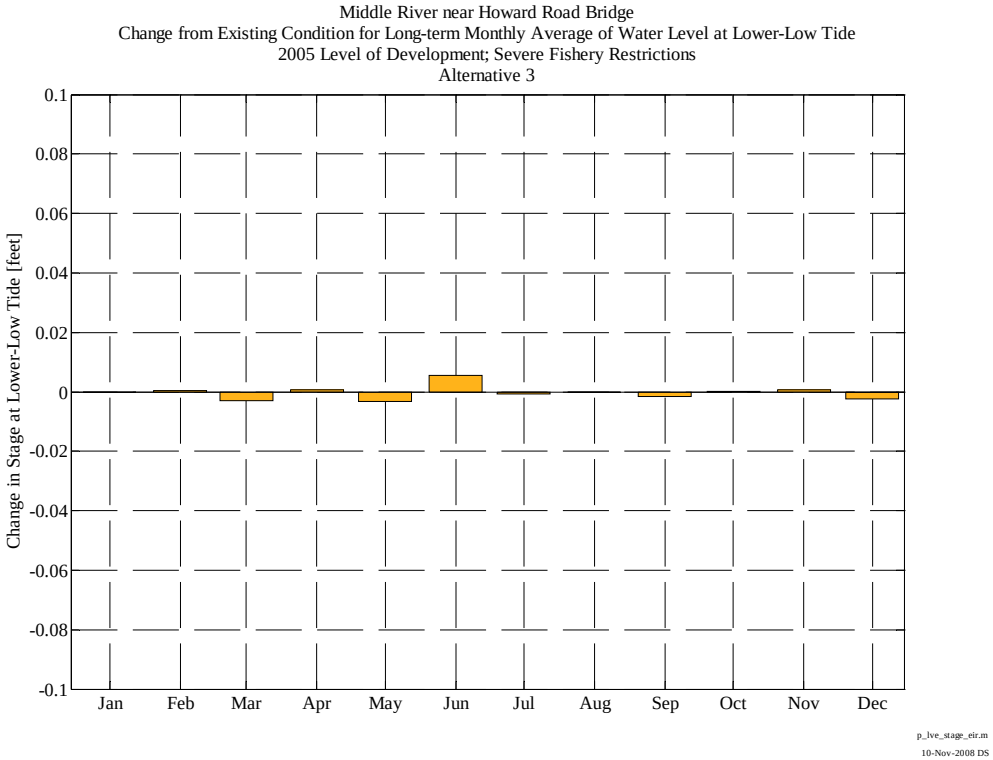

Middle River near Howard Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 3

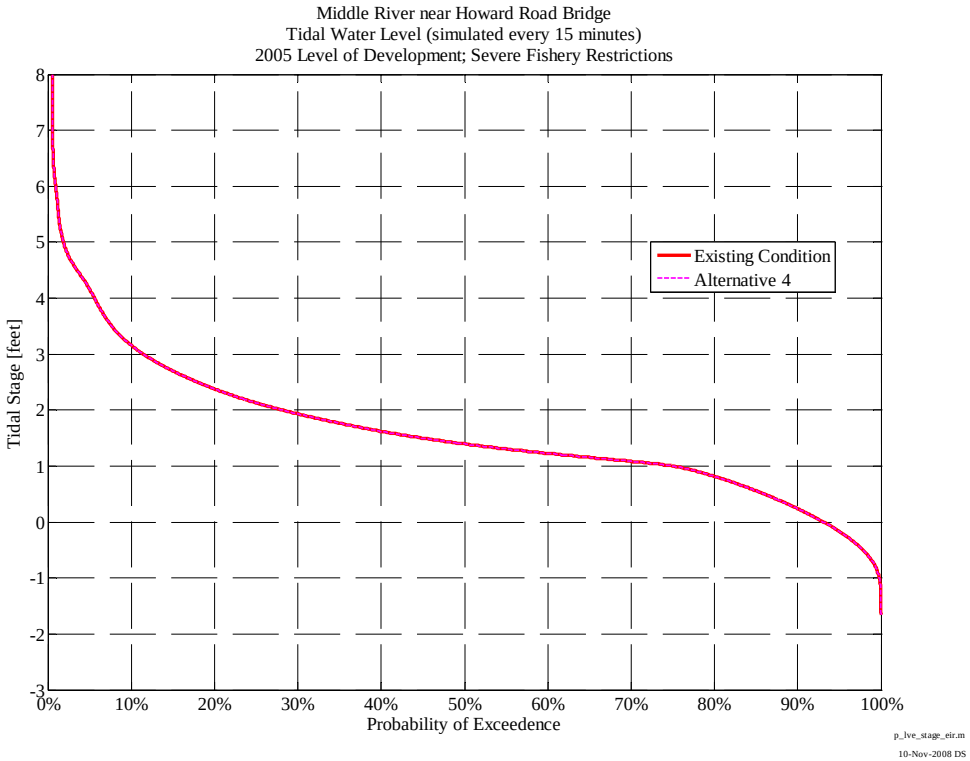


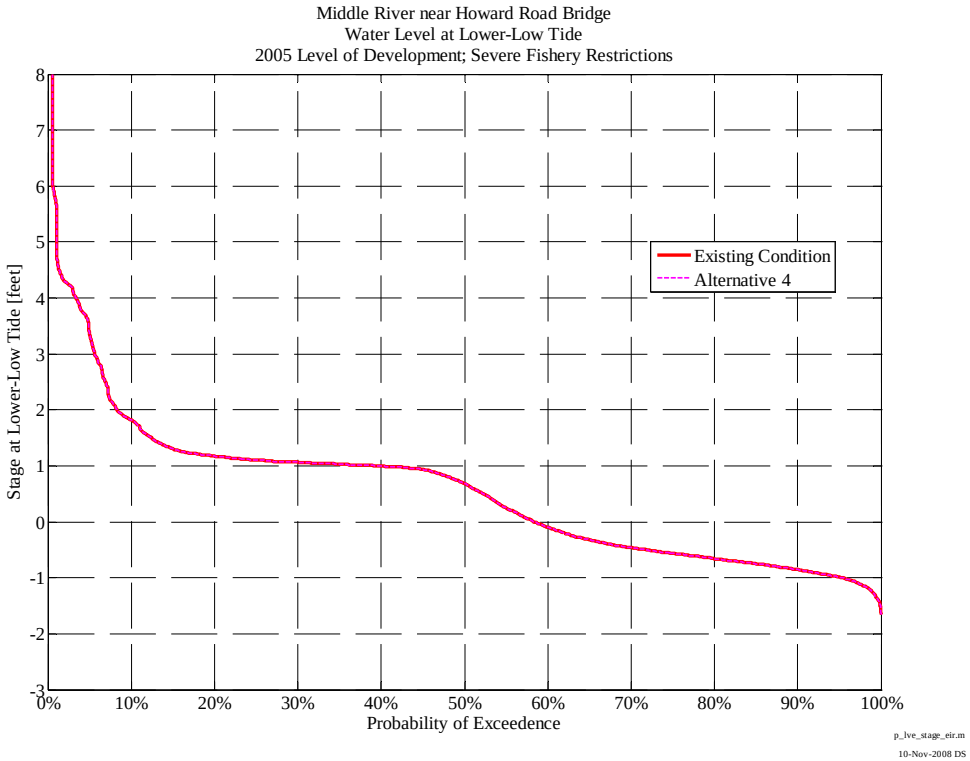


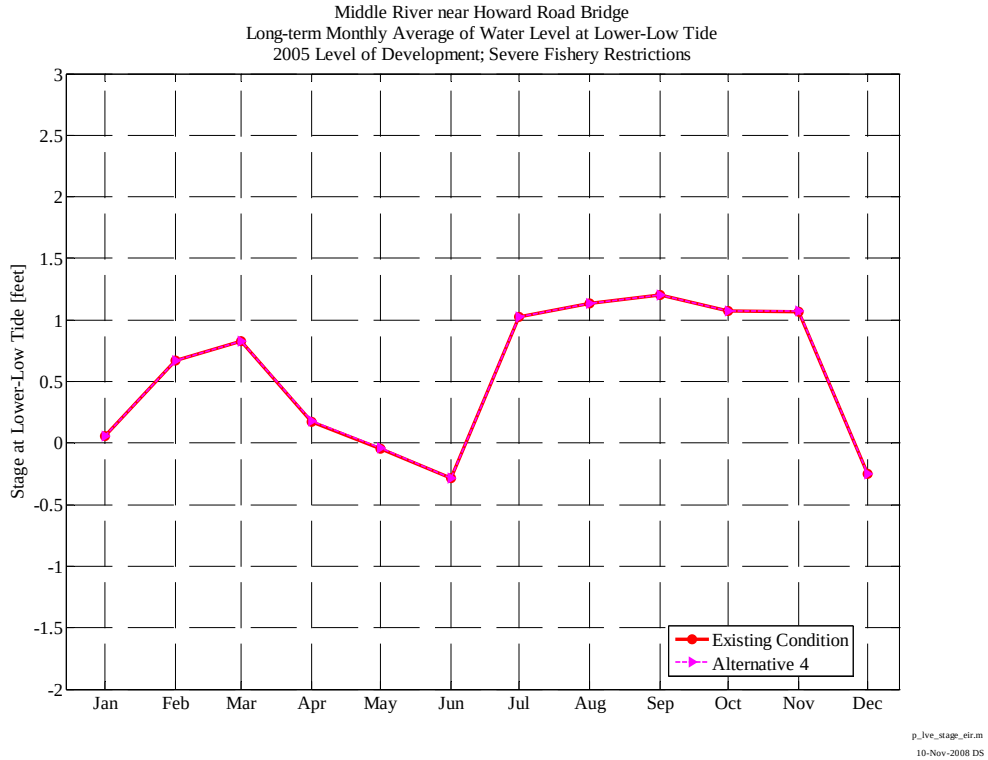

Middle River near Howard Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_stage_eir.m
10-Nov-2008 DS

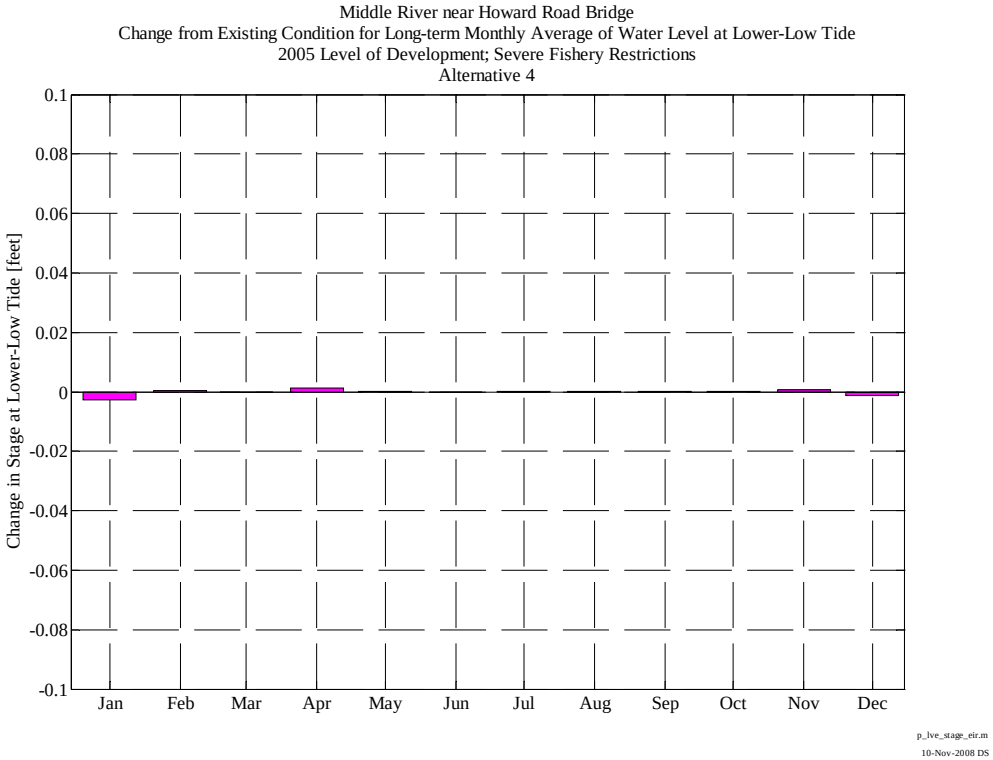

Middle River near Howard Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 4



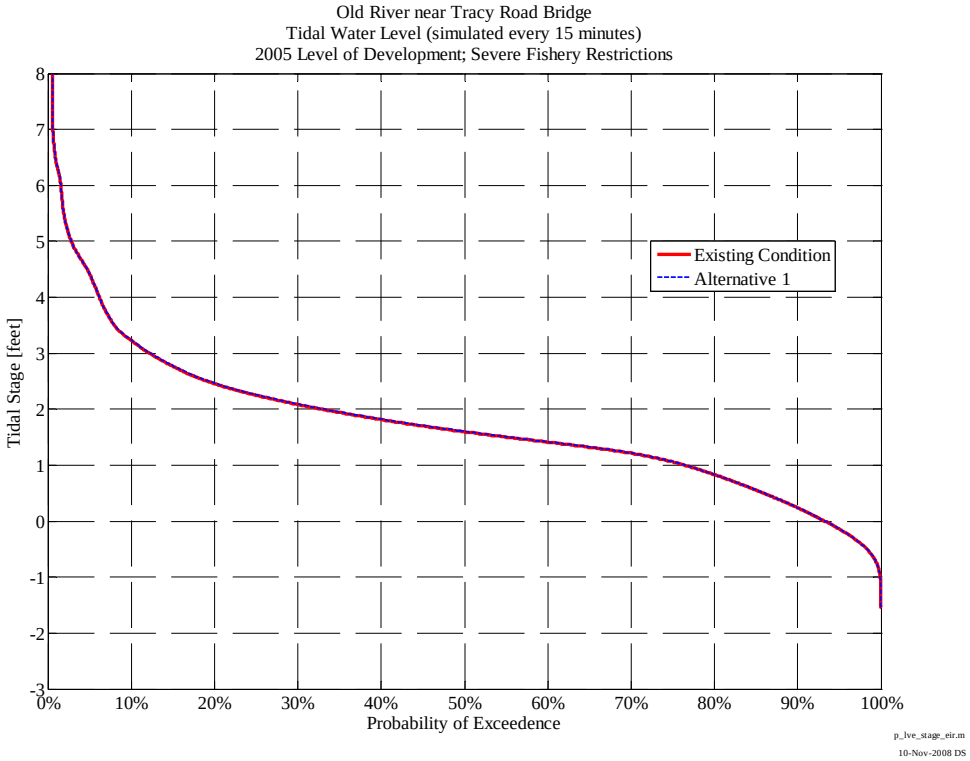


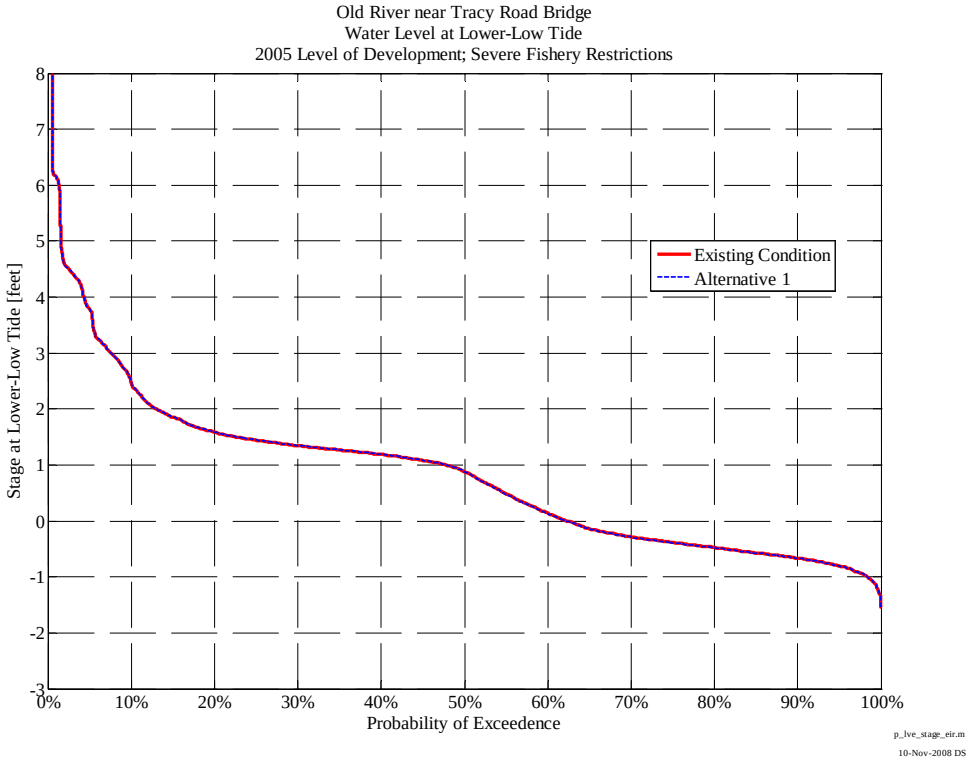

Middle River near Howard Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_stage_eir.m
10-Nov-2008 DS

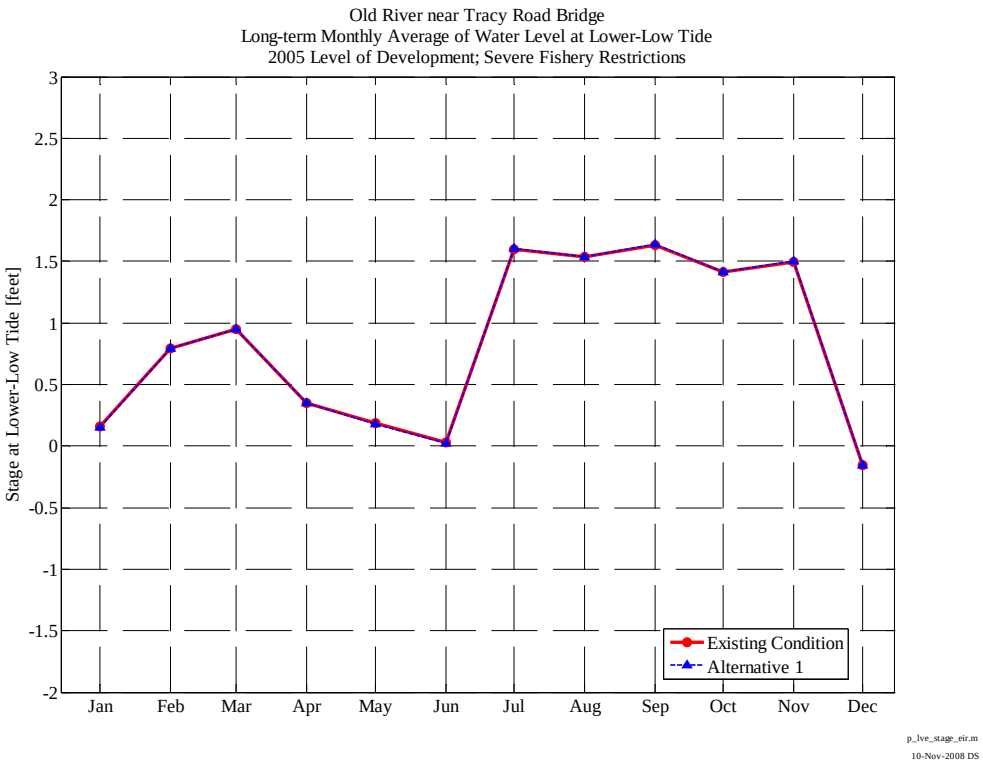

Middle River near Howard Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

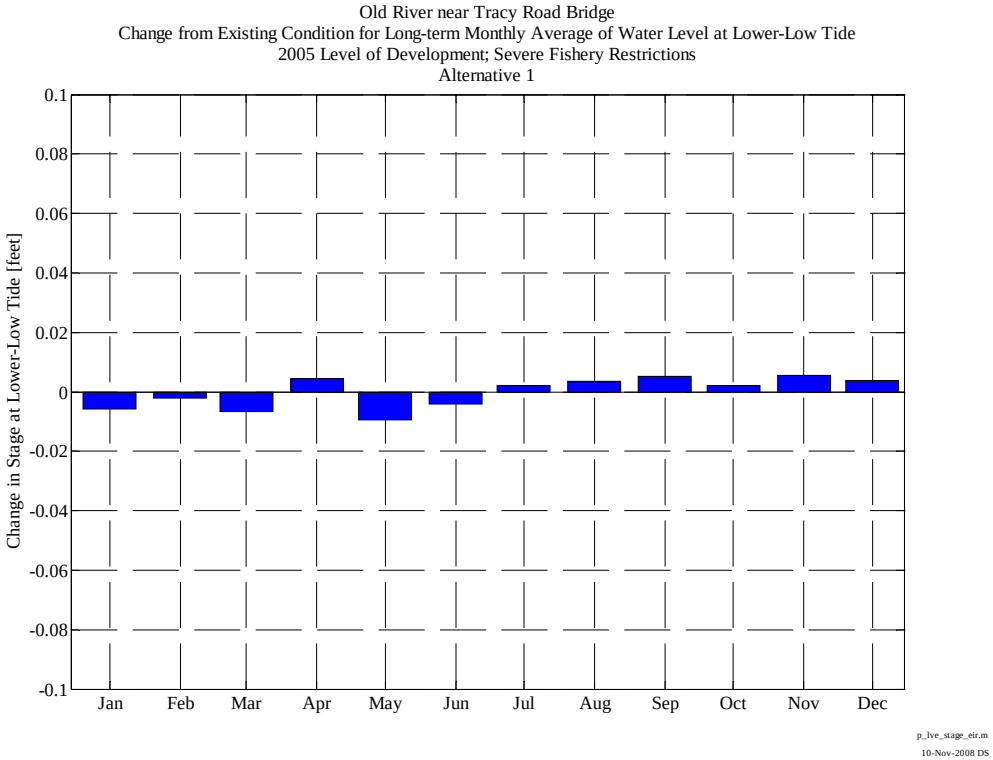
Old River near Tracy Road Bridge

Alternative 1

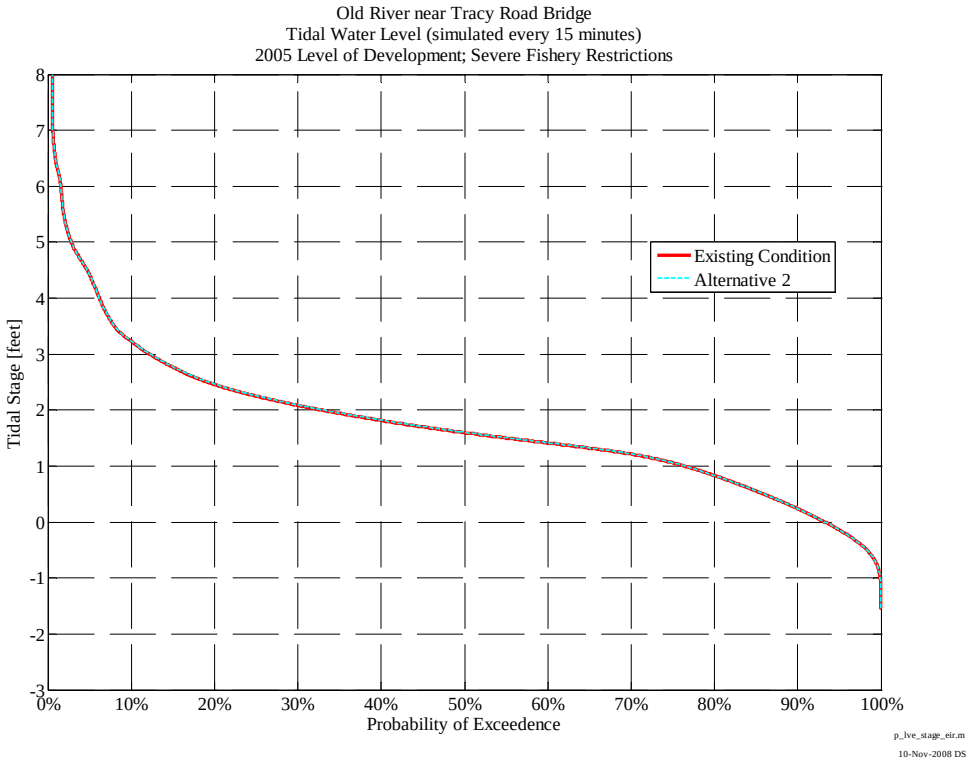


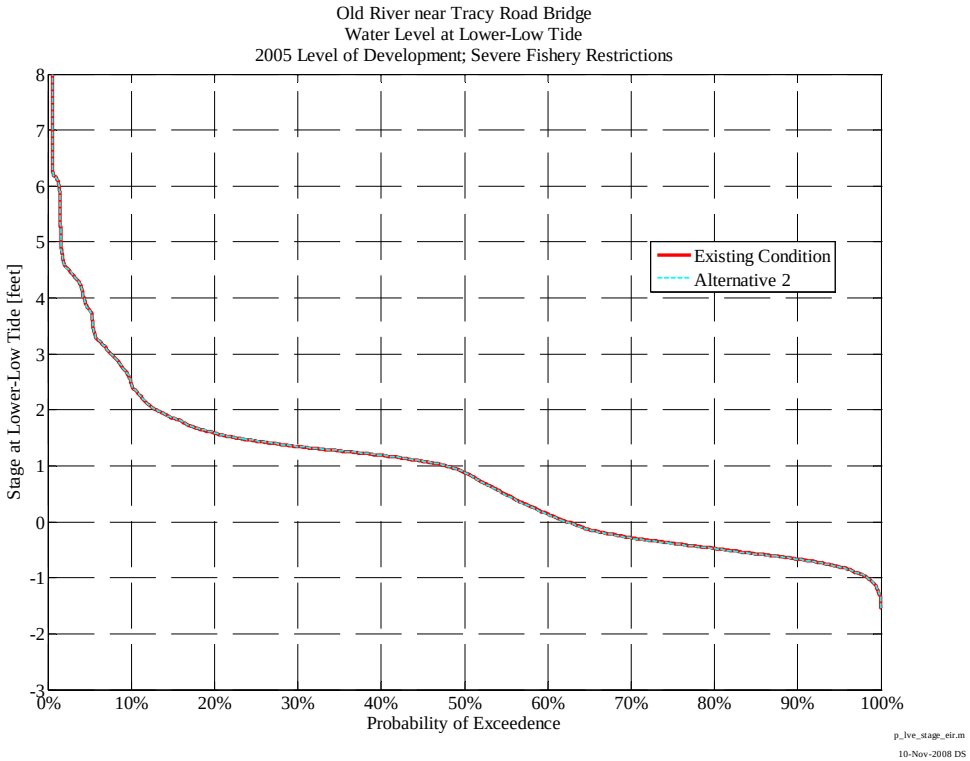


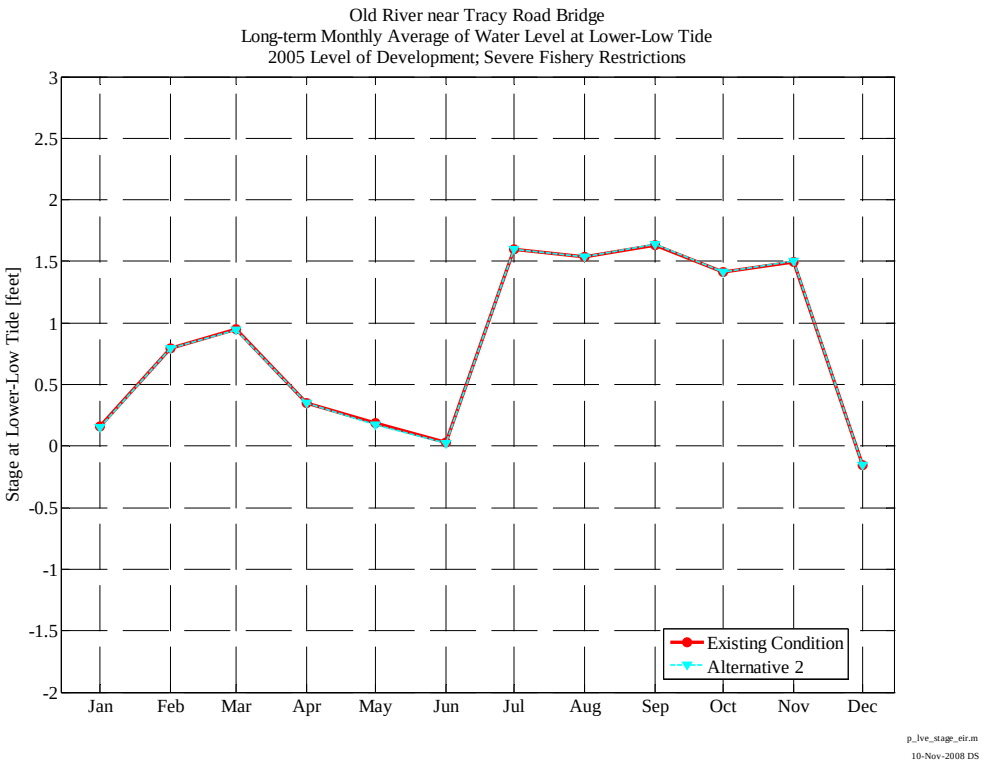

Old River near Tracy Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_stage_eir.m
10-Nov-2008 DS

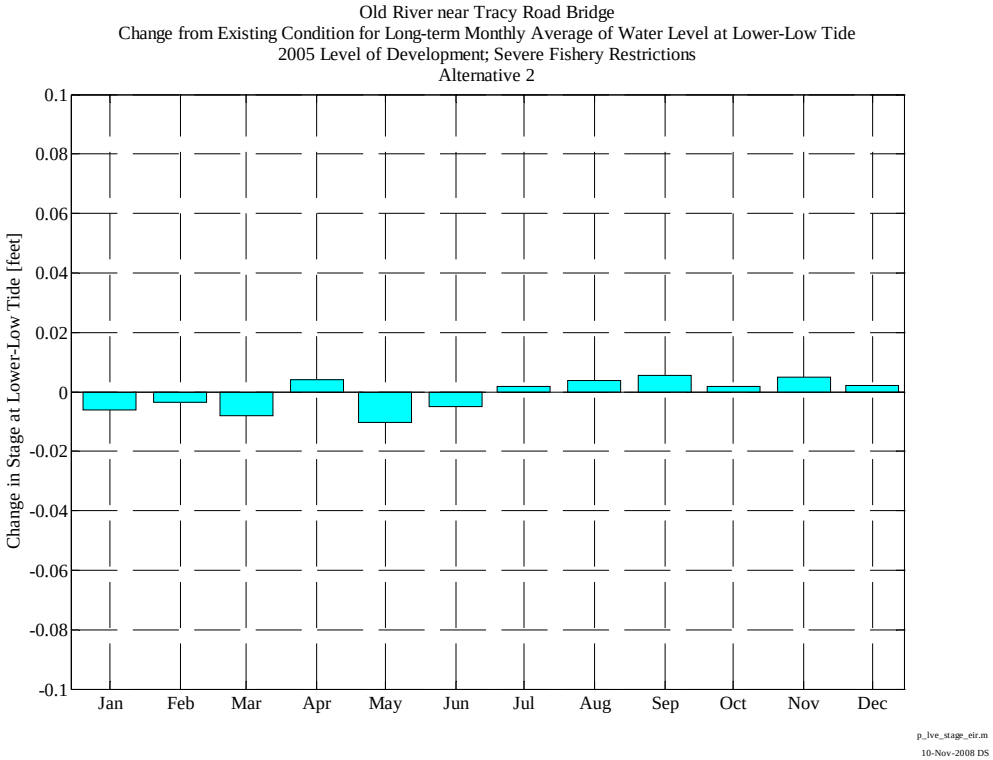

Old River near Tracy Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 2

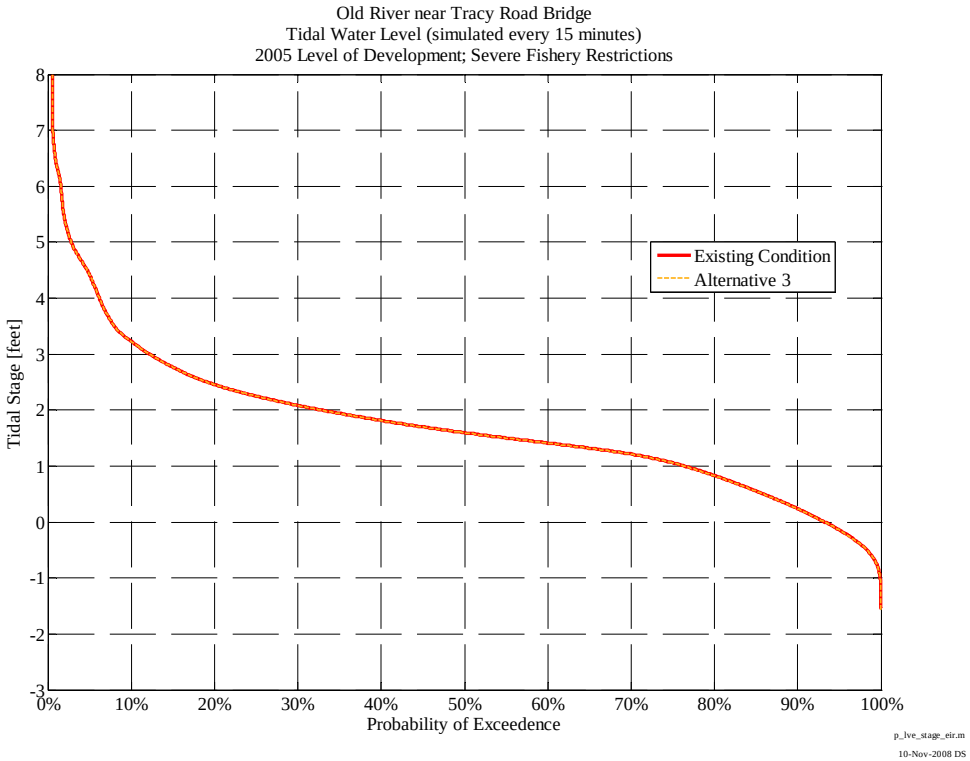


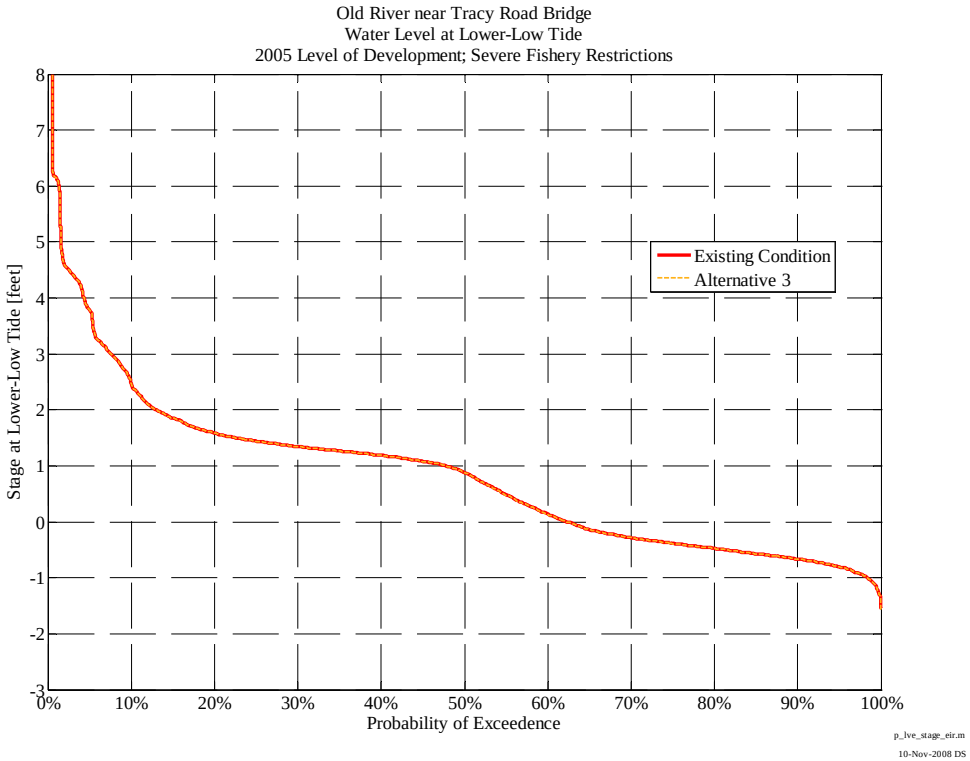


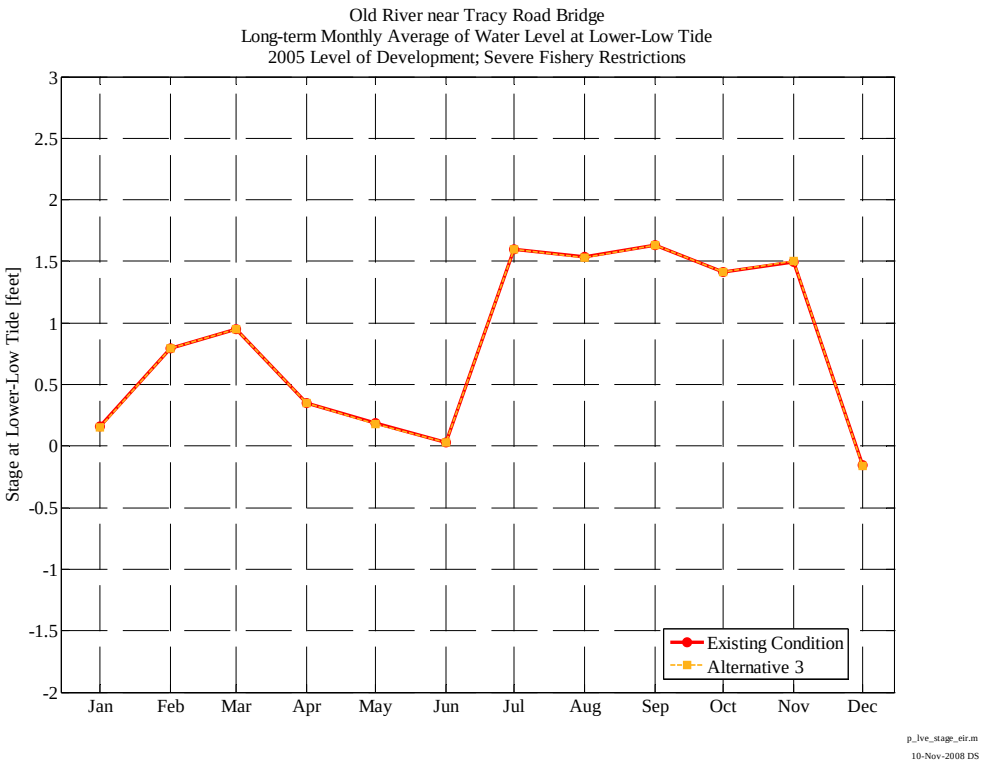

Old River near Tracy Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_stage_eir.m
10-Nov-2008 DS


Old River near Tracy Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 3






Old River near Tracy Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
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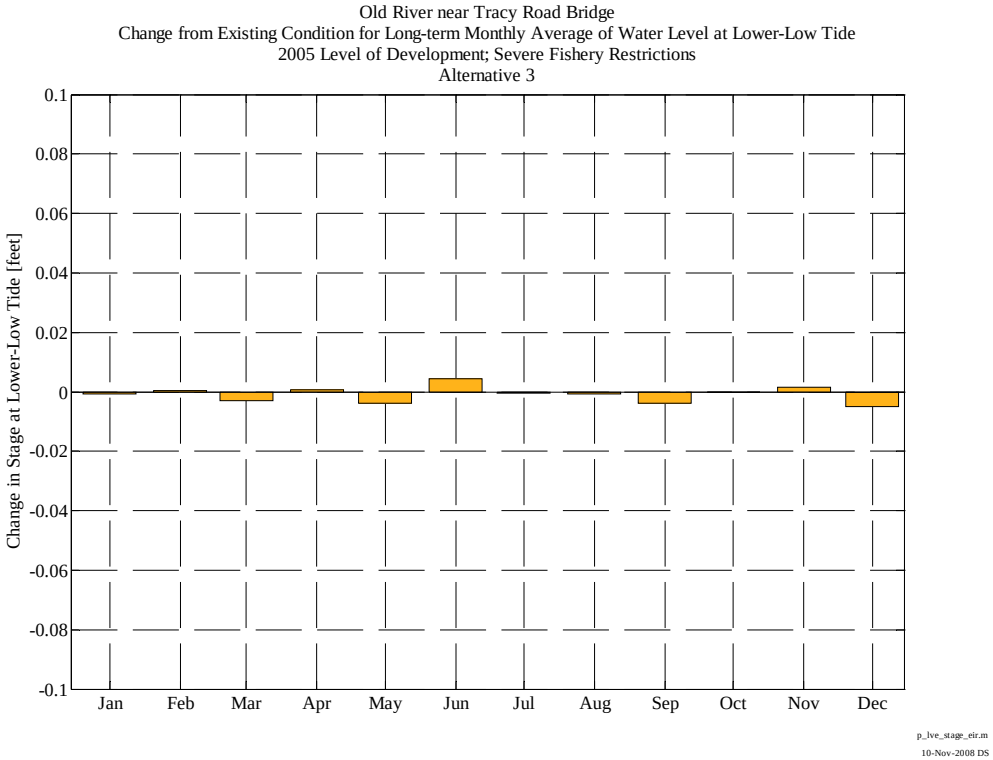
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_stage_eir.m
10-Nov-2008 DS


Old River near Tracy Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
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May
Jun
Jul
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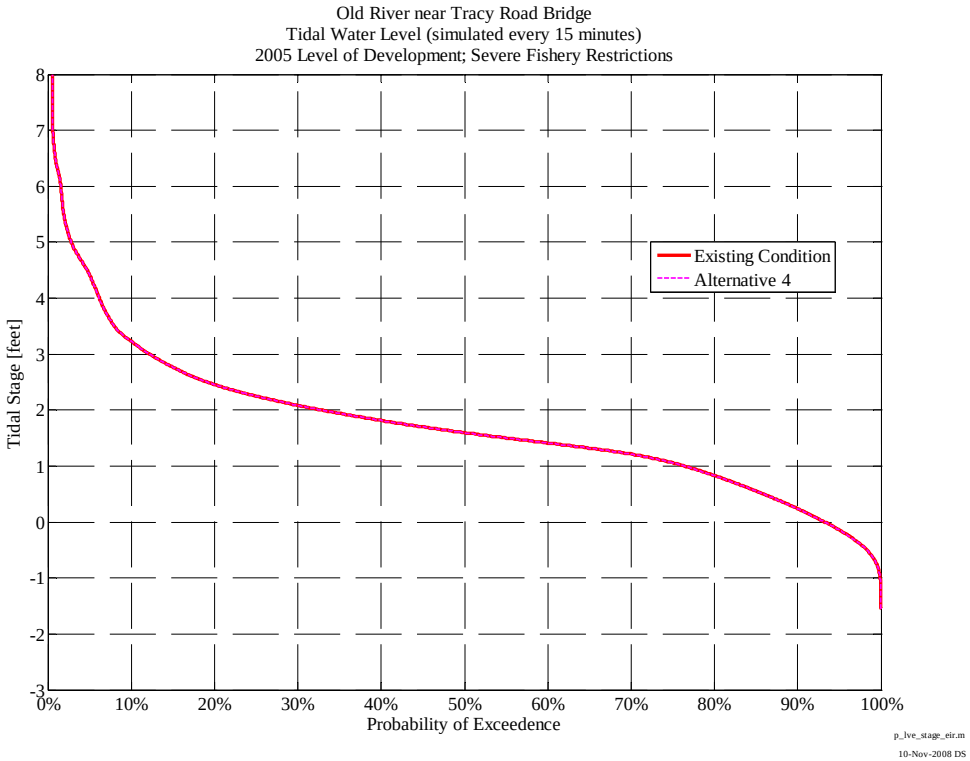
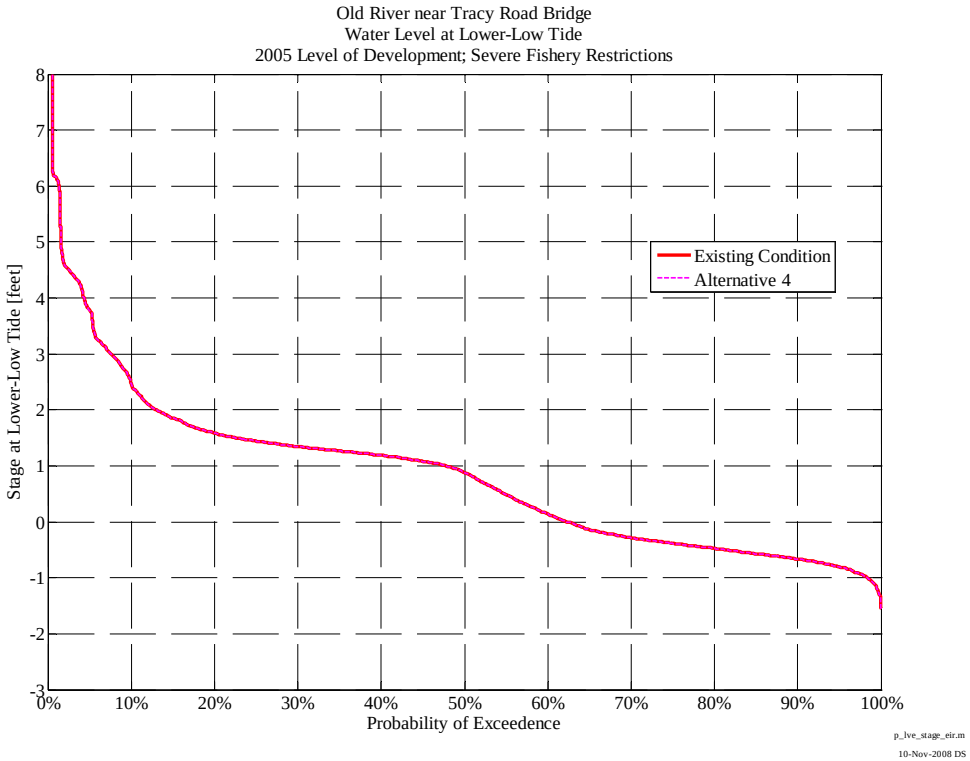
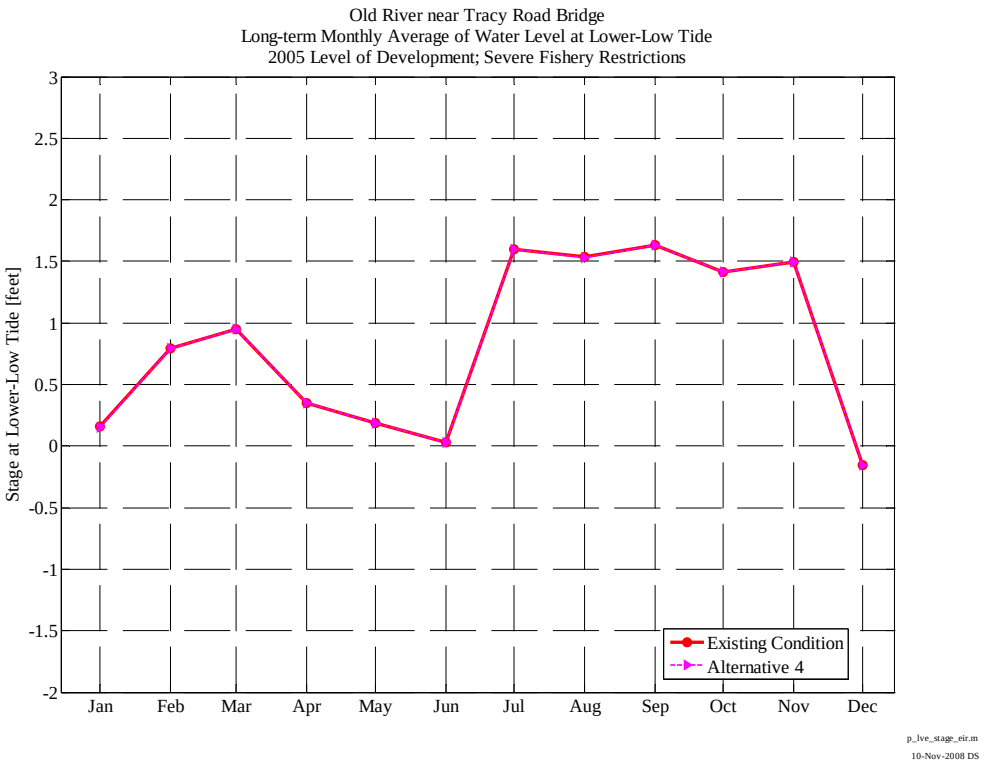
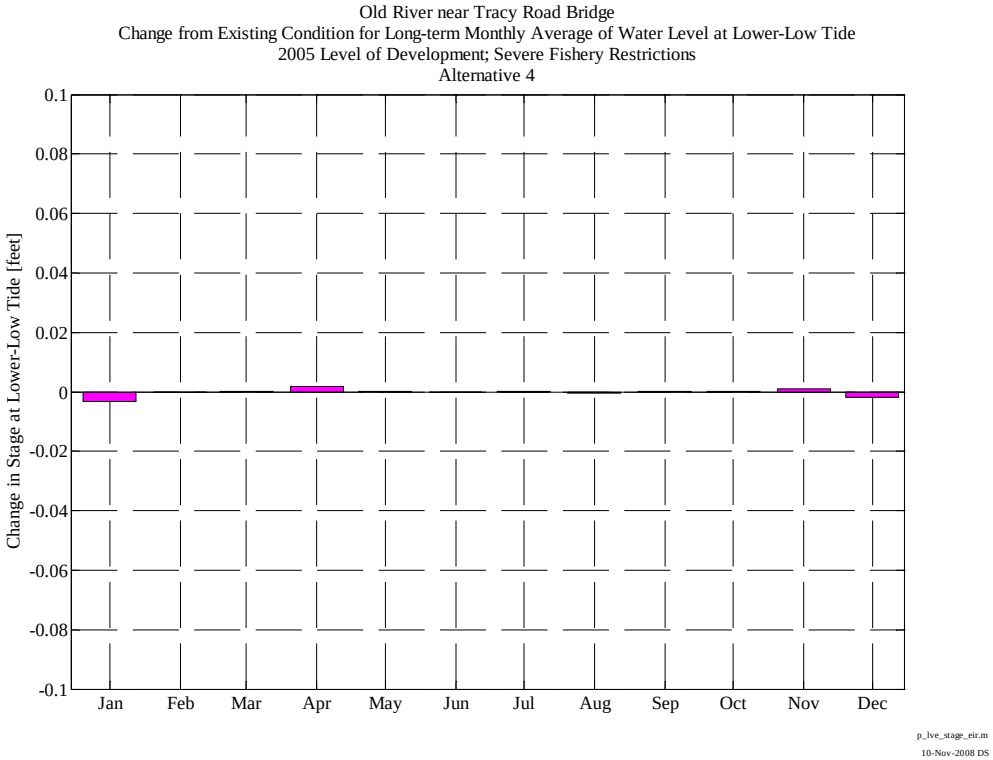
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 4



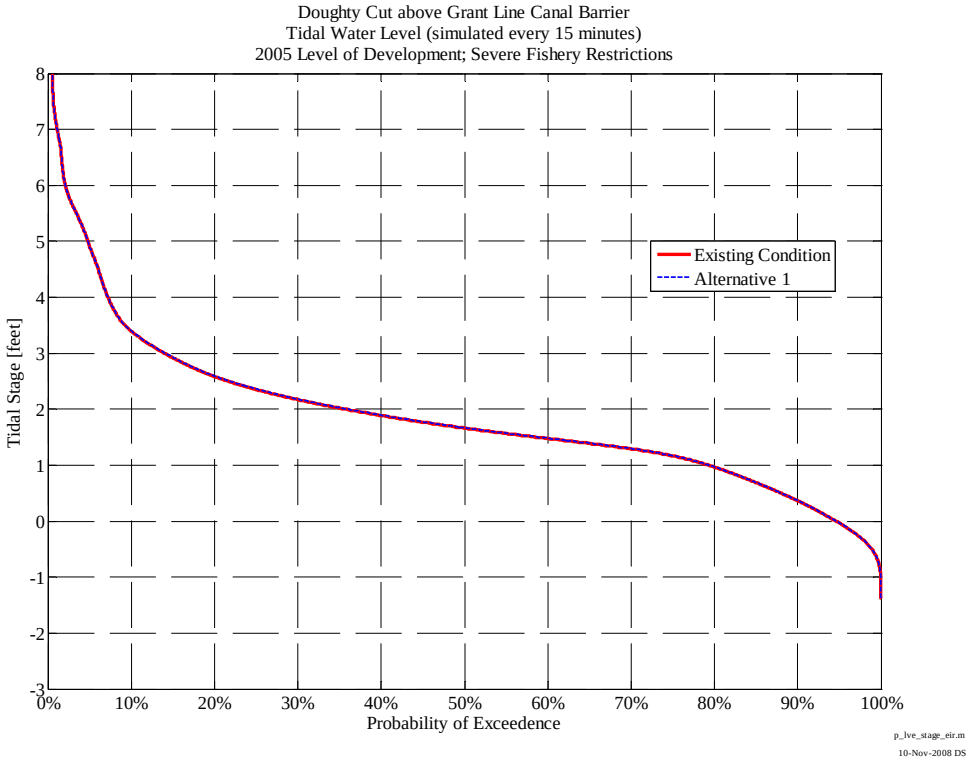


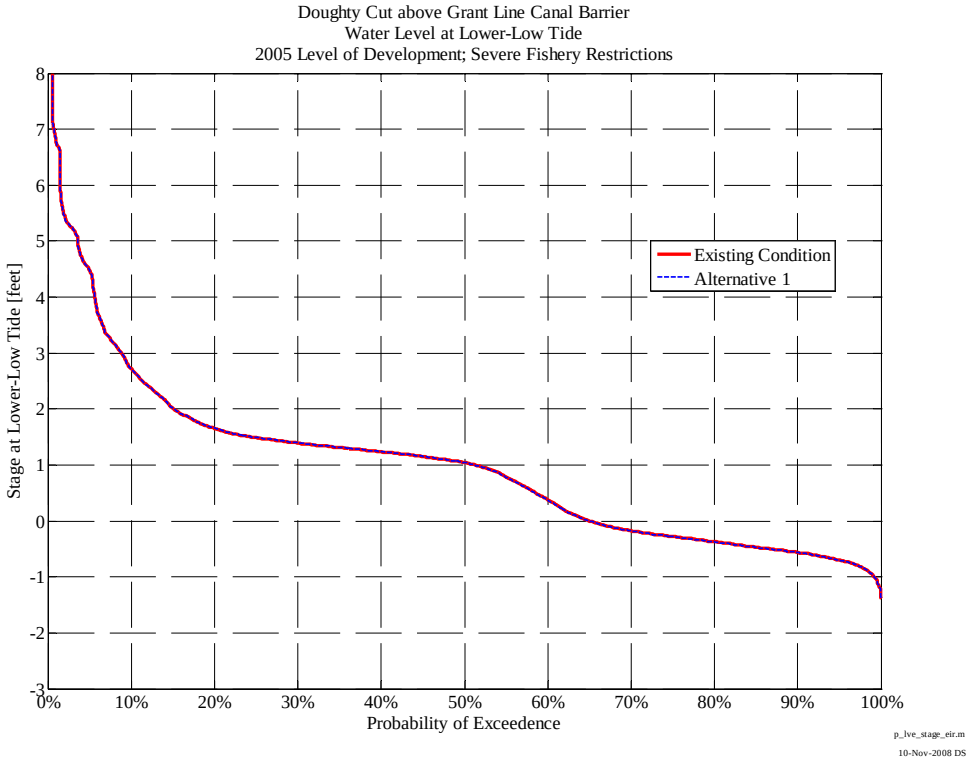

Old River near Tracy Road Bridge
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_stage_eir.m
10-Nov-2008 DS

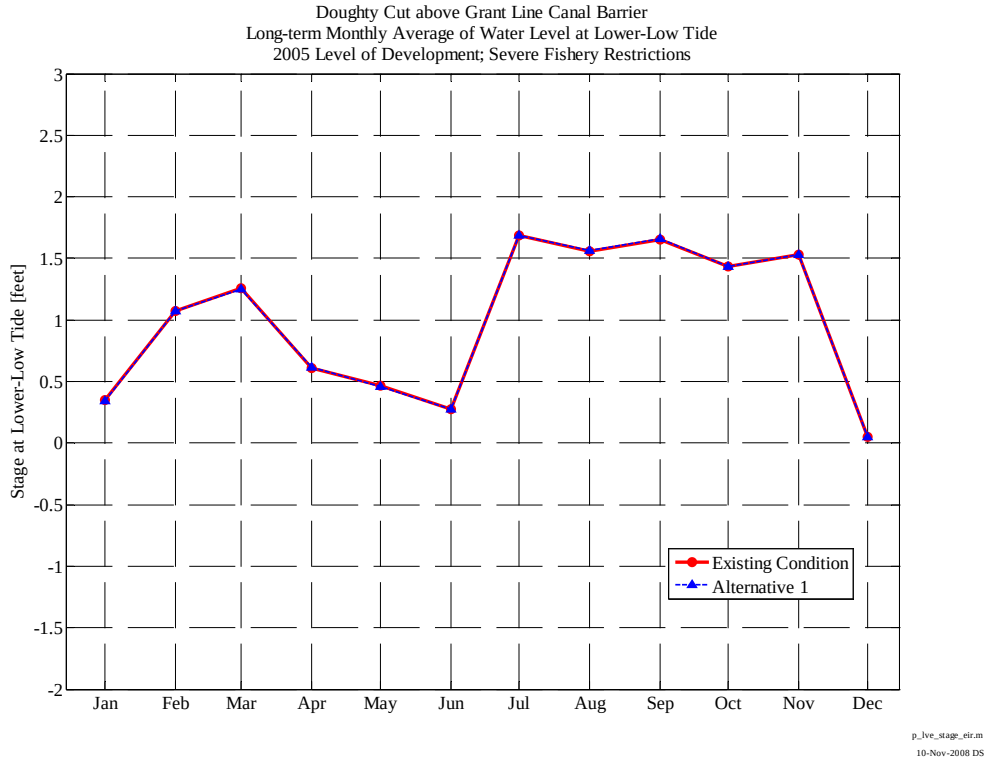

Old River near Tracy Road Bridge
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

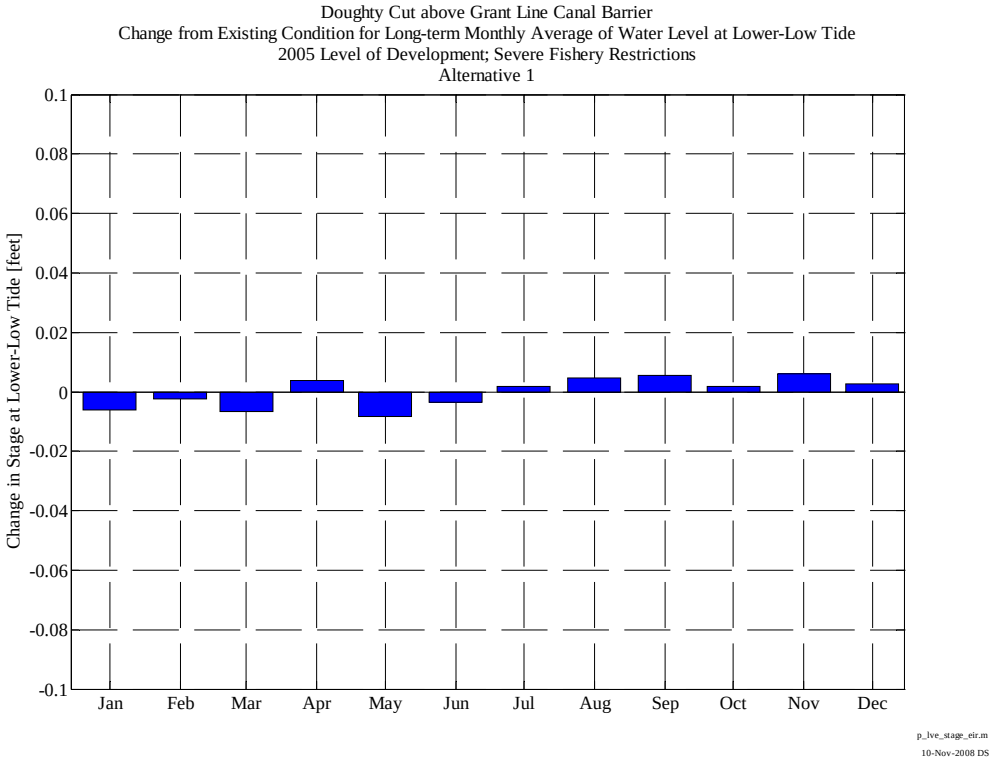
Doughty Cut above Grant Line Canal Barrier

Alternative 1

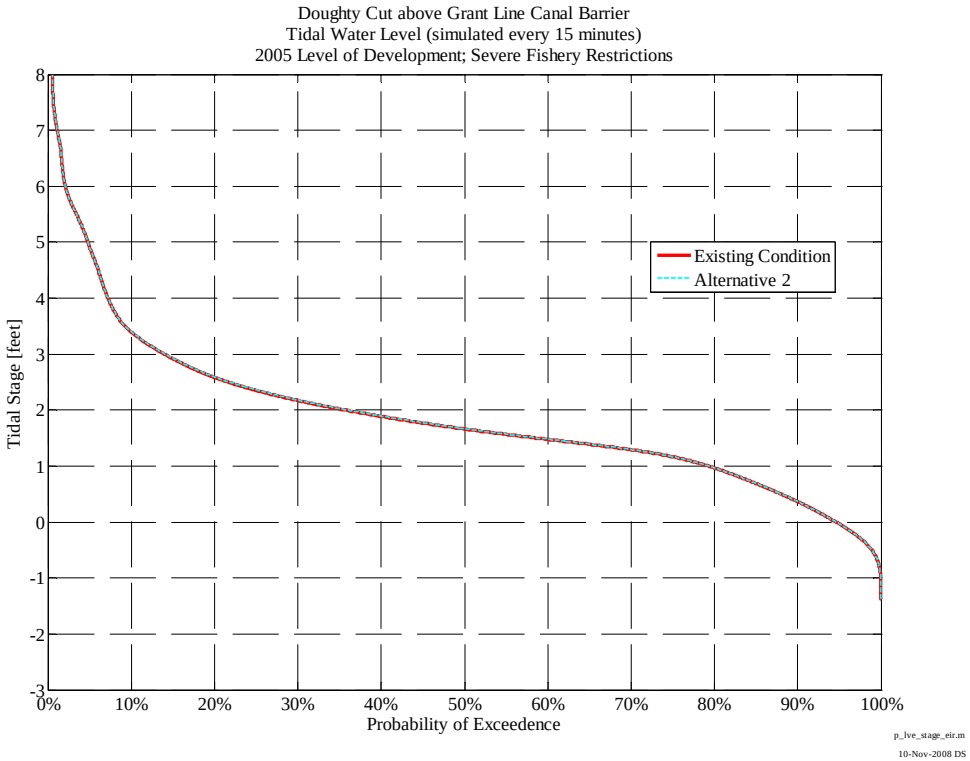


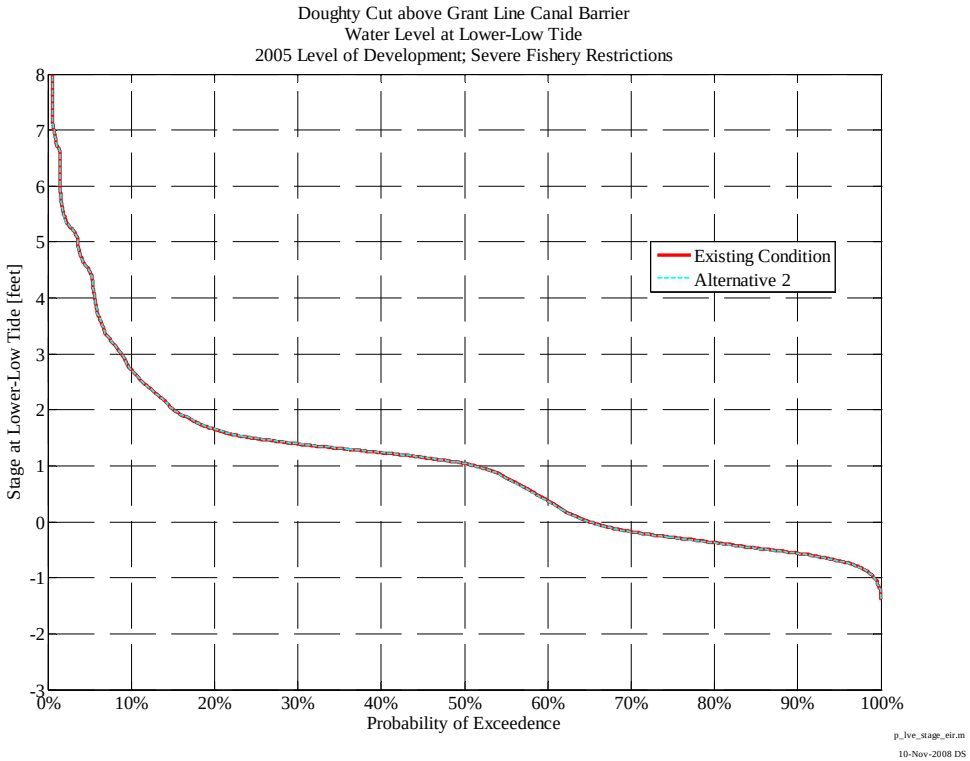


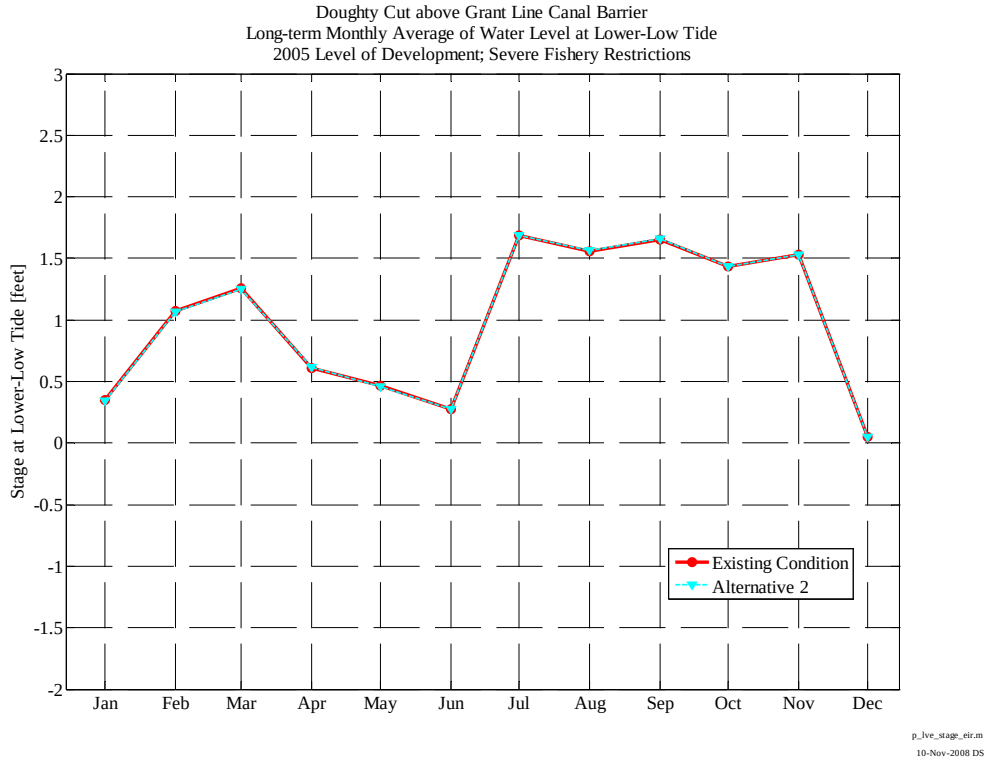

Doughty Cut above Grant Line Canal Barrier
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_stage_eir.m
10-Nov-2008 DS

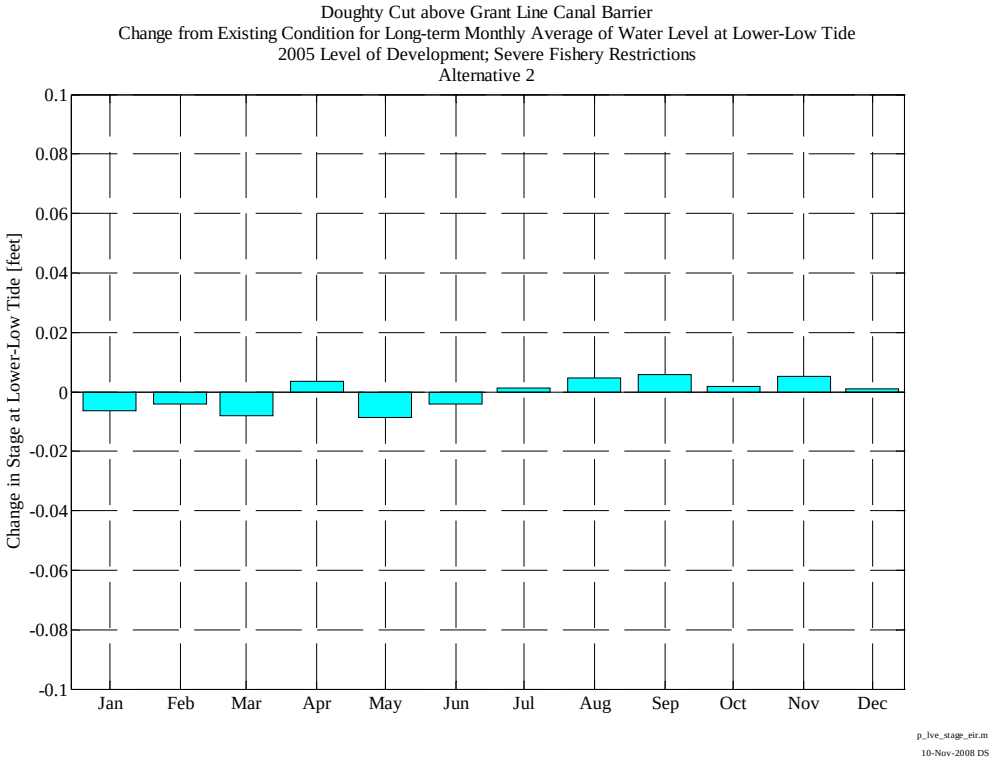

Doughty Cut above Grant Line Canal Barrier
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 2

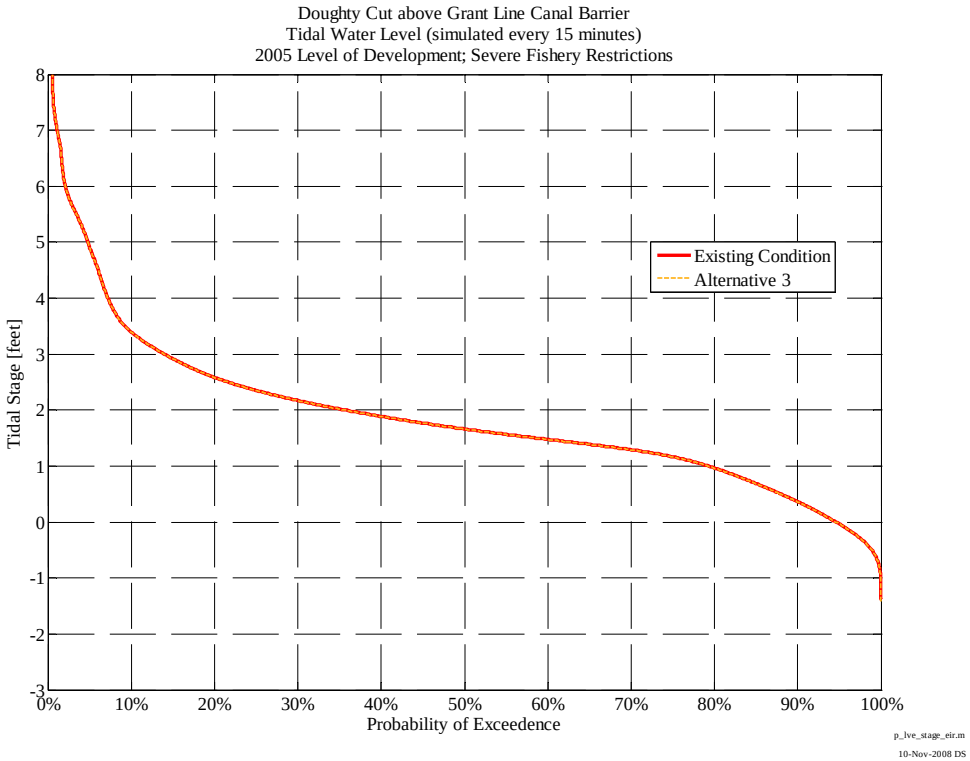


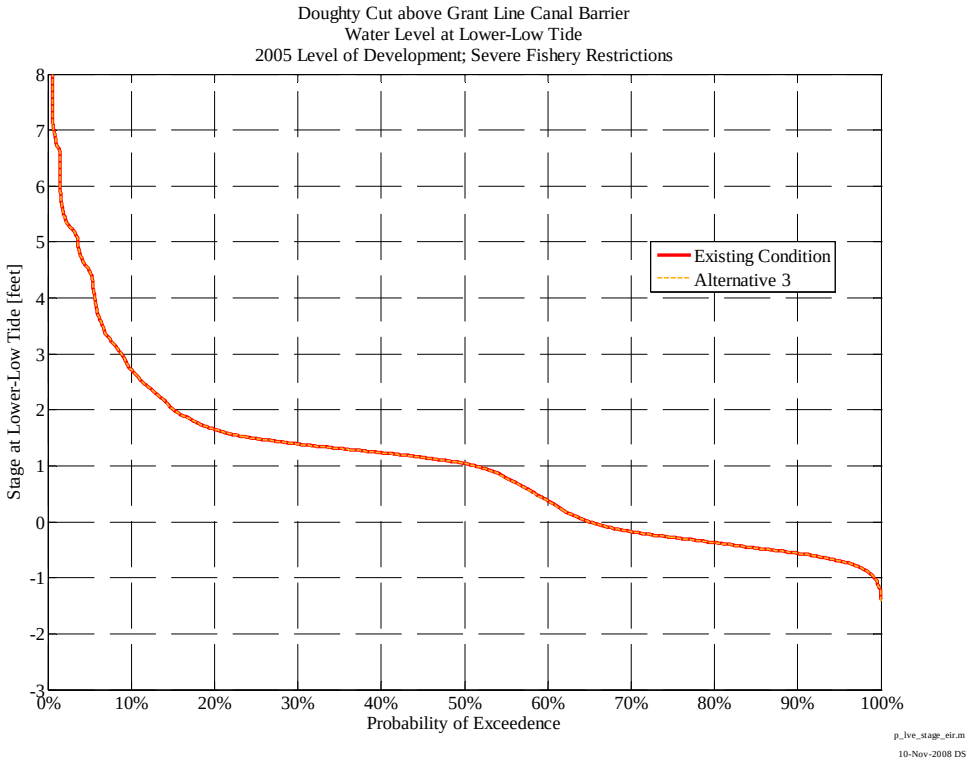


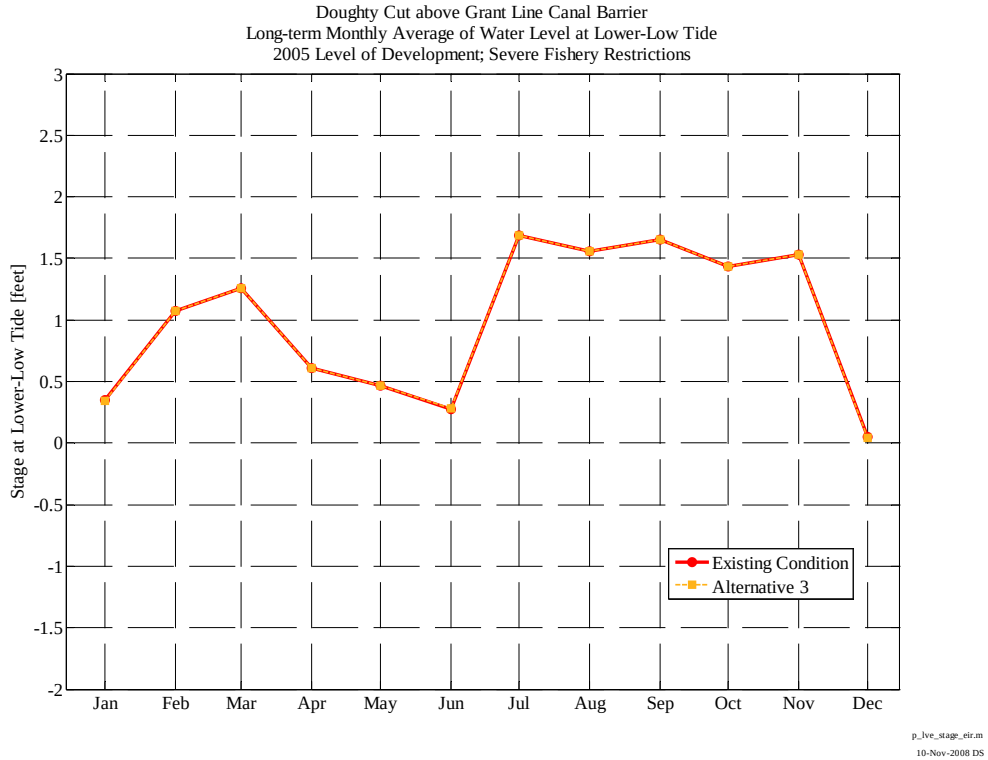

Doughty Cut above Grant Line Canal Barrier
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_stage_eir.m
10-Nov-2008 DS

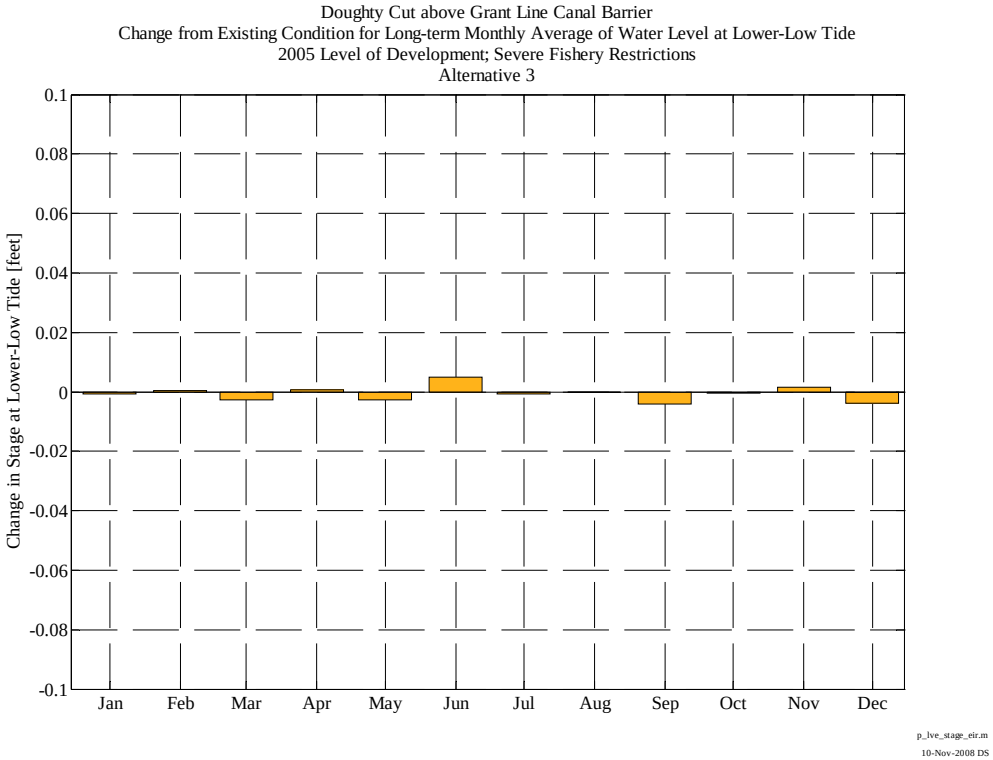

Doughty Cut above Grant Line Canal Barrier
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 3

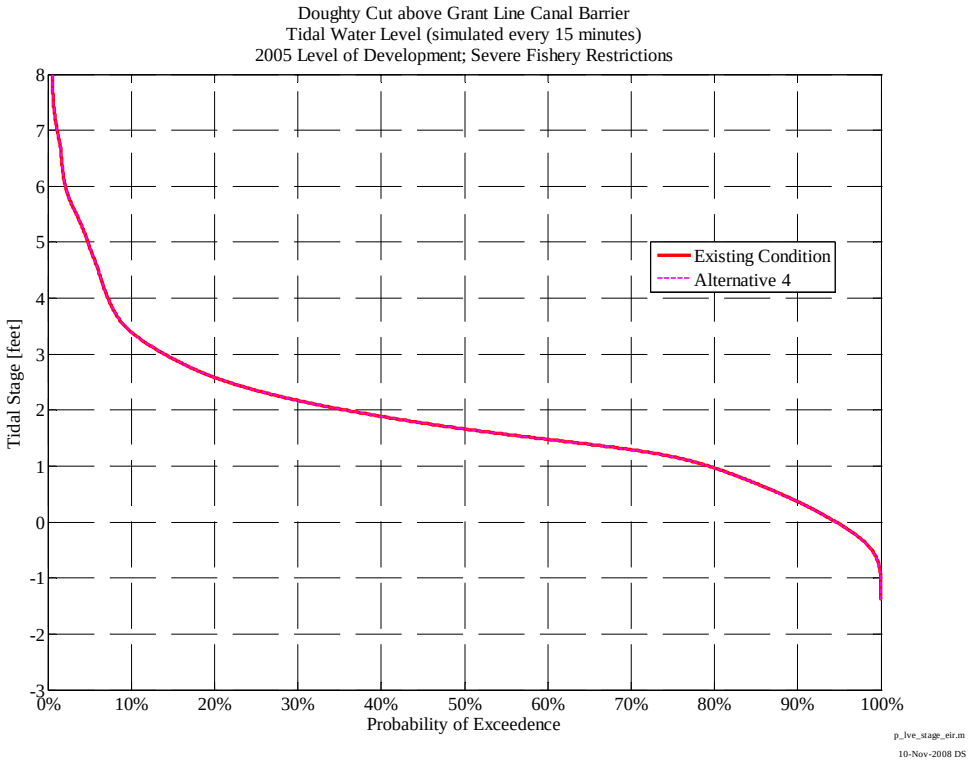


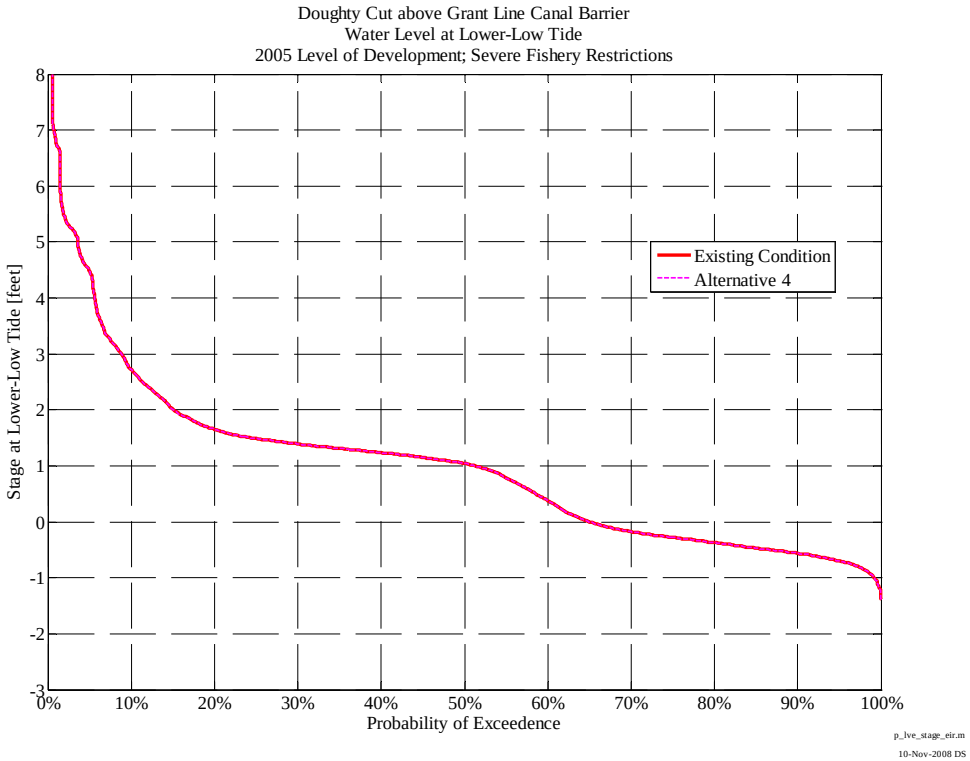


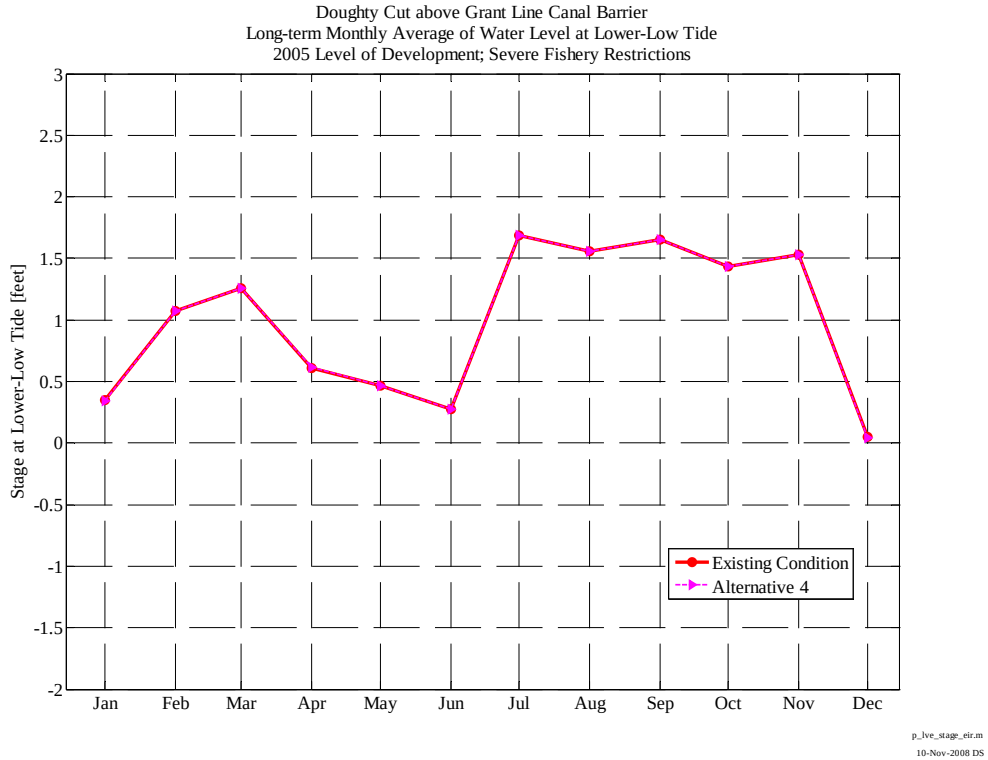

Doughty Cut above Grant Line Canal Barrier
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_stage_eir.m
10-Nov-2008 DS


Doughty Cut above Grant Line Canal Barrier
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 4






Doughty Cut above Grant Line Canal Barrier
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
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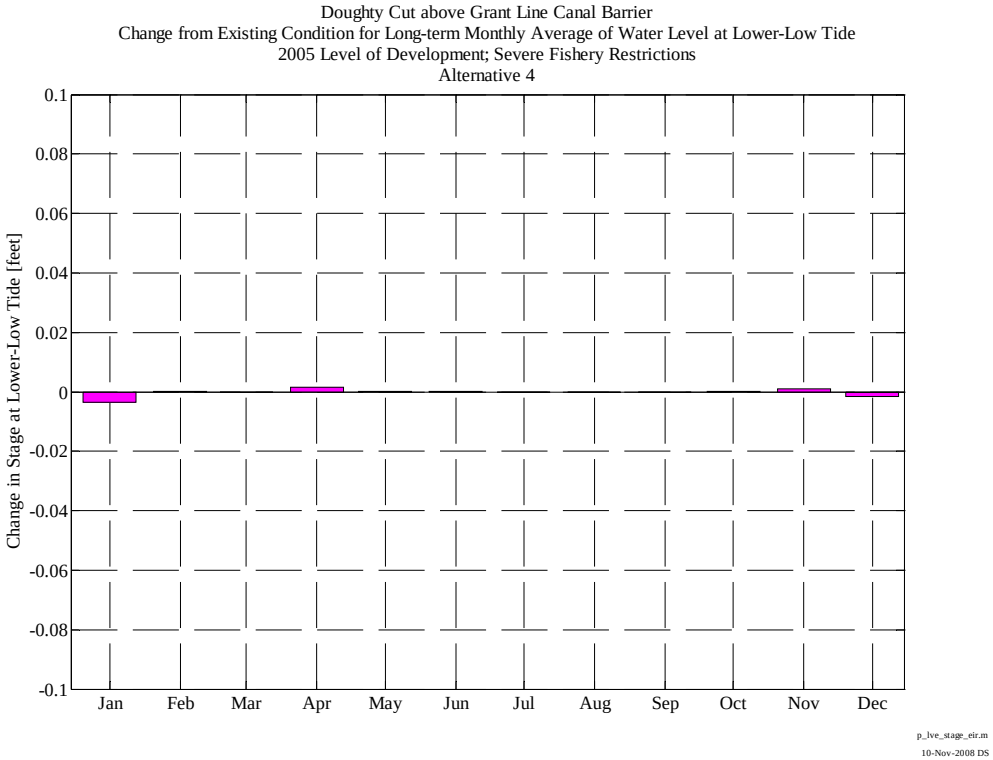
Dec
Existing Condition
Alternative 4
p_lve_stage_eir.m
10-Nov-2008 DS


Doughty Cut above Grant Line Canal Barrier
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
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May
Jun
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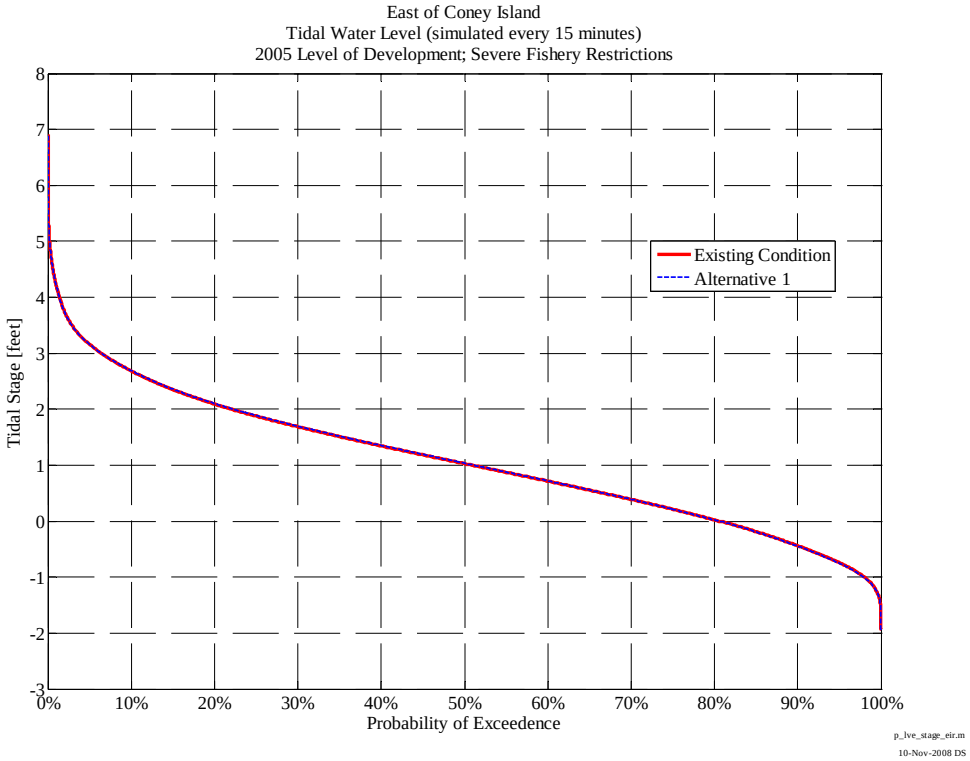
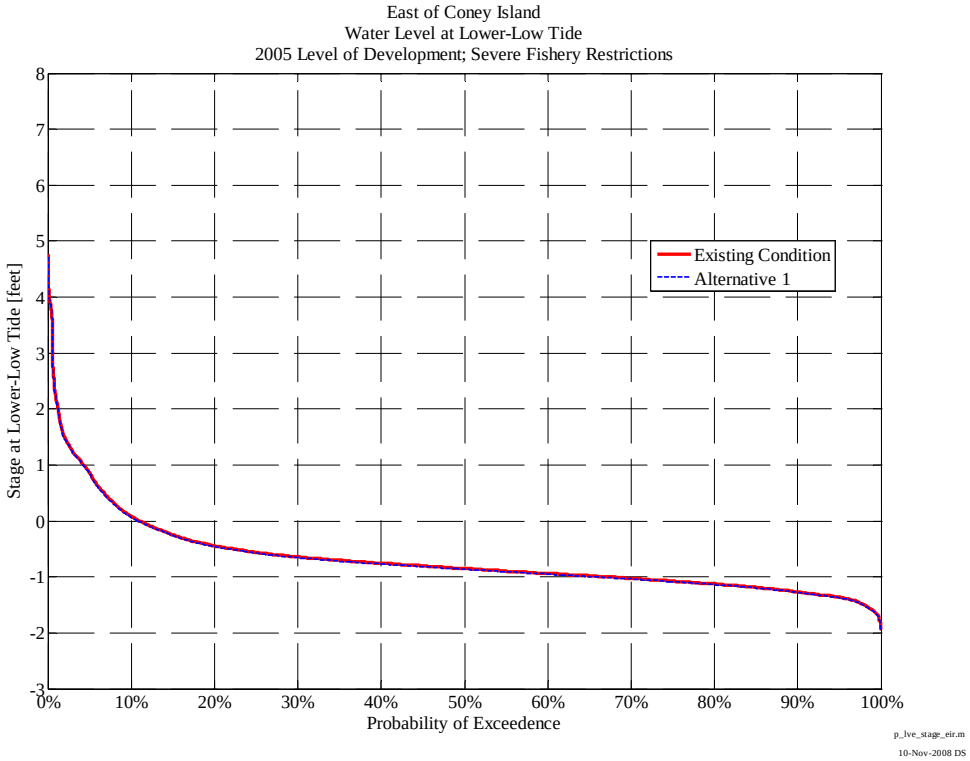
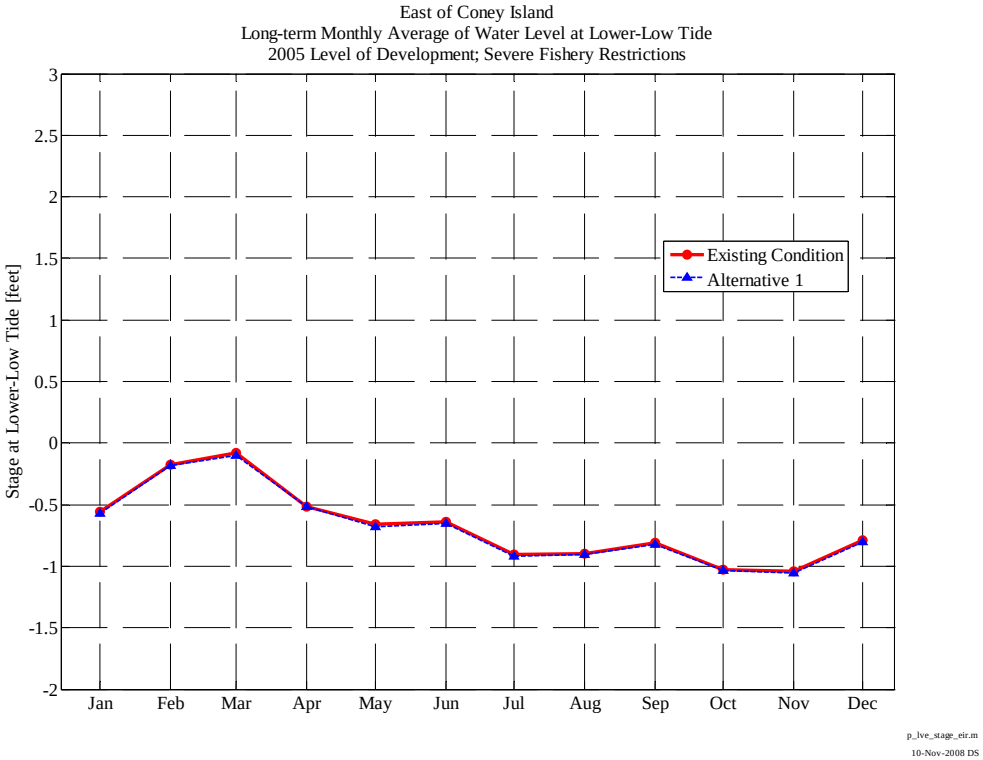
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

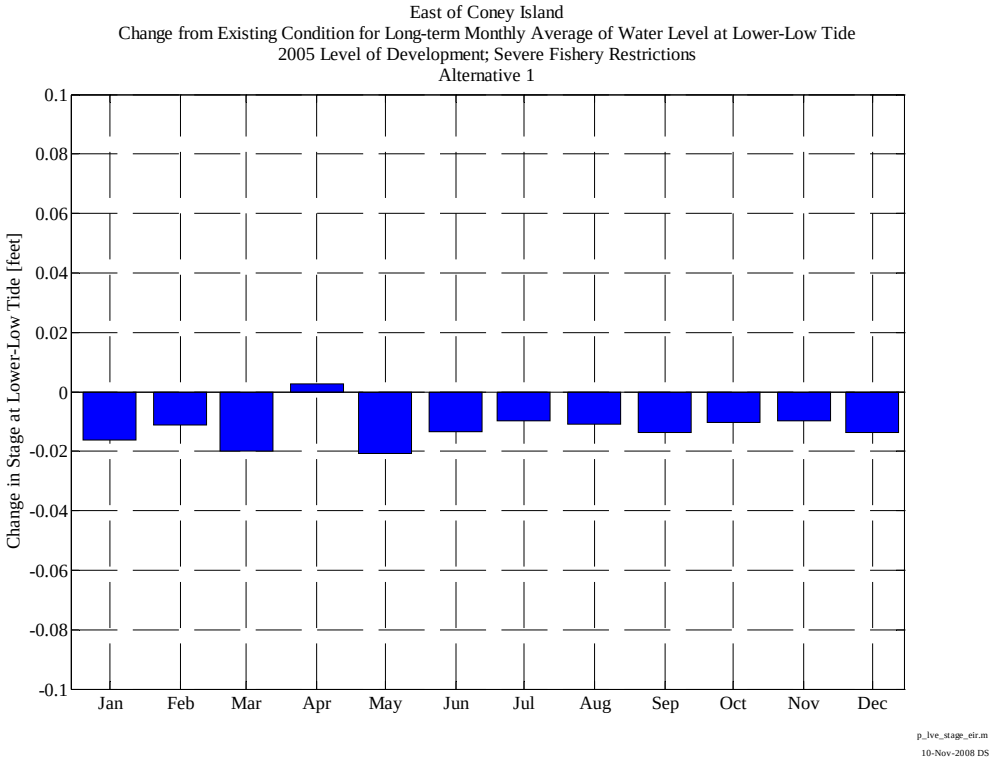
East of Coney Island

Alternative 1

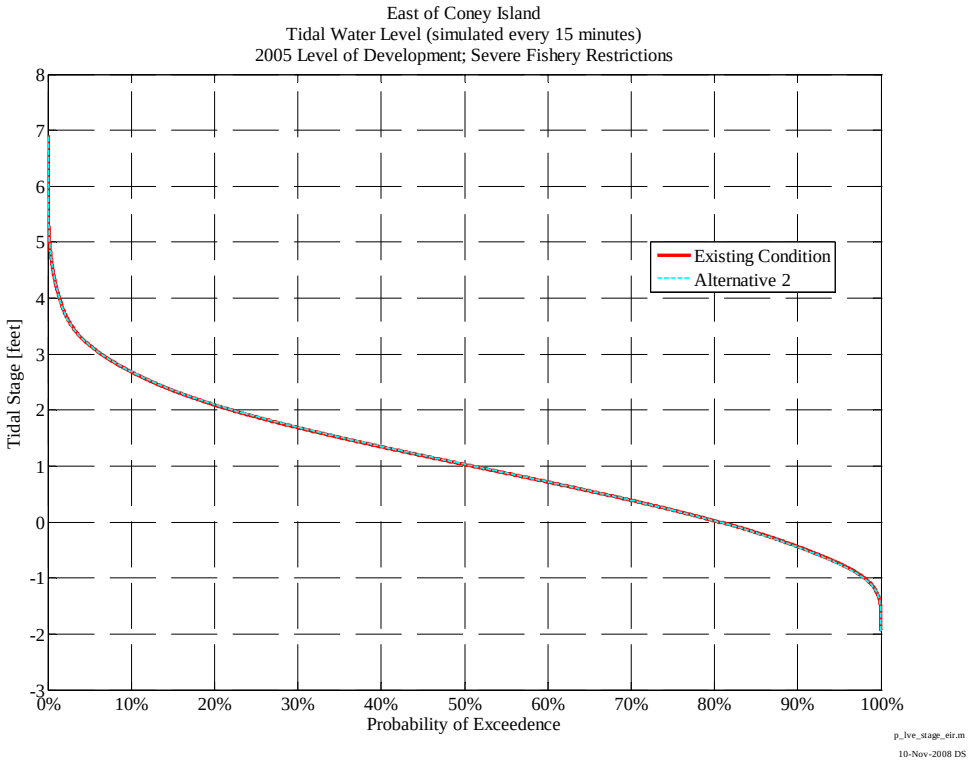


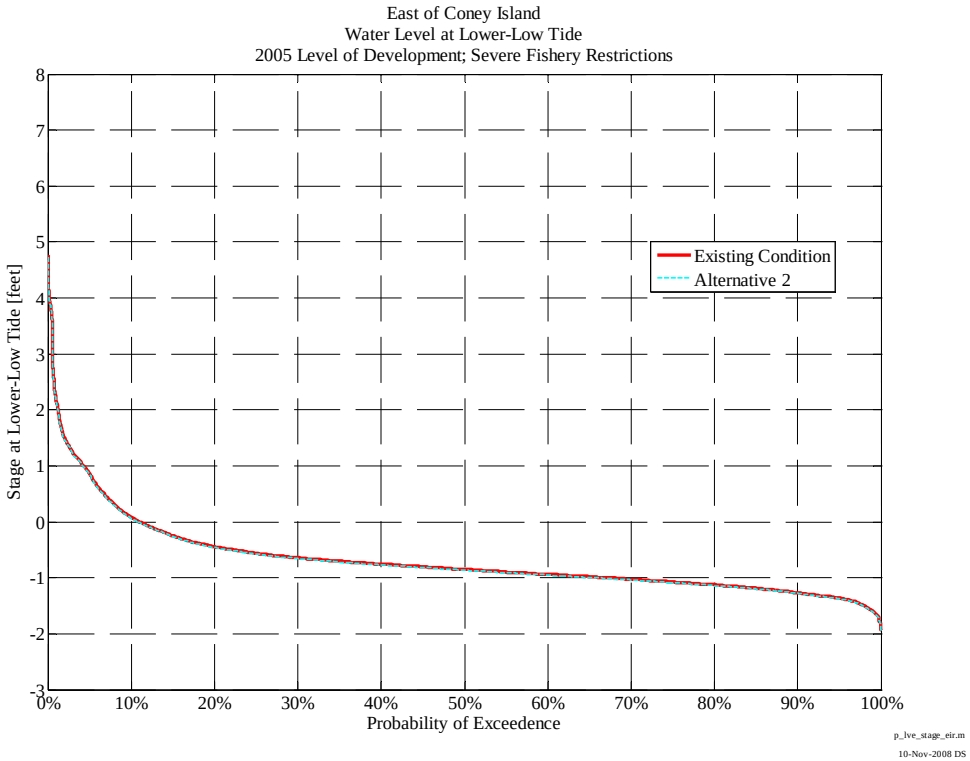



East of Coney Island
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_stage_eir.m
10-Nov-2008 DS

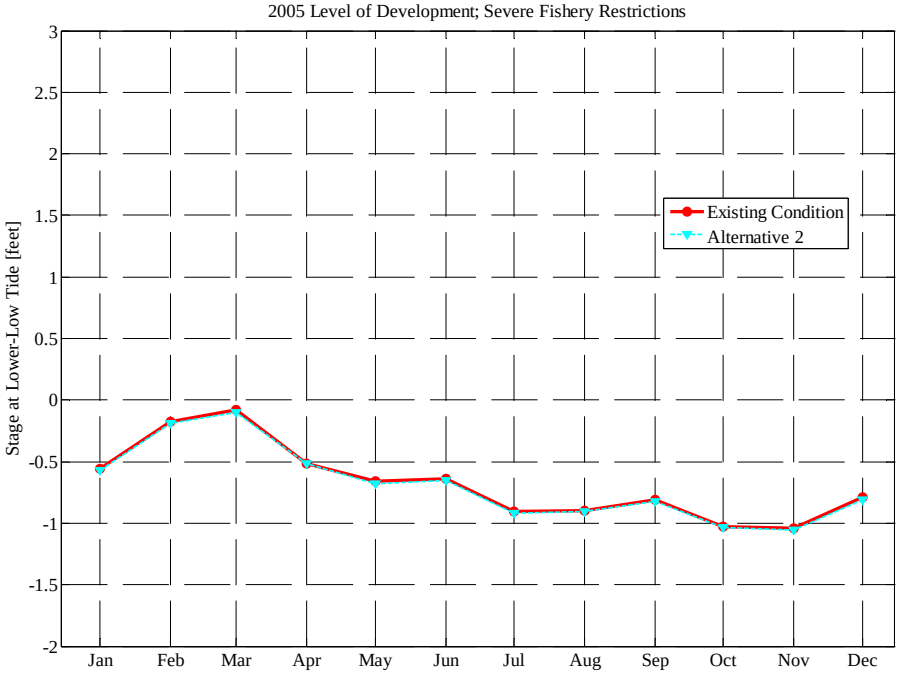

East of Coney Island
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 2



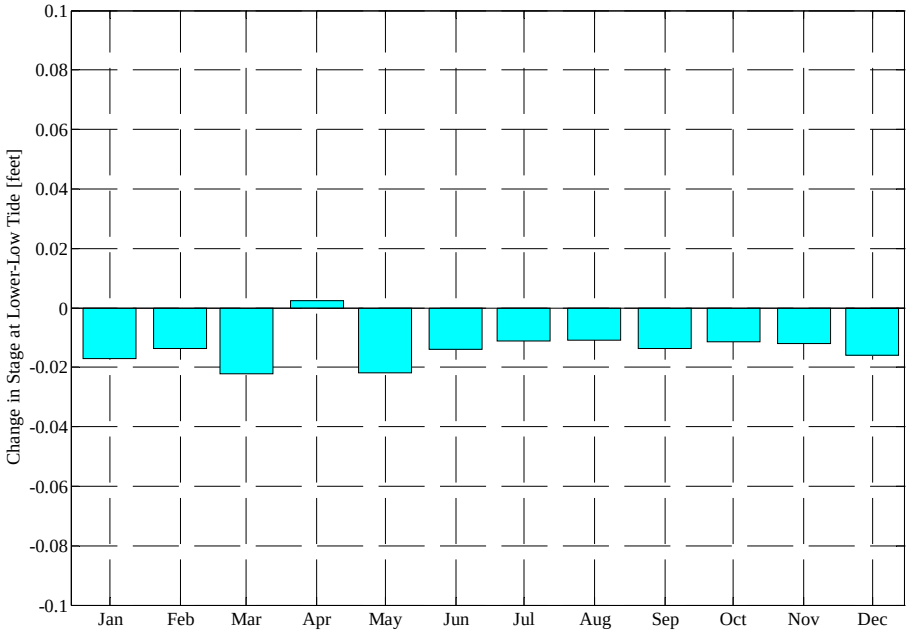


East of Coney Island
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions



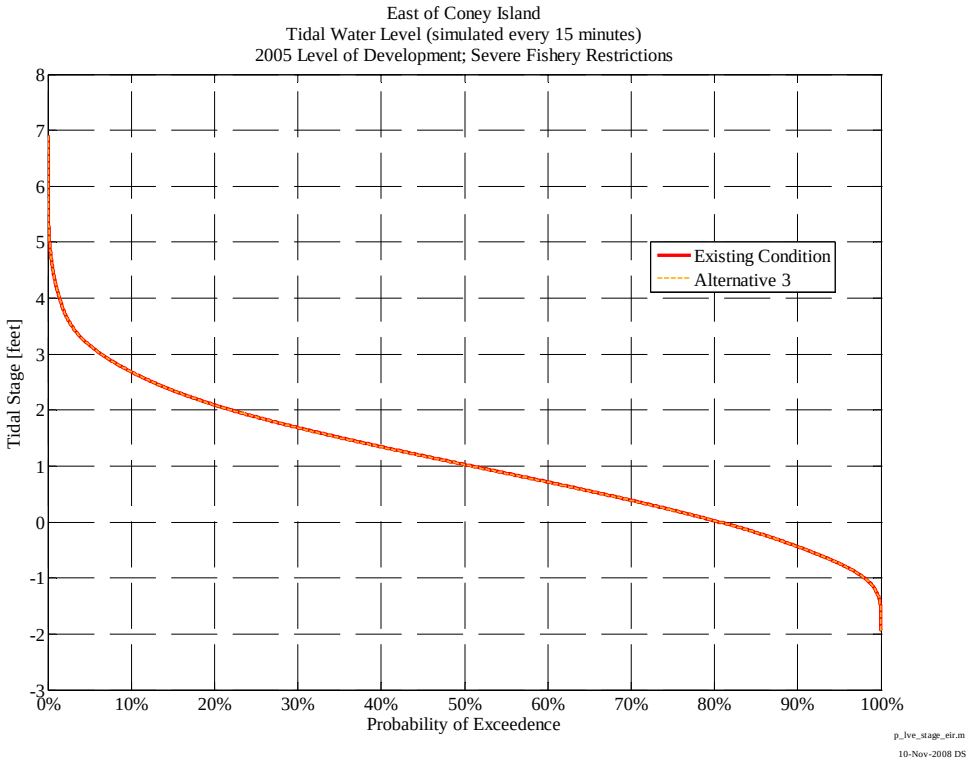
p_lve_stage_eir.m
10-Nov-2008 DS

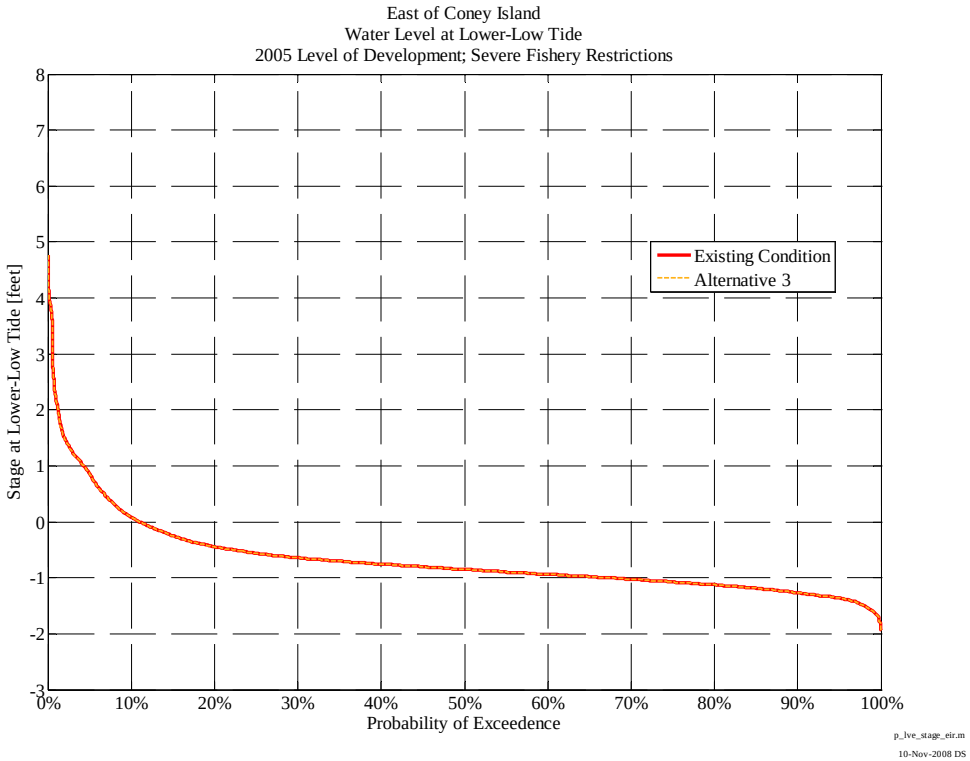
East of Coney Island
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 2

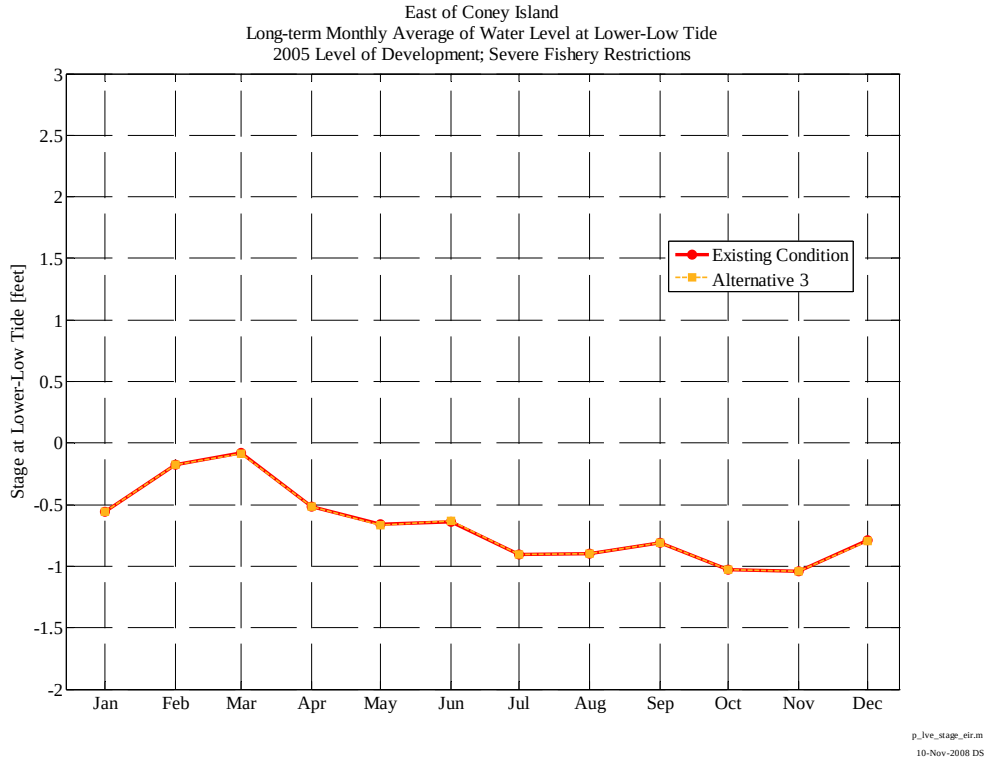


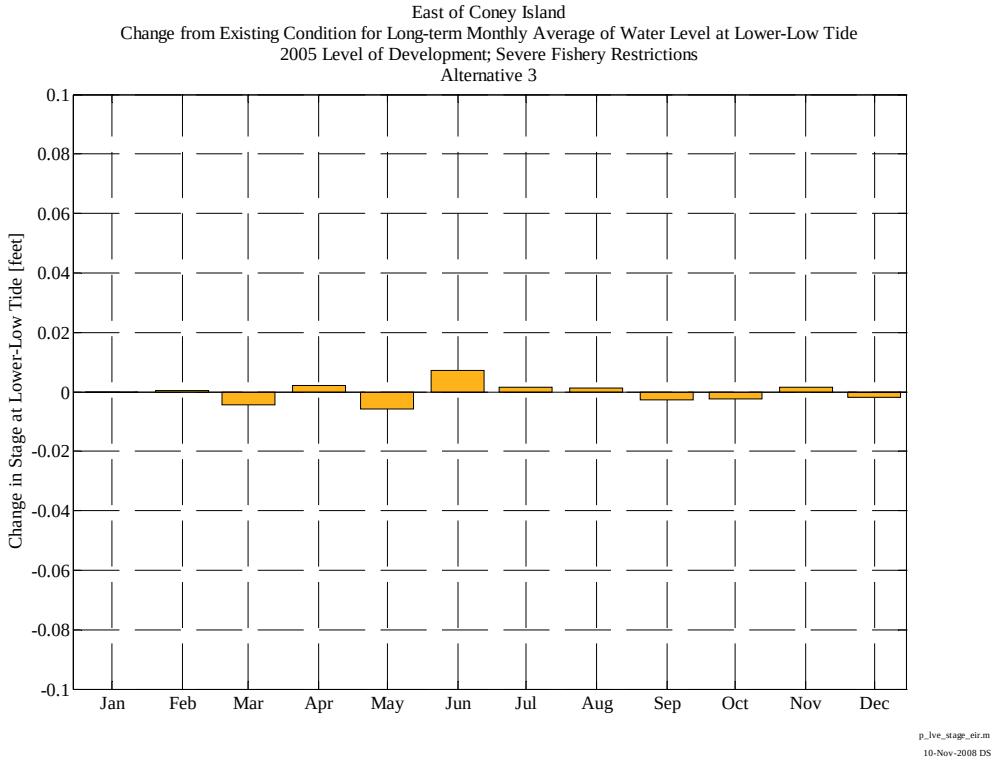
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 3

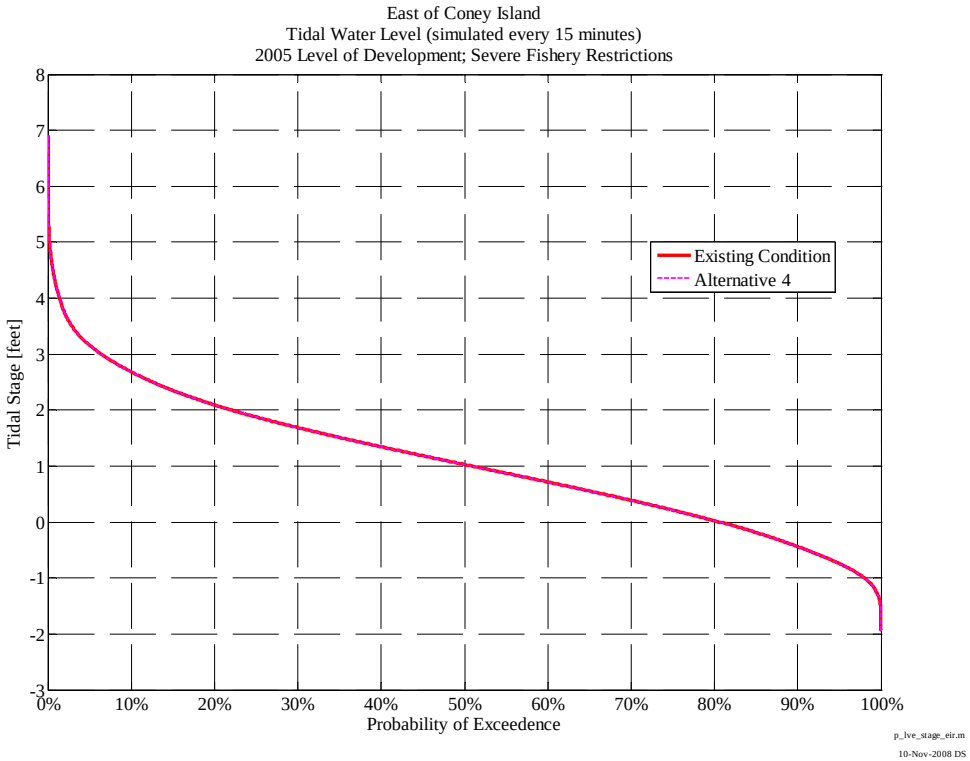


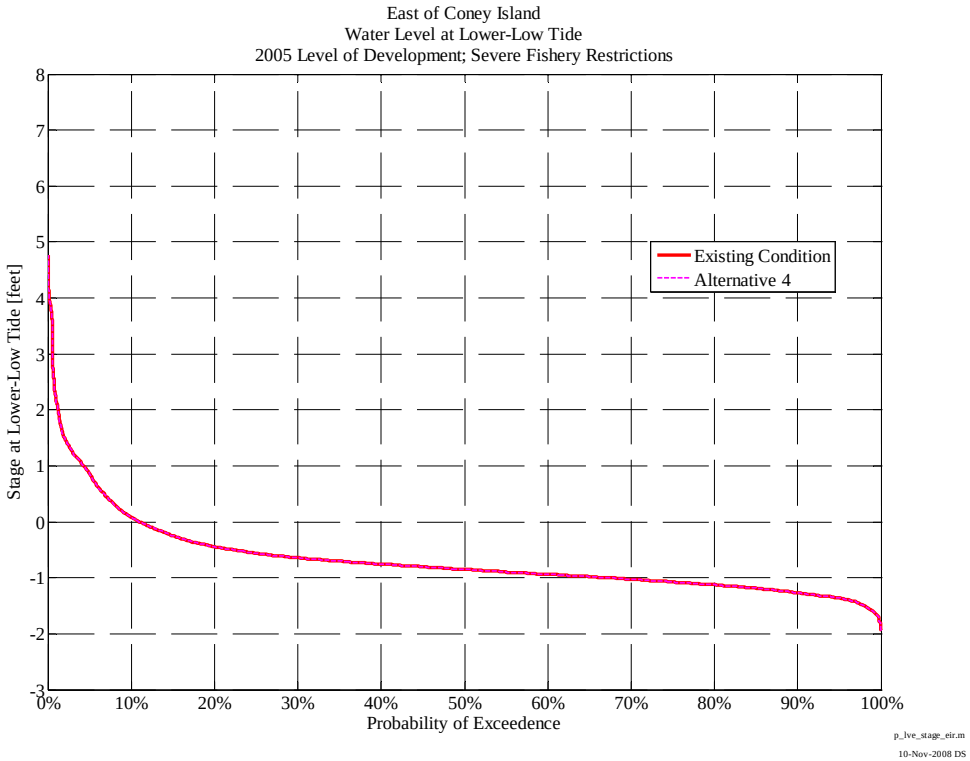


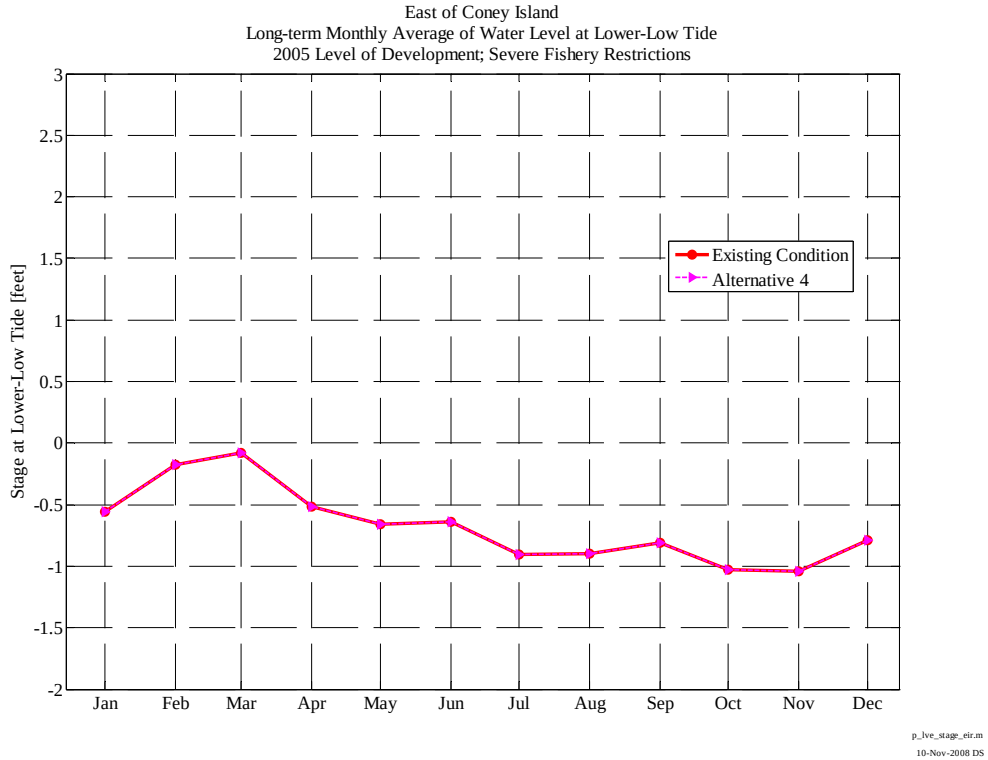

East of Coney Island
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_stage_eir.m
10-Nov-2008 DS

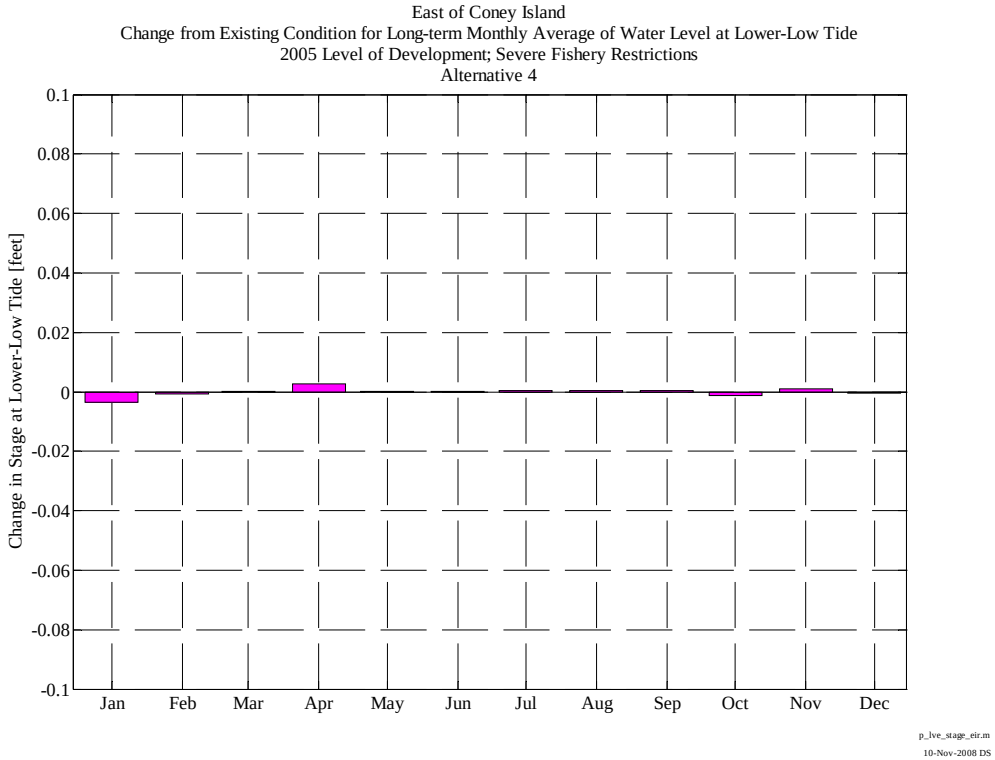

East of Coney Island
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 4



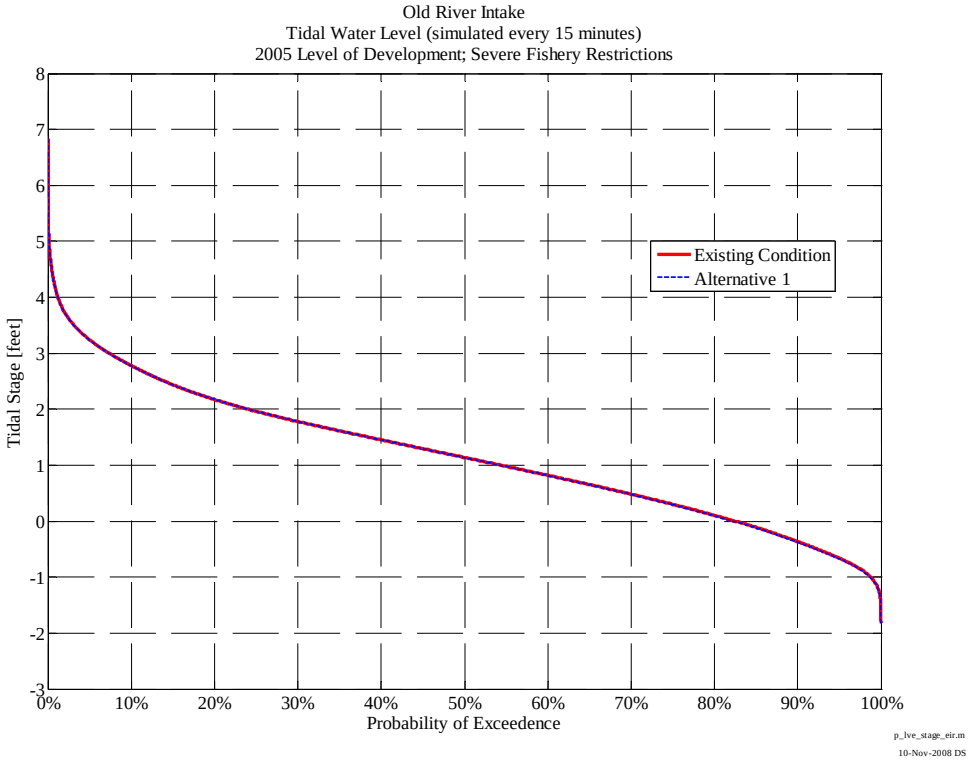


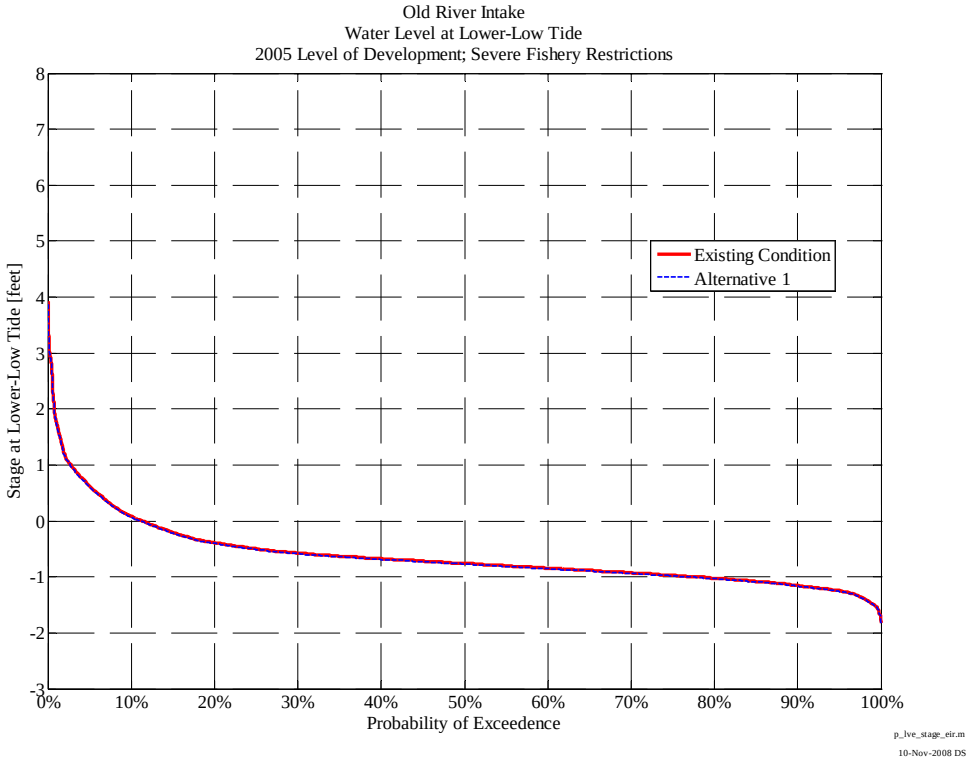

East of Coney Island
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_stage_eir.m
10-Nov-2008 DS

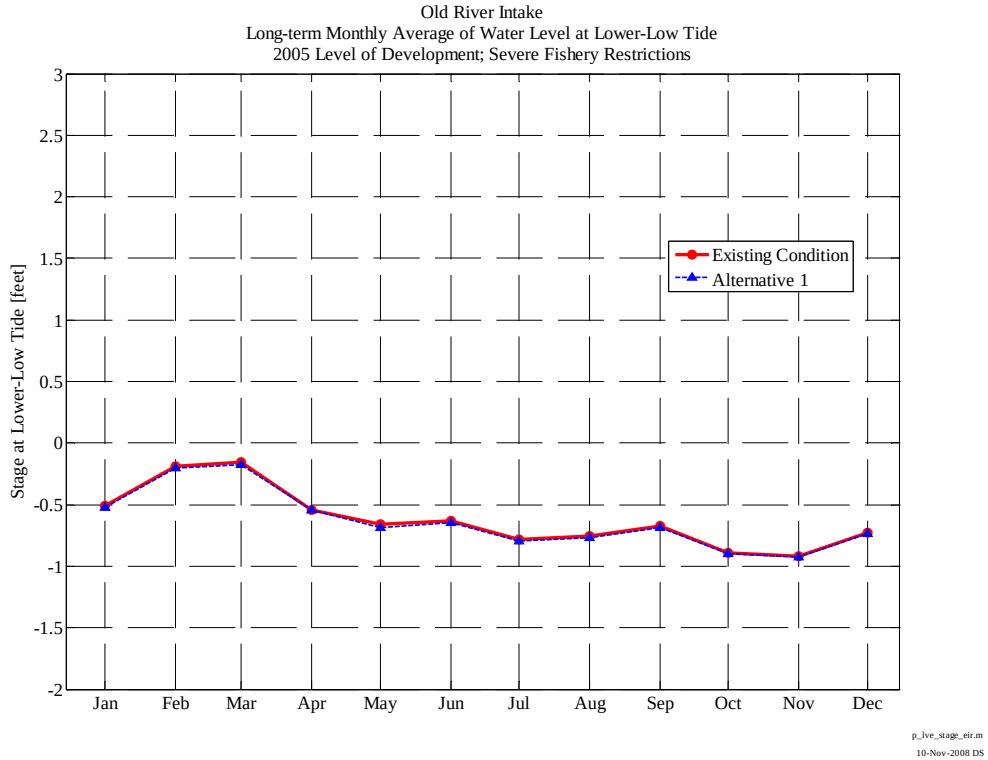

East of Coney Island
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

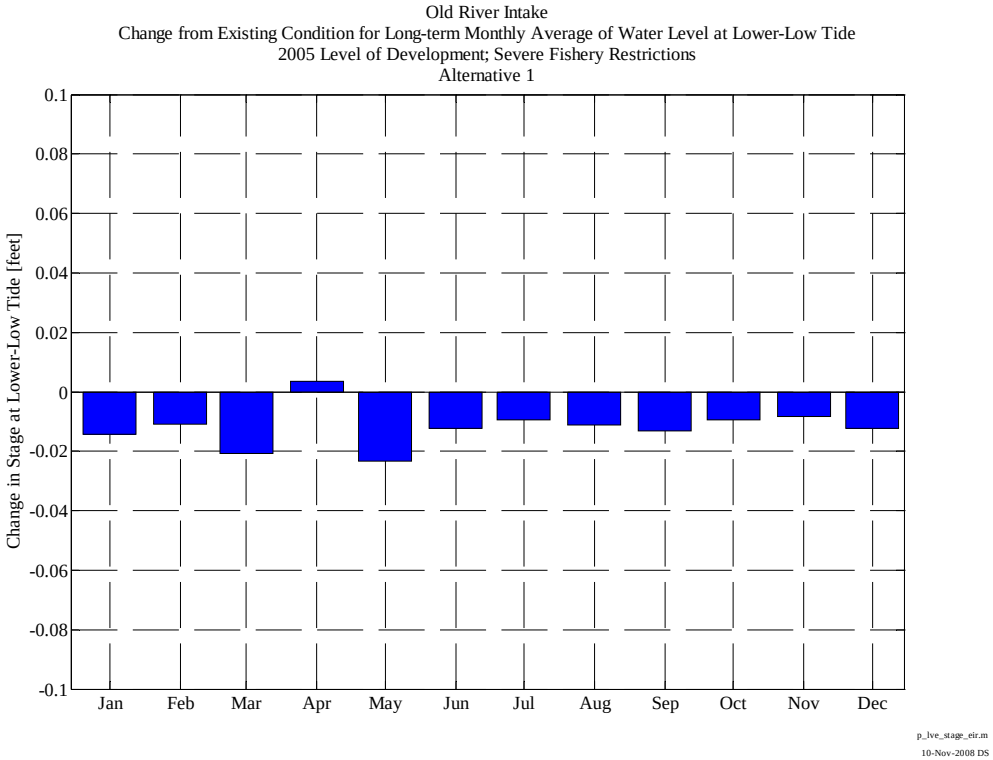
Old River Intake

Alternative 1

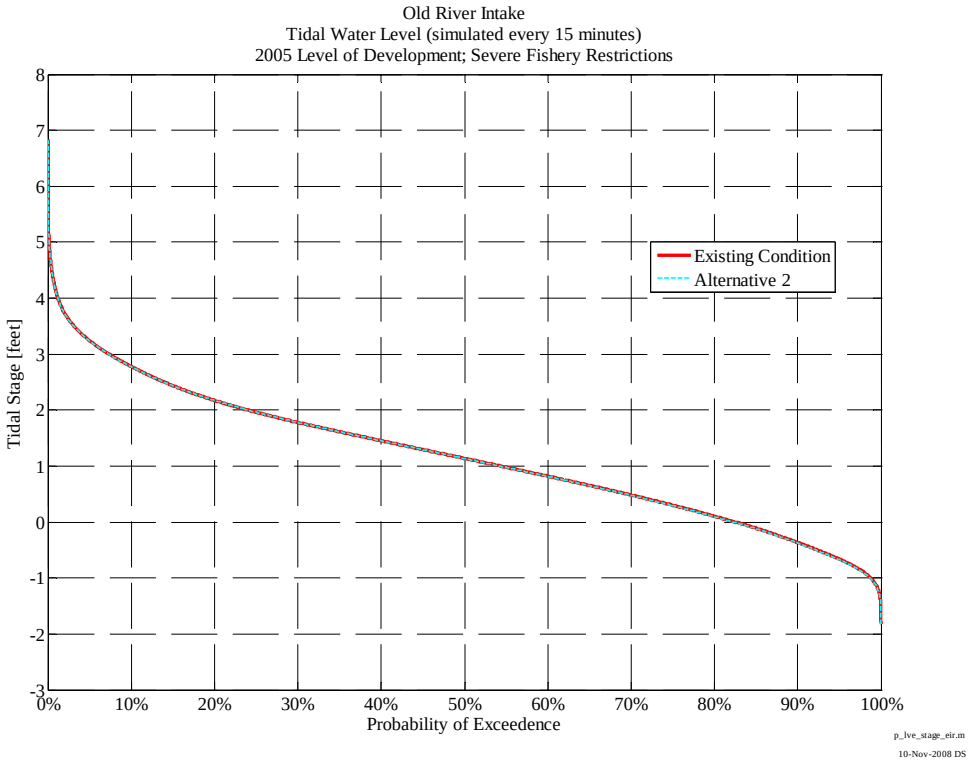


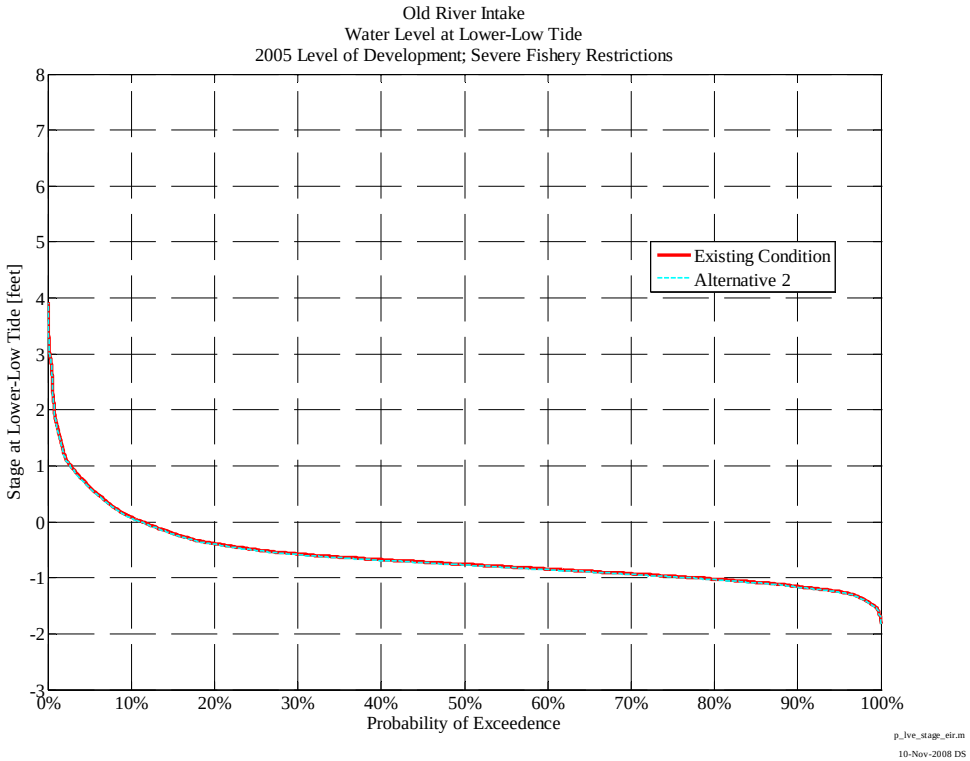


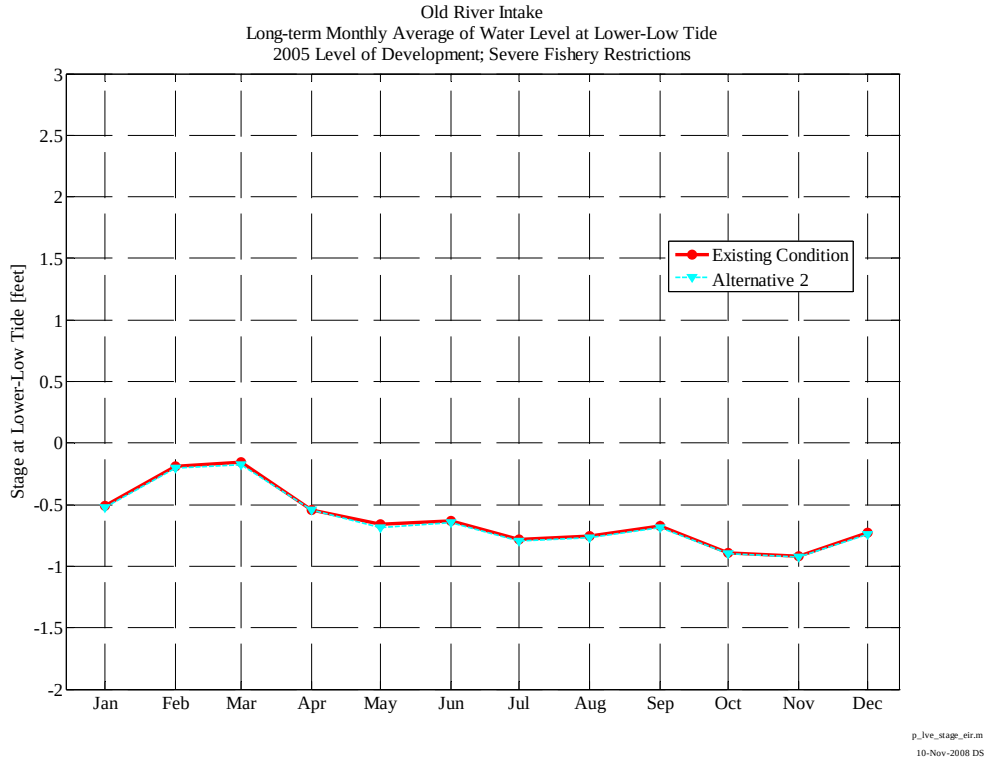

Old River Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_stage_eir.m
10-Nov-2008 DS

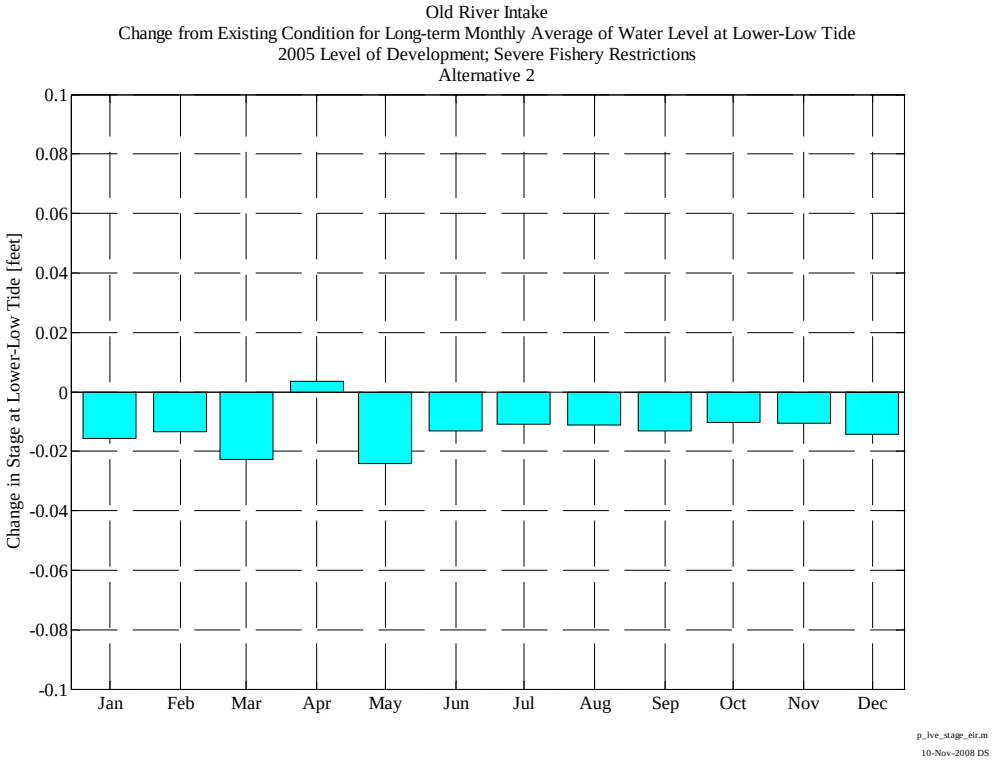

Old River Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 2

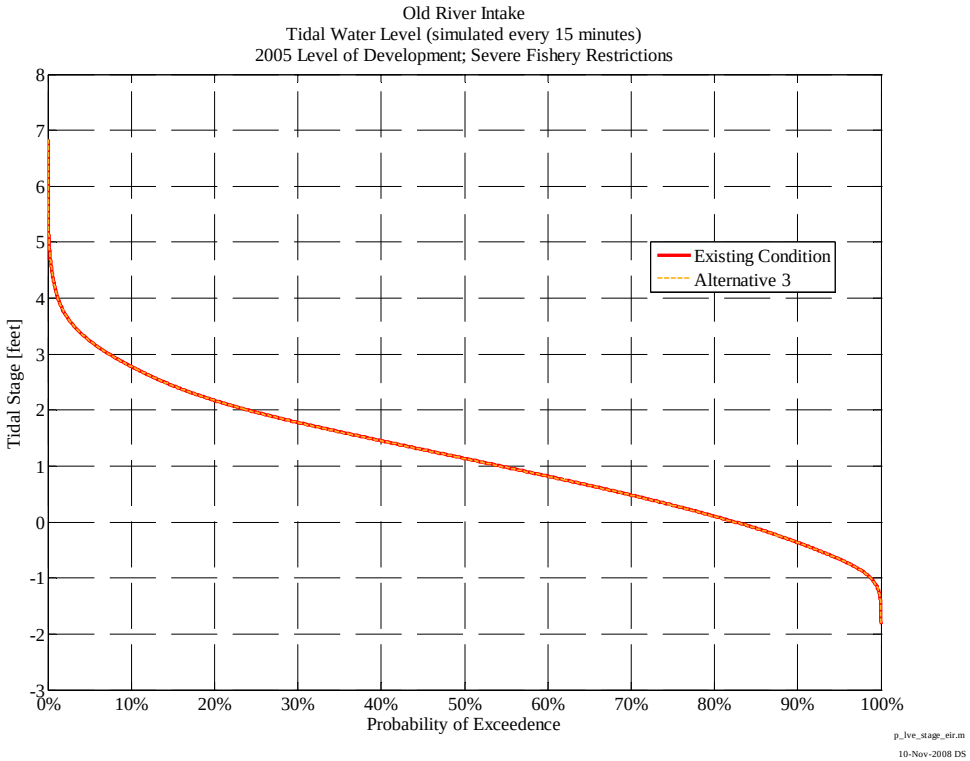


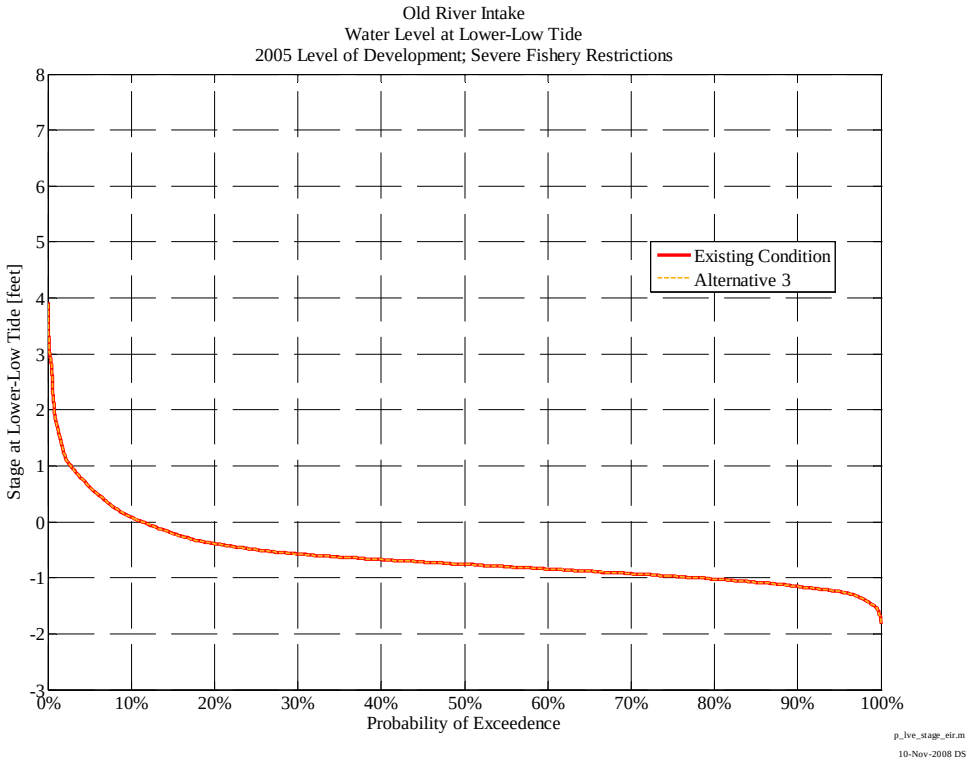


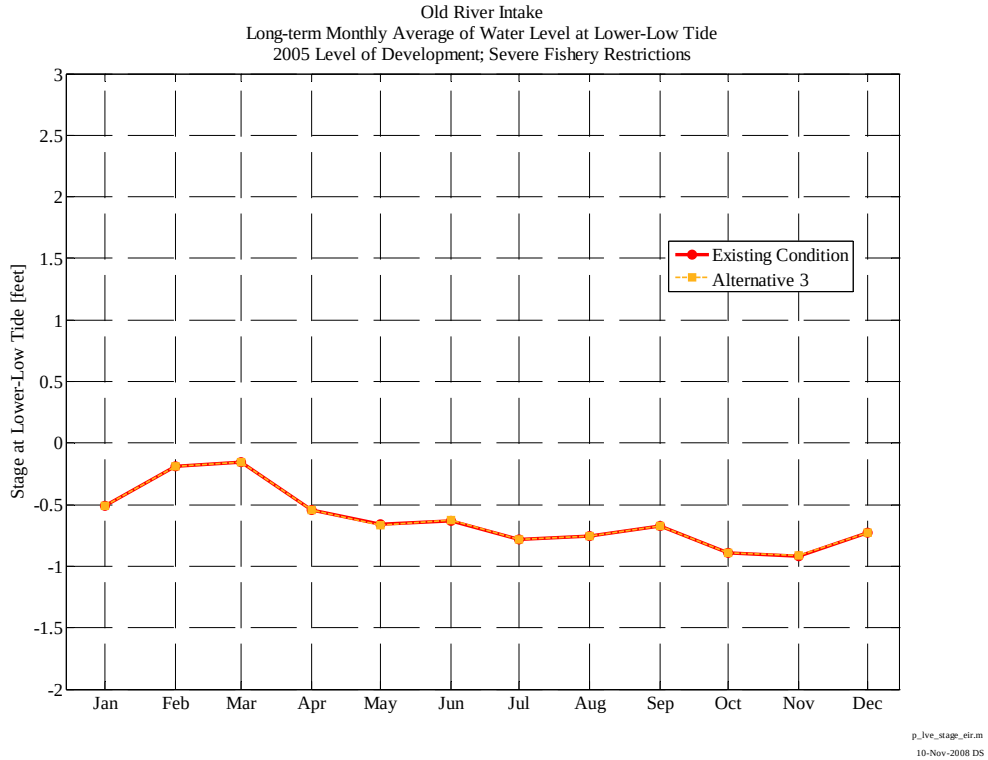

Old River Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_stage_eir.m
10-Nov-2008 DS

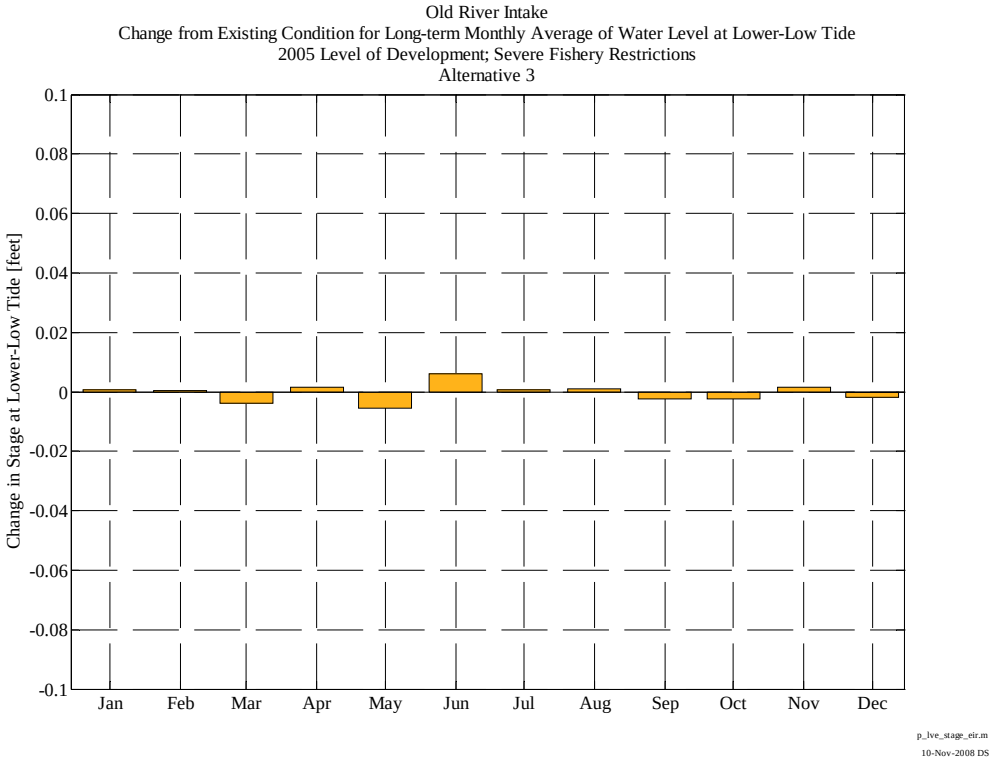

Old River Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 3

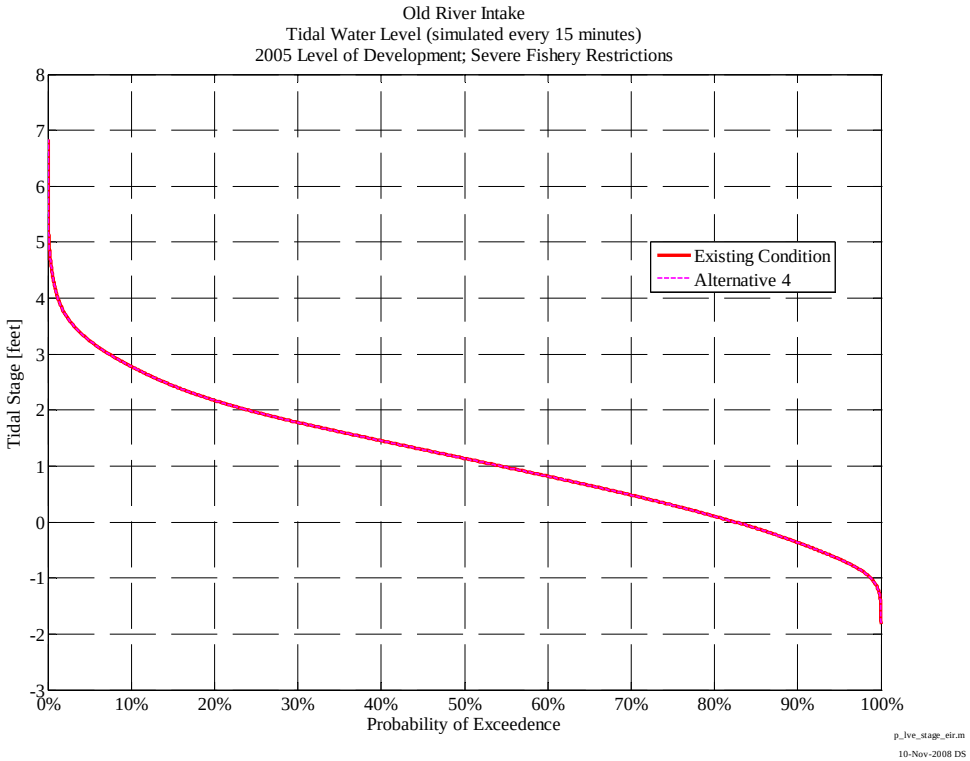


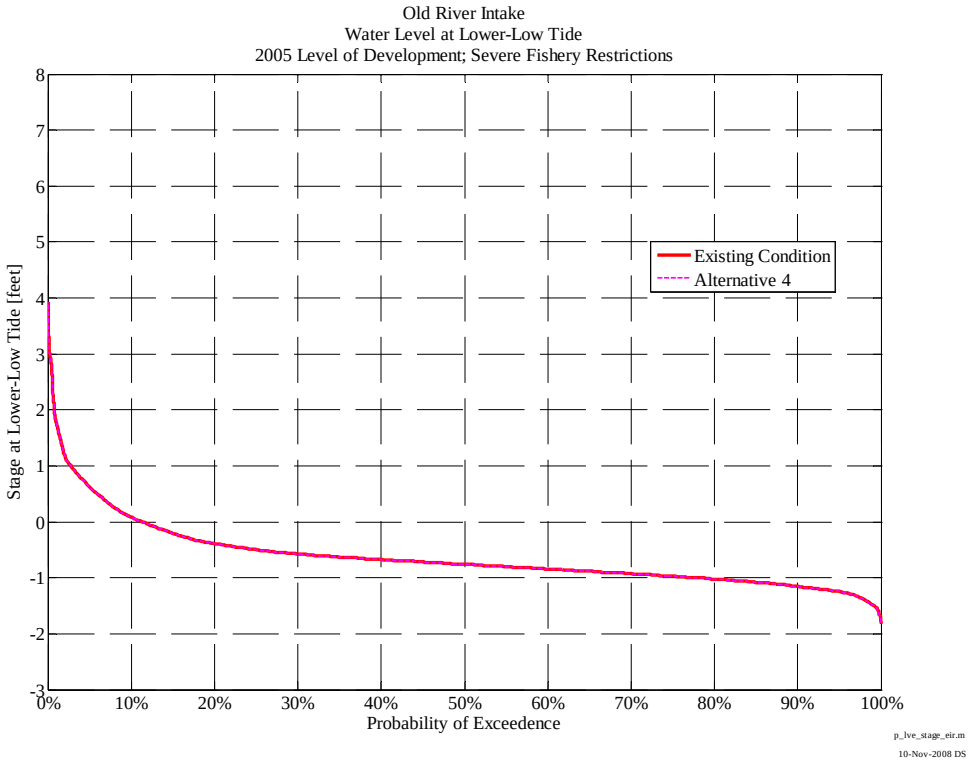


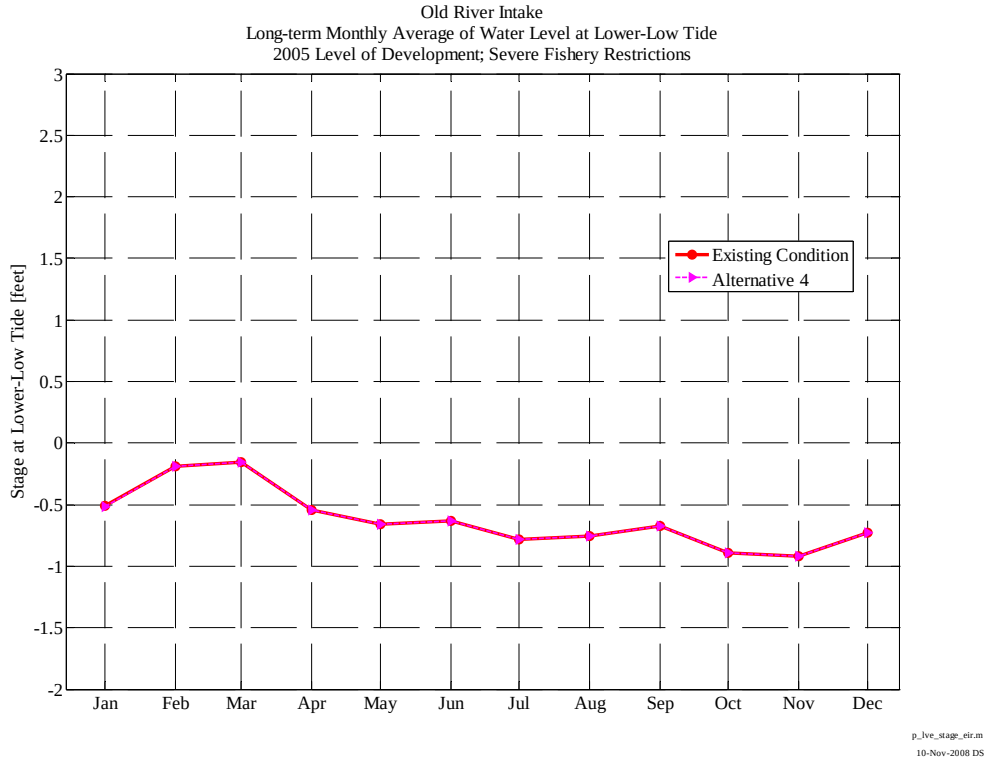

Old River Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_stage_eir.m
10-Nov-2008 DS

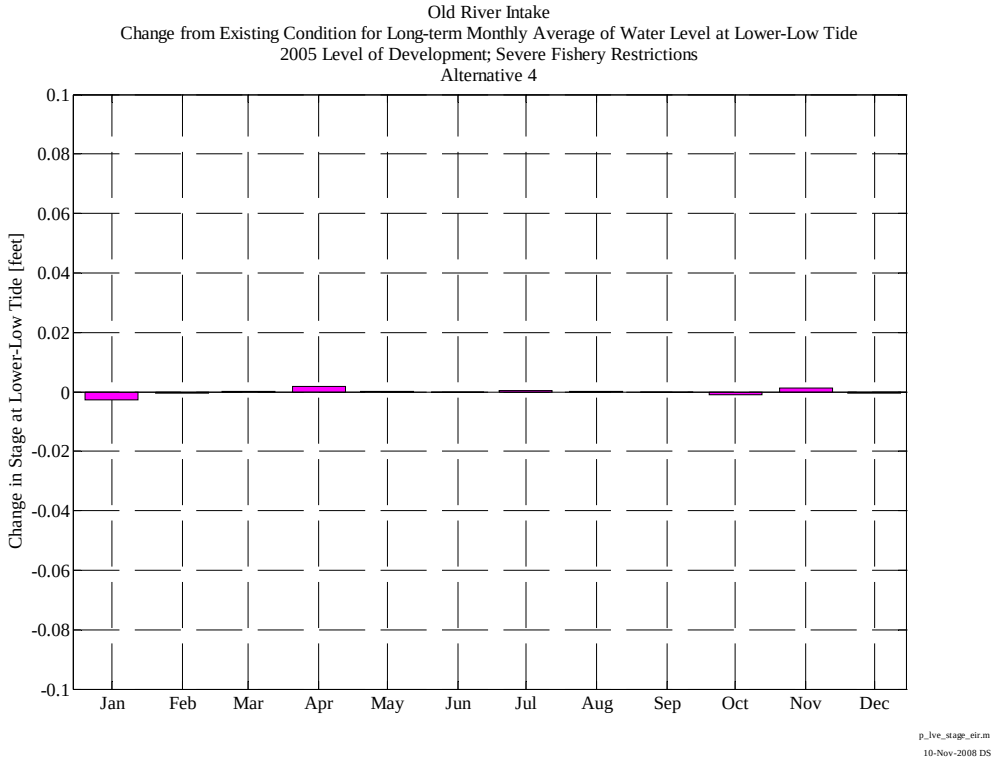

Old River Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 4



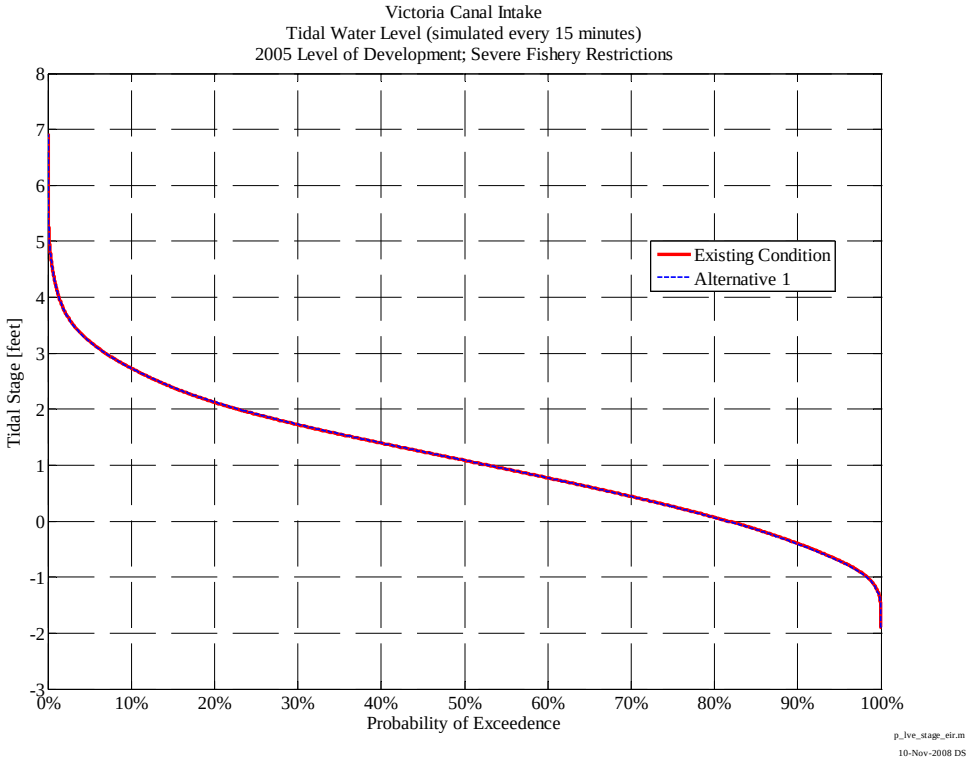


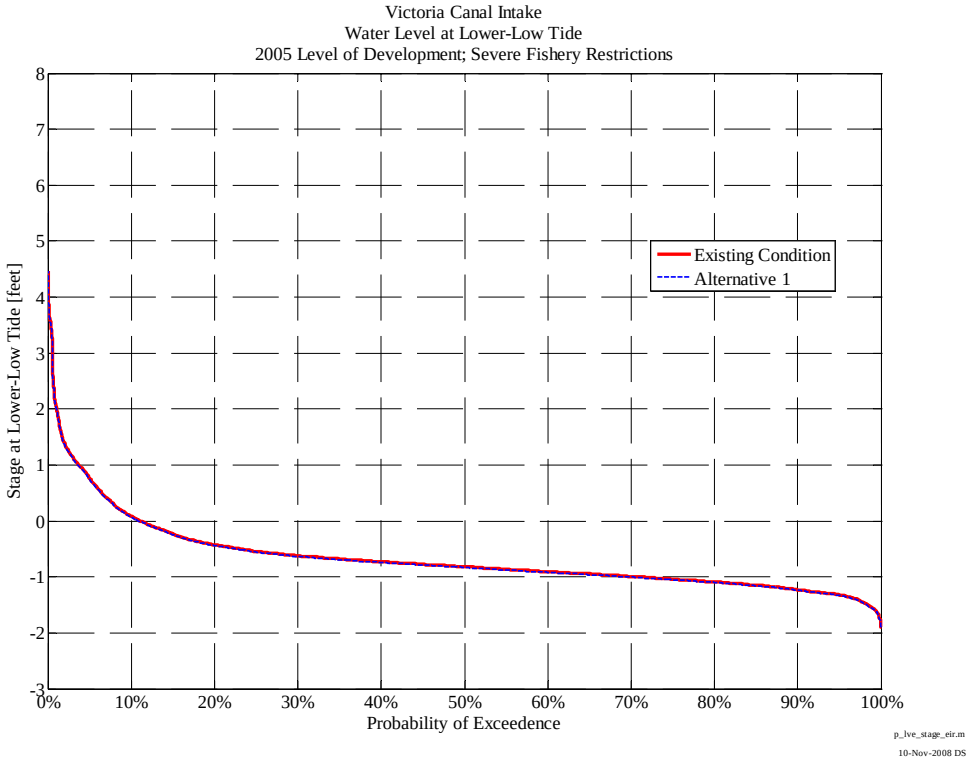

Old River Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_stage_eir.m
10-Nov-2008 DS

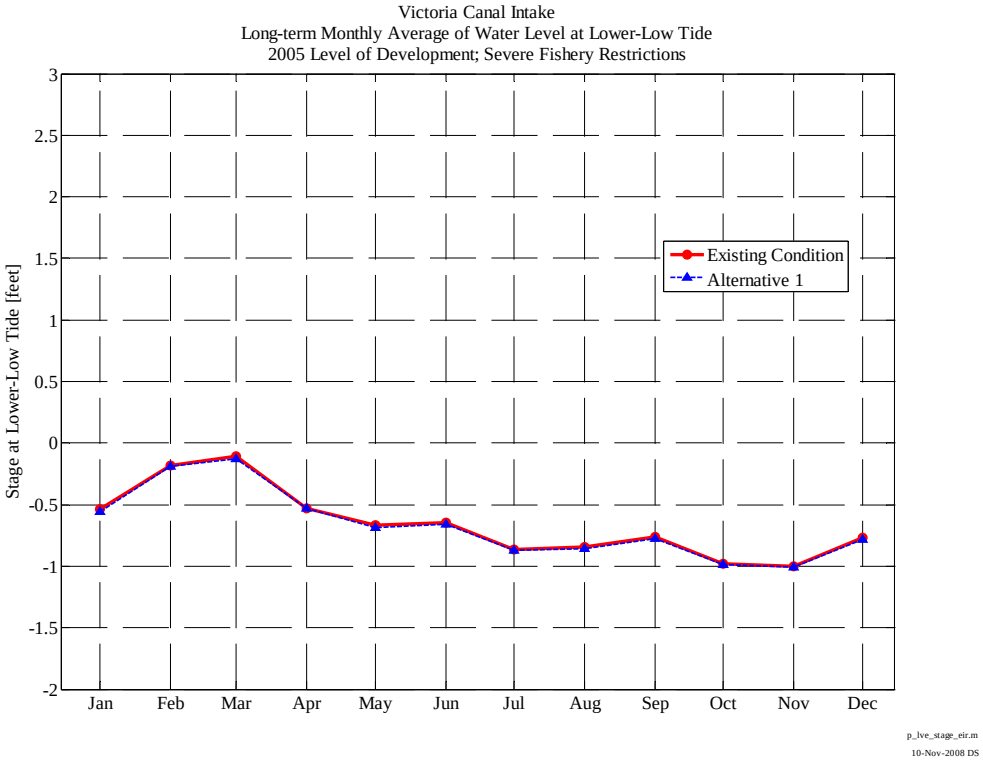

Old River Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

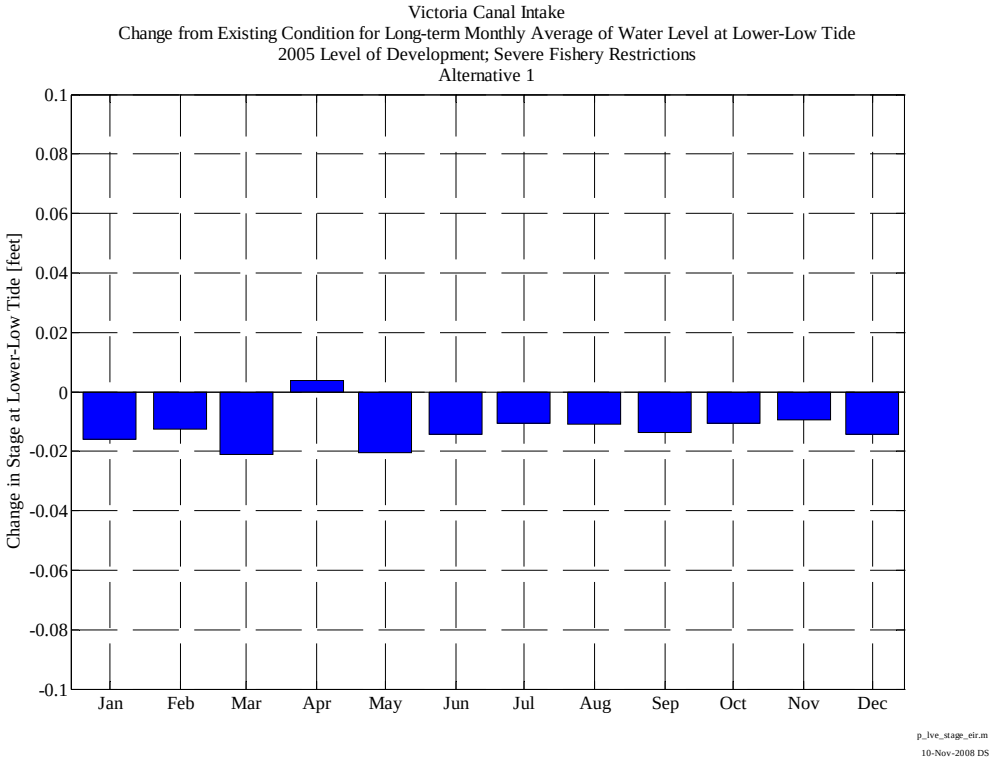
Victoria Canal Intake

Alternative 1

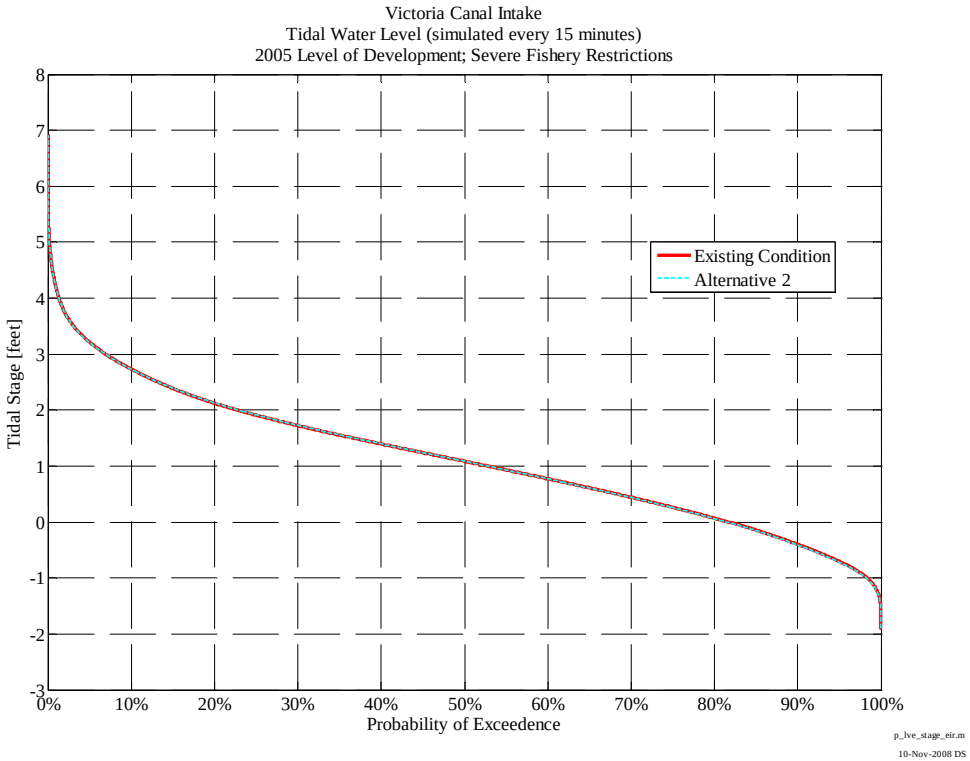


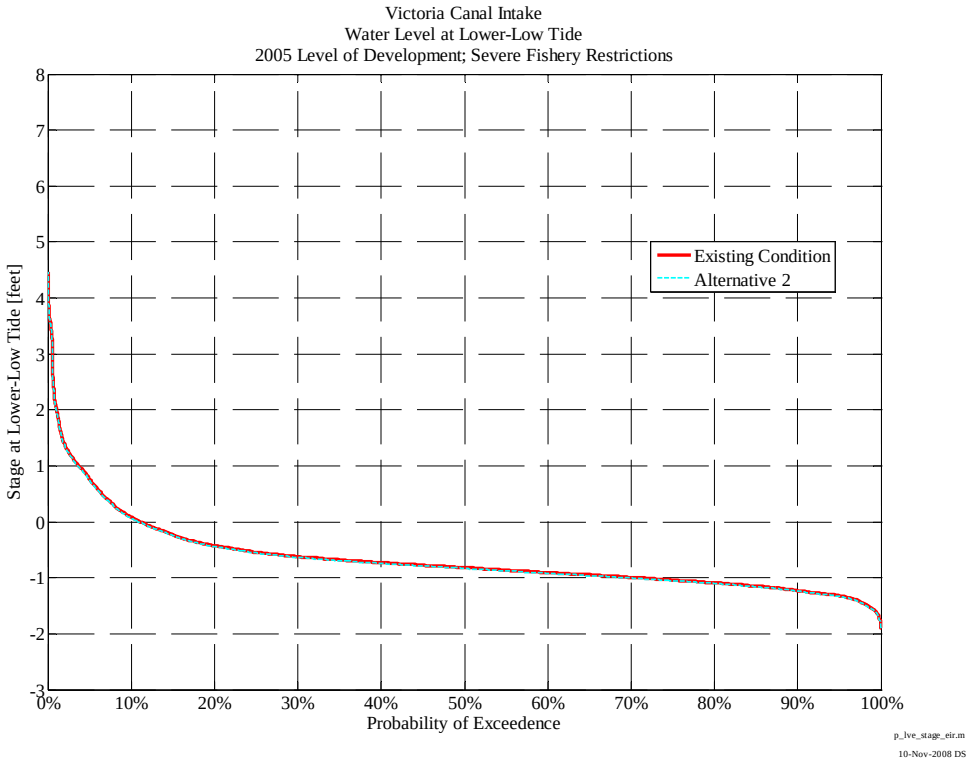


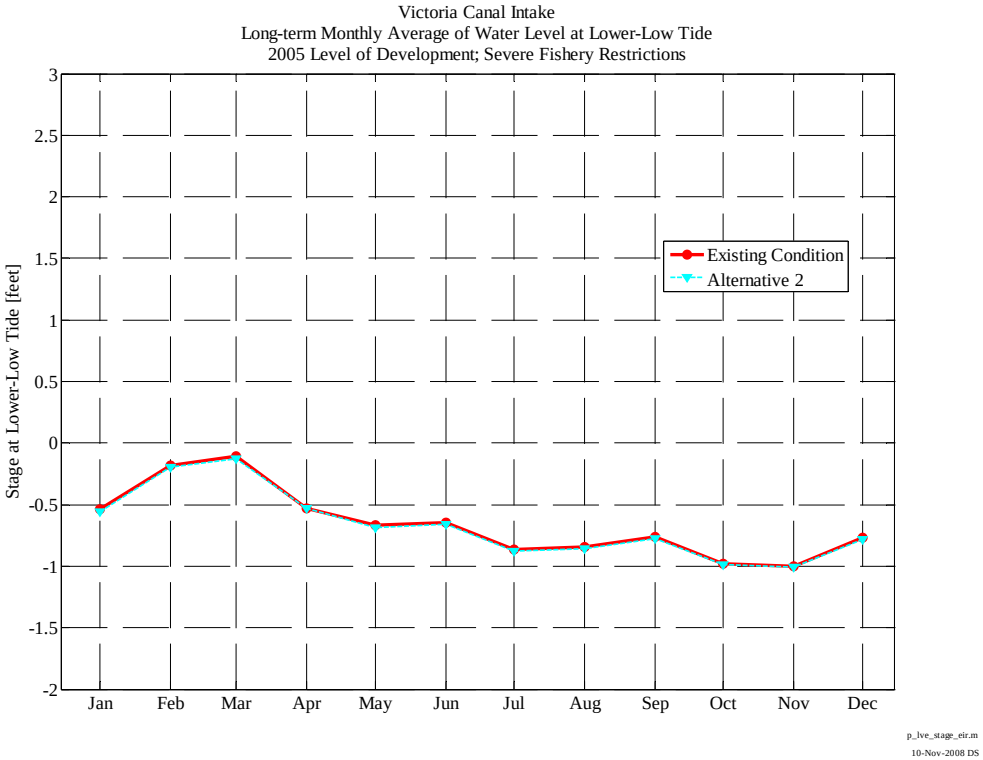

Victoria Canal Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_stage_eir.m
10-Nov-2008 DS

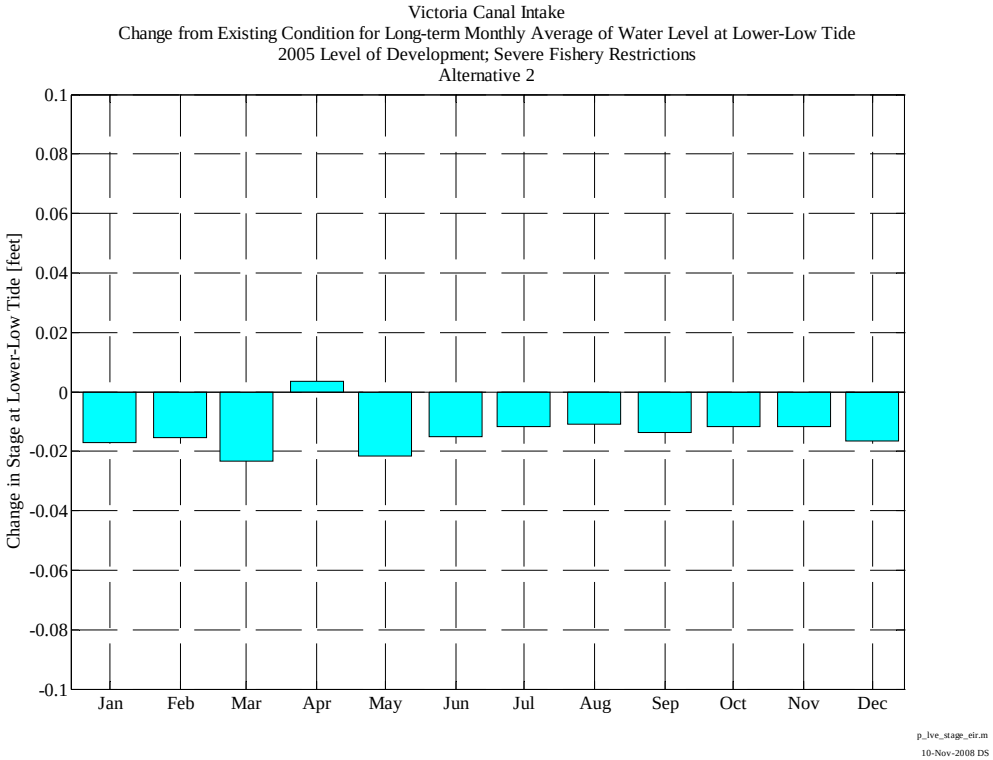

Victoria Canal Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 1
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 2

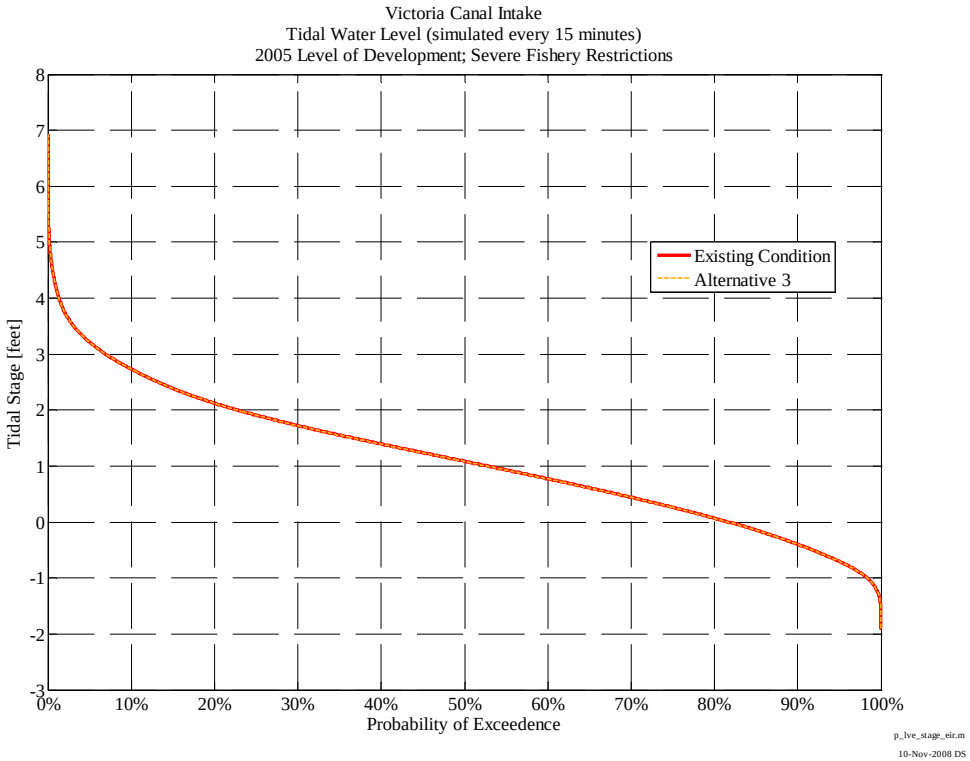


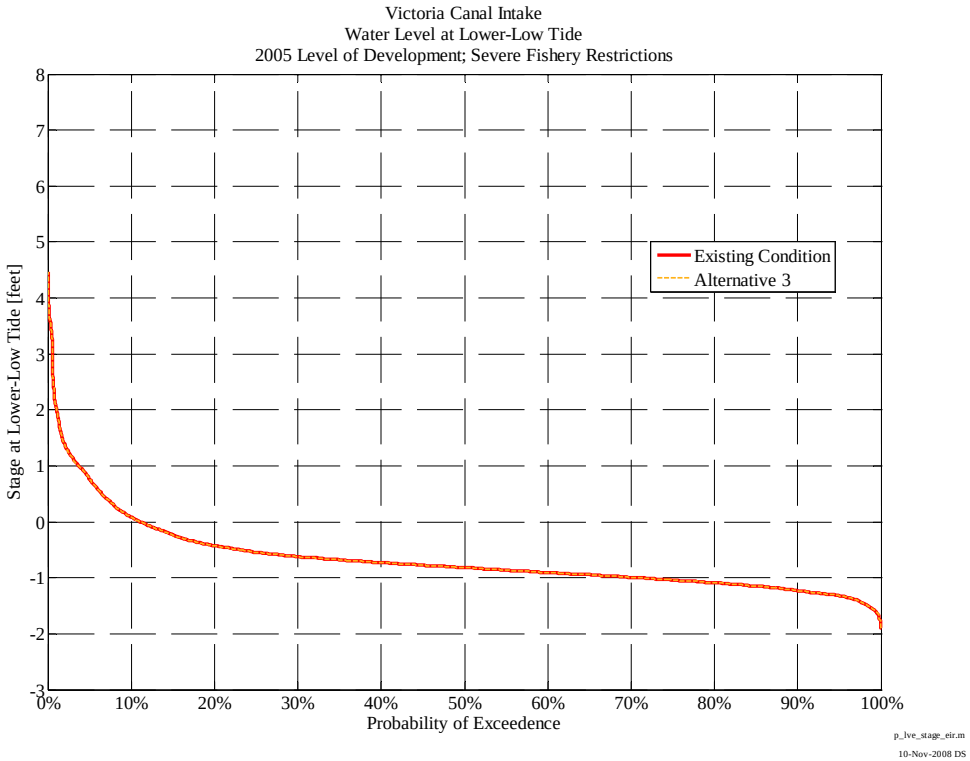


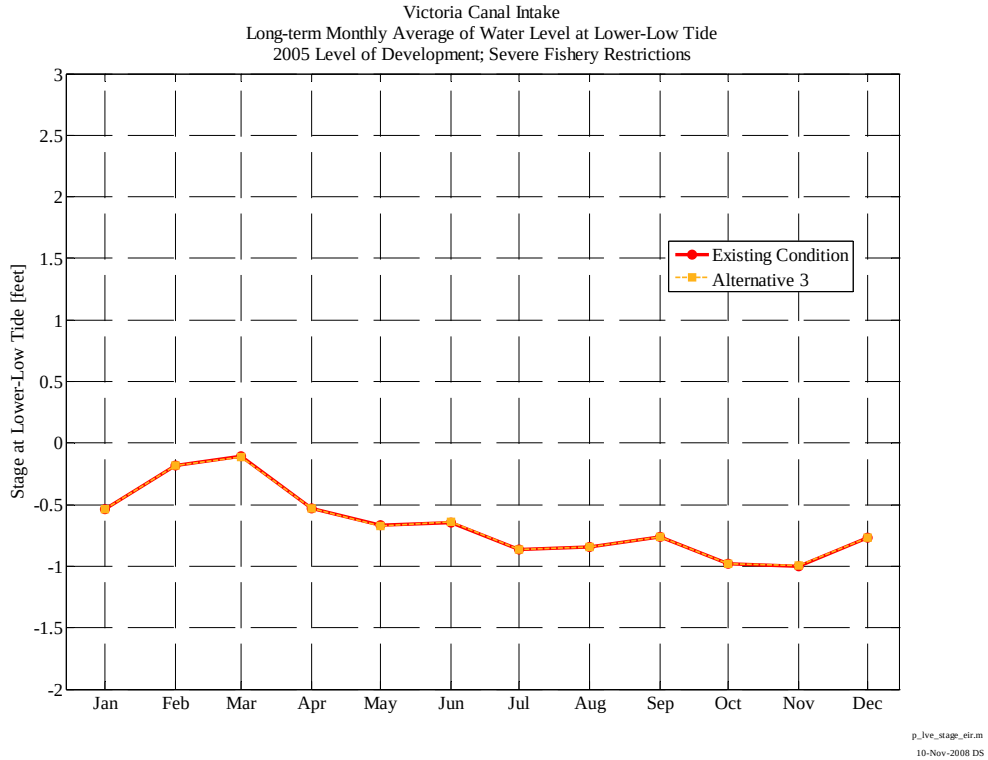

Victoria Canal Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_stage_eir.m
10-Nov-2008 DS

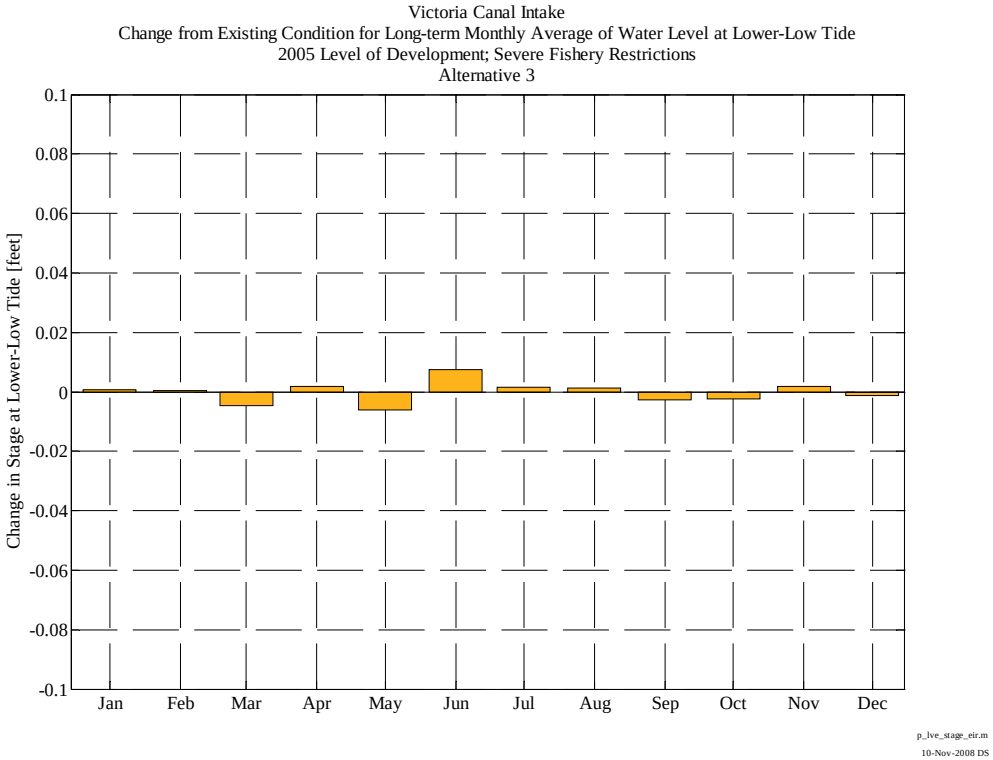

Victoria Canal Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 2
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 3

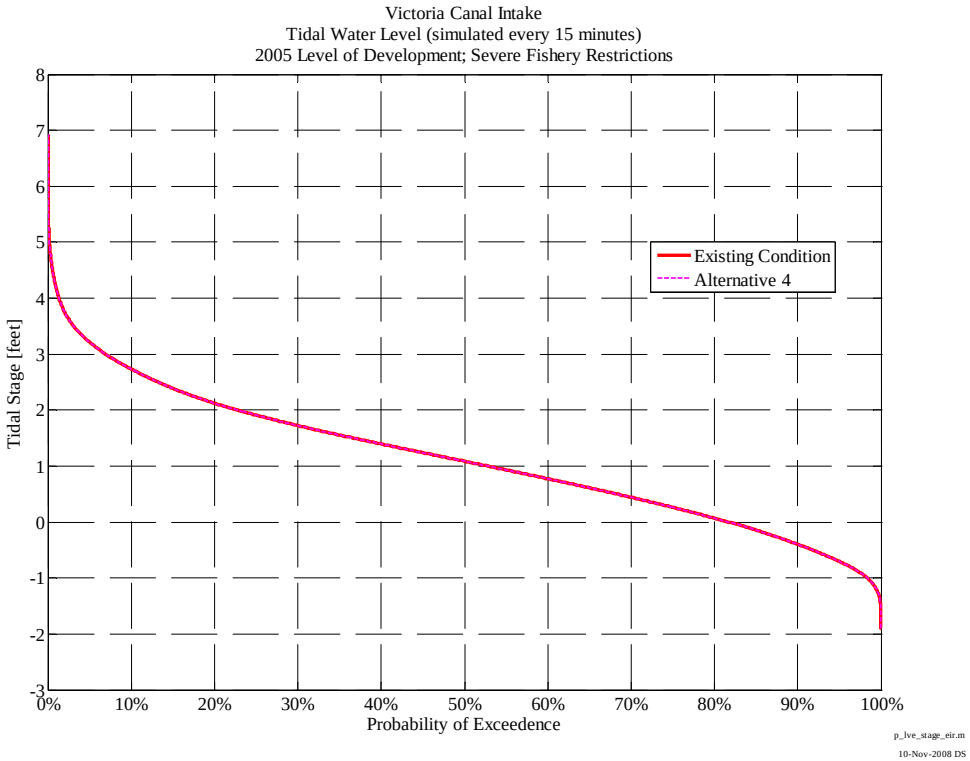


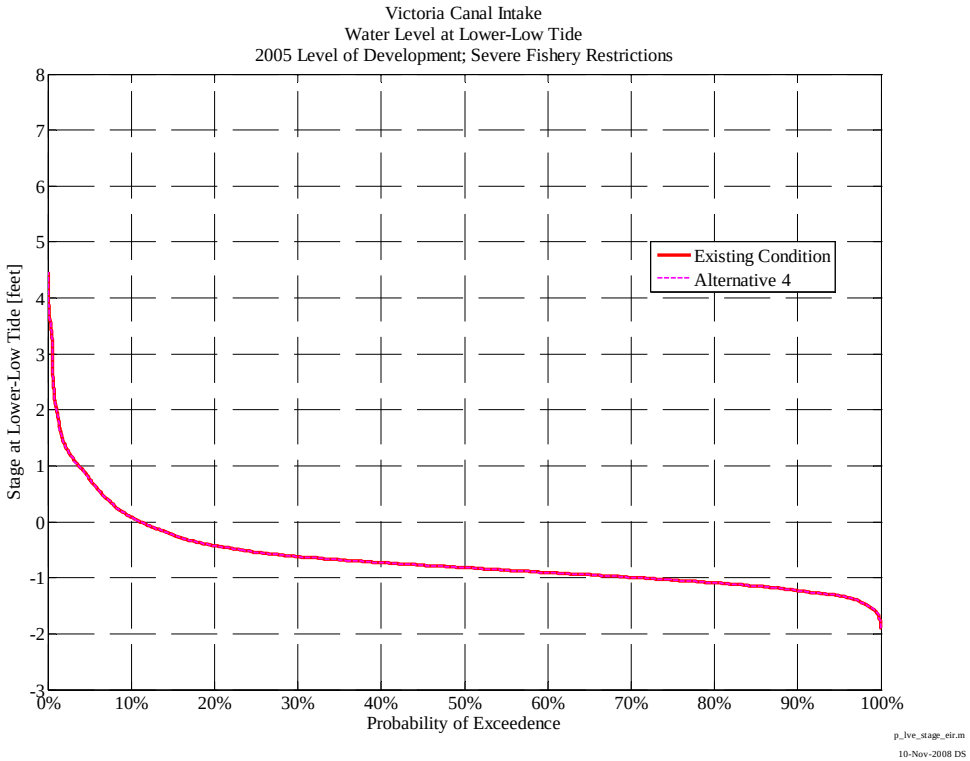


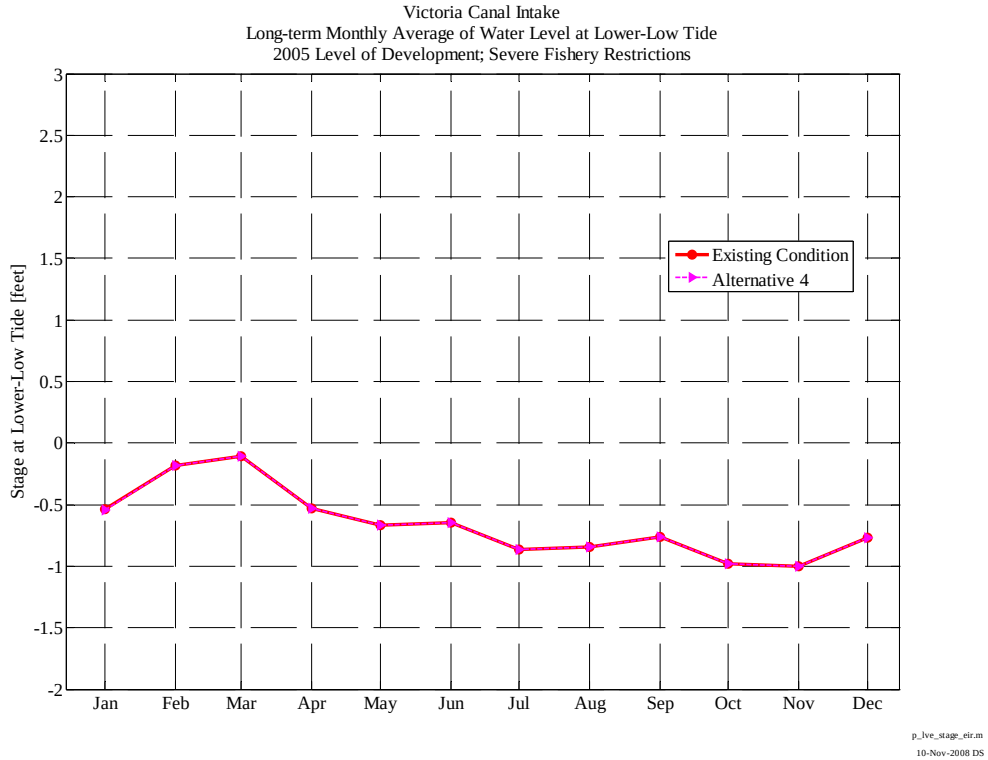

Victoria Canal Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_stage_eir.m
10-Nov-2008 DS

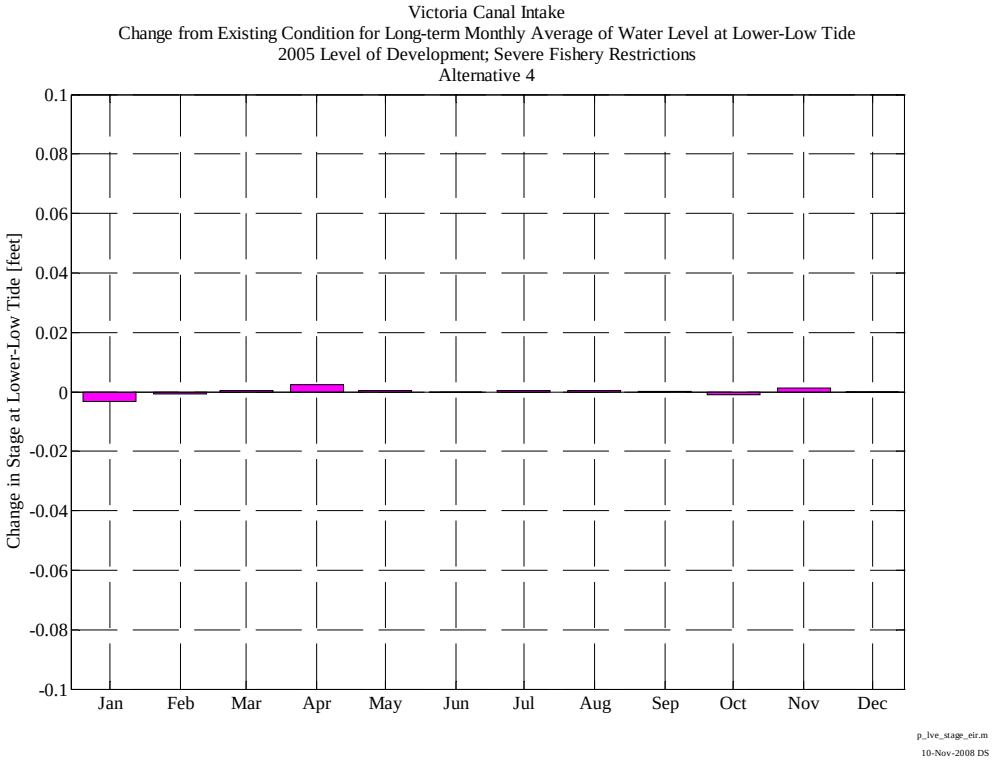

Victoria Canal Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 3
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

Alternative 4






Victoria Canal Intake
Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Stage at Lower-Low Tide [feet]
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_stage_eir.m
10-Nov-2008 DS


Victoria Canal Intake
Change from Existing Condition for Long-term Monthly Average of Water Level at Lower-Low Tide
2005 Level of Development; Severe Fishery Restrictions
Alternative 4
Change in Stage at Lower-Low Tide [feet]
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
-0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_stage_eir.m
10-Nov-2008 DS

2005 Level of Development; Moderate Fishery Restrictions

Water Quality

Chipps Island

Existing Condition

Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,049	6,147	8,076	8,970	6,363	3,004	4,605	8,600	11,809	11,940	12,547	14,195
1977	13,632	13,929	11,962	11,645	6,332	6,524	8,742	10,605	12,299	12,521	12,988	14,034
1978	14,830	14,191	9,952	486	212	207	247	604	1,897	4,609	8,524	9,888
1979	11,492	12,721	12,015	4,241	340	320	1,037	1,662	3,171	6,234	9,547	12,362
1980	13,076	10,231	5,866	296	214	221	622	1,429	2,359	4,572	8,324	11,287
1981	12,819	13,211	11,382	2,805	638	402	1,598	4,065	7,461	8,106	9,569	12,363
1982	13,715	2,549	186	202	194	205	192	216	686	3,471	7,679	3,007
1983	1,260	351	201	232	218	206	205	200	198	274	1,081	793
1984	1,884	266	193	206	235	237	967	2,376	4,771	5,748	8,577	11,741
1985	12,351	2,287	1,618	3,715	2,355	1,356	2,547	4,007	7,279	8,435	9,765	12,552
1986	13,062	12,976	9,635	3,421	209	207	421	1,420	3,085	5,249	8,623	10,253
1987	11,779	12,749	12,867	9,807	3,001	574	2,677	5,737	8,010	8,416	9,844	12,347
1988	13,854	13,694	11,558	2,650	2,597	5,201	5,952	7,583	8,622	10,466	12,407	13,833
1989	14,918	14,534	12,943	10,602	8,277	658	375	1,461	6,071	7,683	9,610	12,566
1990	13,652	13,567	12,045	6,424	4,354	5,036	5,581	8,157	11,091	12,523	12,698	13,638
1991	14,977	14,666	14,658	13,769	5,967	838	2,432	7,209	10,950	12,443	12,639	13,878
Avg	11,397	9,879	8,447	4,967	2,594	1,575	2,388	4,083	6,235	7,668	9,651	11,171
W/AN/BN	9,903	7,612	5,435	1,298	232	229	527	1,130	2,310	4,308	7,479	8,476
D/C	12,559	11,643	10,790	7,821	4,432	2,621	3,834	6,381	9,288	10,281	11,341	13,267

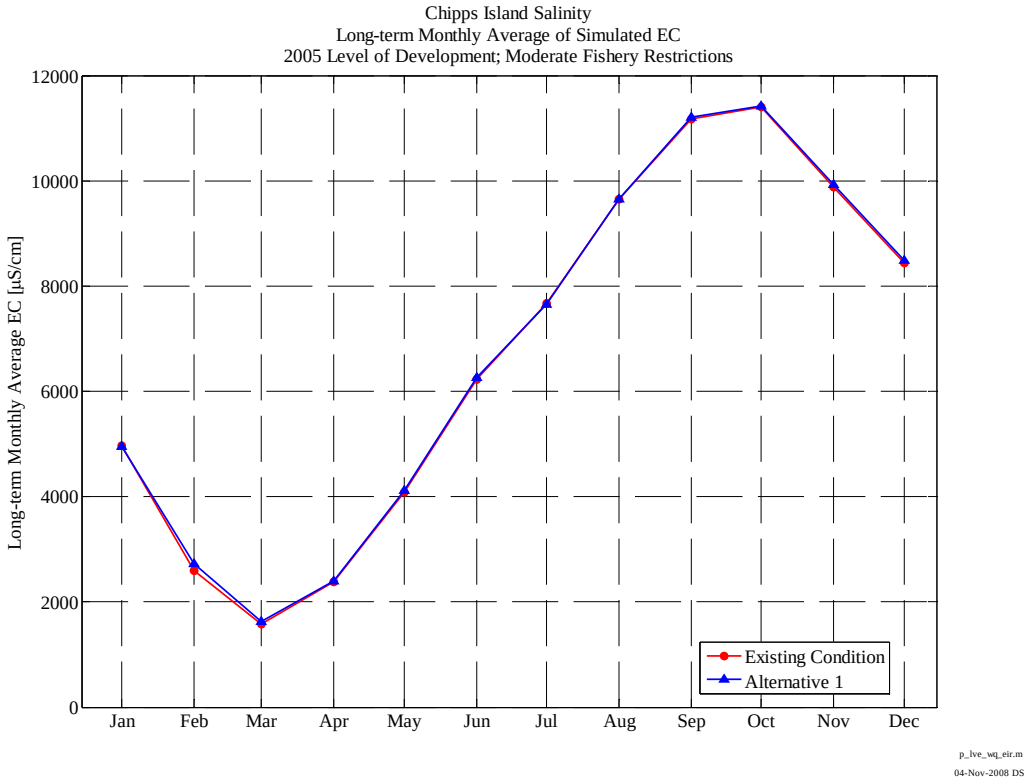
Alternative 1

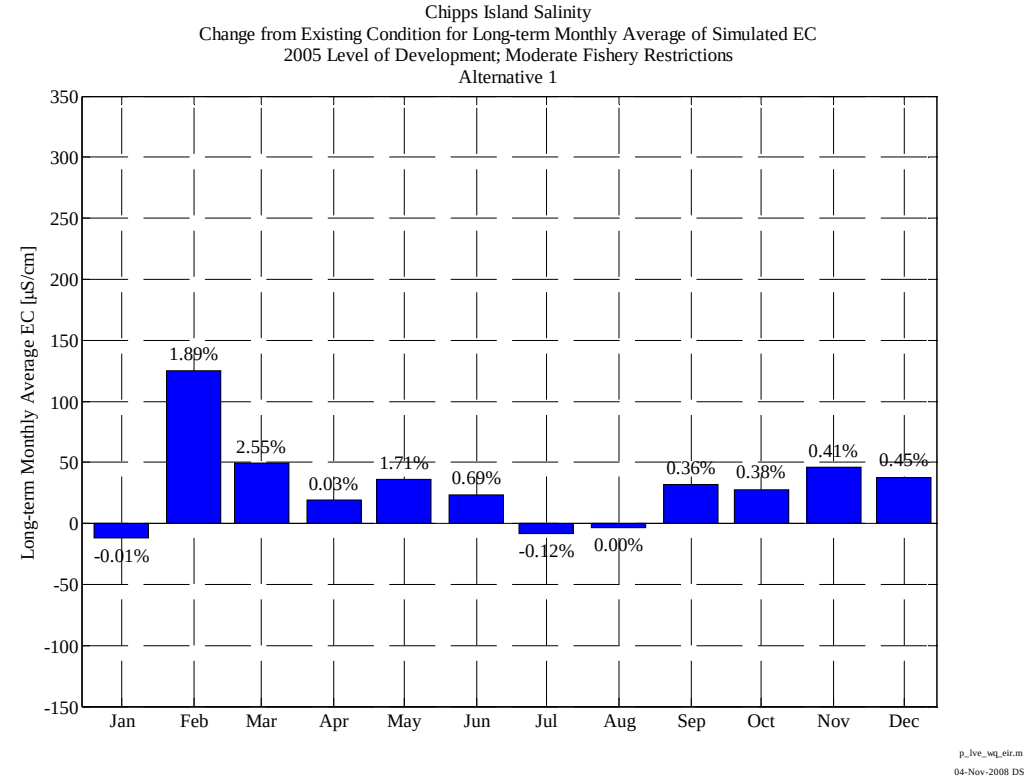
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

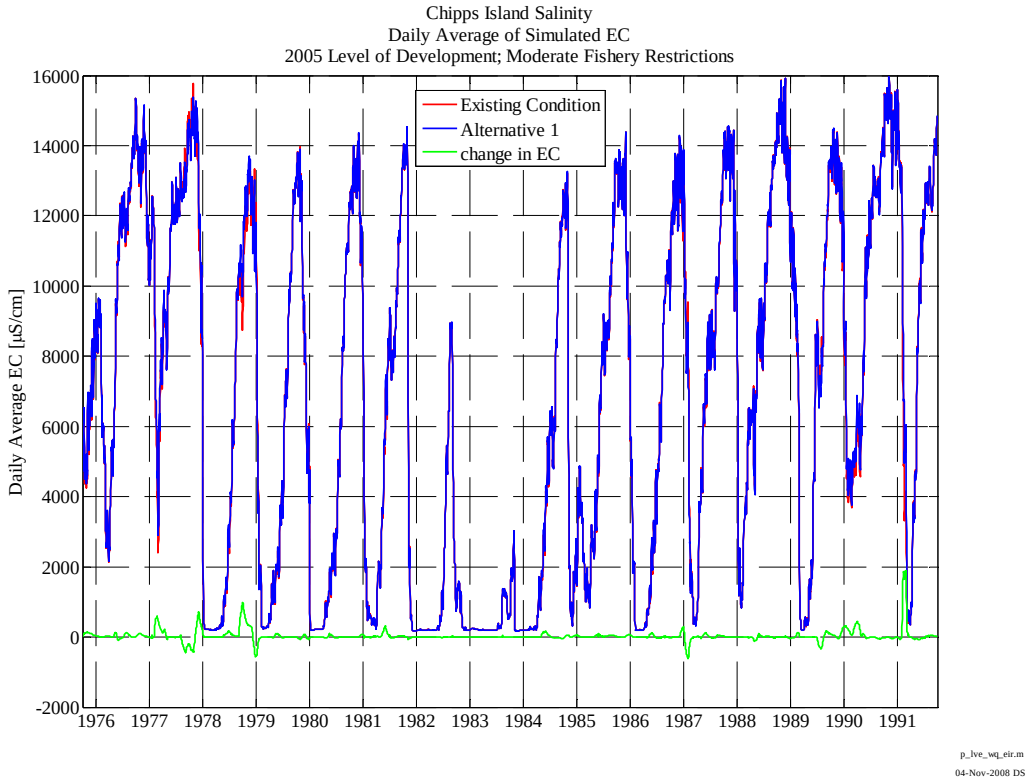
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,145	6,263	8,139	8,990	6,374	3,019	4,612	8,640	11,752	12,010	12,606	14,201
1977	13,699	13,990	11,977	11,627	6,779	6,778	8,852	10,597	12,295	12,520	12,783	13,746
1978	14,476	14,427	10,356	497	212	207	247	627	2,014	4,702	8,550	10,488
1979	12,092	13,046	11,751	4,044	345	324	1,032	1,734	3,190	6,221	9,541	12,366
1980	13,039	10,269	5,839	293	214	220	607	1,485	2,367	4,557	8,324	11,286
1981	12,819	13,214	11,433	2,825	628	412	1,609	4,223	7,587	8,089	9,575	12,397
1982	13,720	2,516	186	202	194	205	192	217	680	3,463	7,687	3,012
1983	1,269	352	201	232	218	206	205	200	198	274	1,084	794
1984	1,884	266	193	206	235	237	966	2,488	4,859	5,742	8,557	11,706
1985	12,371	2,307	1,647	3,738	2,357	1,355	2,547	4,058	7,315	8,455	9,813	12,588
1986	13,066	12,980	9,684	3,448	209	207	414	1,487	3,110	5,221	8,629	10,248
1987	11,766	12,745	13,041	9,506	2,806	563	2,684	5,791	8,064	8,395	9,865	12,385
1988	13,863	13,697	11,557	2,655	2,603	5,192	5,909	7,555	8,665	10,485	12,420	13,822
1989	14,911	14,542	12,923	10,573	8,366	664	375	1,458	6,069	7,441	9,581	12,697
1990	13,714	13,547	12,201	6,703	4,465	5,320	5,847	8,201	11,064	12,526	12,668	13,603
1991	14,965	14,639	14,637	13,736	7,508	1,079	2,404	7,150	10,904	12,456	12,679	13,900
Avg	11,425	9,925	8,485	4,955	2,720	1,624	2,406	4,119	6,258	7,660	9,648	11,203
W/AN/BN	9,935	7,694	5,458	1,275	232	229	523	1,177	2,346	4,312	7,482	8,557
D/C	12,584	11,660	10,839	7,817	4,654	2,709	3,871	6,408	9,302	10,264	11,332	13,260

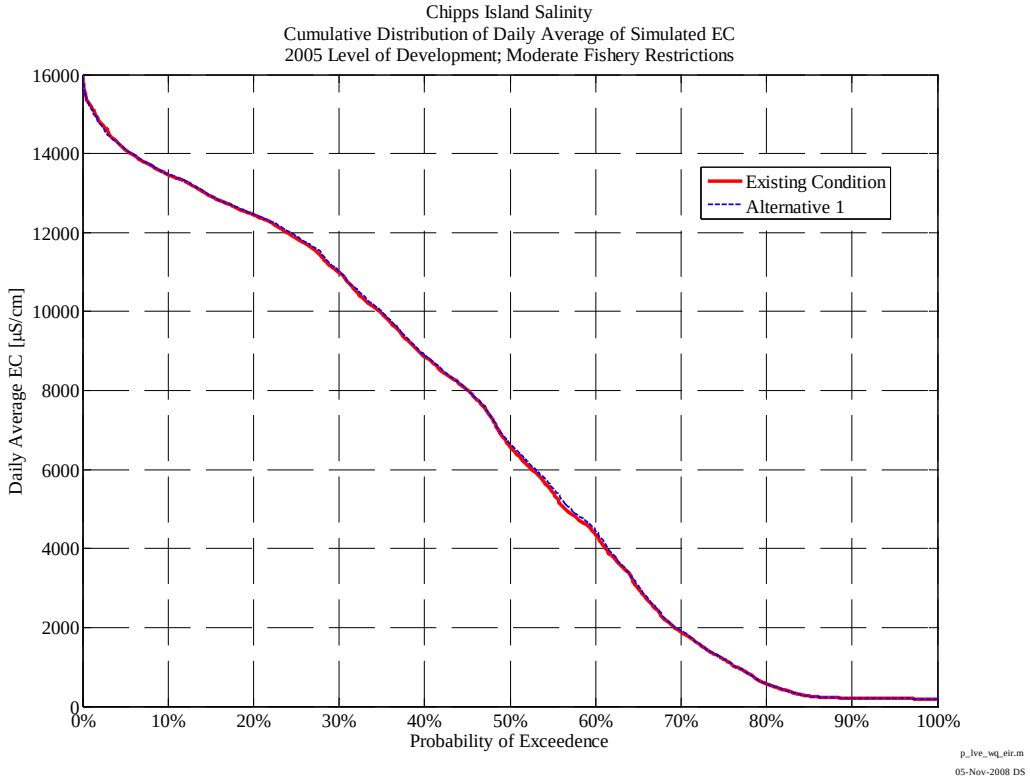
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1.9%	1.9%	0.8%	0.2%	0.2%	0.5%	0.2%	0.5%	-0.5%	0.6%	0.5%	0.0%
1977	0.5%	0.4%	0.1%	-0.1%	7.1%	3.9%	1.3%	-0.1%	0.0%	0.0%	-1.6%	-2.0%
1978	-2.4%	1.7%	4.1%	2.3%	0.0%	-0.1%	-0.1%	3.8%	6.2%	2.0%	0.3%	6.1%
1979	5.2%	2.6%	-2.2%	-4.6%	1.2%	1.2%	-0.5%	4.3%	0.6%	-0.2%	-0.1%	0.0%
1980	-0.3%	0.4%	-0.5%	-1.0%	-0.1%	-0.1%	-2.4%	3.9%	0.3%	-0.3%	0.0%	0.0%
1981	0.0%	0.0%	0.4%	0.7%	-1.5%	2.5%	0.7%	3.9%	1.7%	-0.2%	0.1%	0.3%
1982	0.0%	-1.3%	-0.1%	0.2%	0.0%	0.0%	0.0%	0.4%	-0.8%	-0.2%	0.1%	0.2%
1983	0.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.2%	-0.2%	0.0%	-0.1%	0.3%	0.1%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.2%	4.7%	1.9%	-0.1%	-0.2%	-0.3%
1985	0.2%	0.8%	1.8%	0.6%	0.1%	-0.1%	0.0%	1.3%	0.5%	0.2%	0.5%	0.3%
1986	0.0%	0.0%	0.5%	0.8%	0.0%	-0.2%	-1.8%	4.7%	0.8%	-0.5%	0.1%	0.0%
1987	-0.1%	0.0%	1.4%	-3.1%	-6.5%	-1.9%	0.3%	0.9%	0.7%	-0.3%	0.2%	0.3%
1988	0.1%	0.0%	0.0%	0.2%	0.2%	-0.2%	-0.7%	-0.4%	0.5%	0.2%	0.1%	-0.1%
1989	0.0%	0.1%	-0.2%	-0.3%	1.1%	0.9%	0.0%	-0.2%	0.0%	-3.2%	-0.3%	1.0%
1990	0.5%	-0.1%	1.3%	4.3%	2.5%	5.6%	4.8%	0.5%	-0.2%	0.0%	-0.2%	-0.3%
1991	-0.1%	-0.2%	-0.1%	-0.2%	25.8%	28.8%	-1.1%	-0.8%	-0.4%	0.1%	0.3%	0.2%
Avg	0.4%	0.4%	0.5%	0.0%	1.9%	2.5%	0.0%	1.7%	0.7%	-0.1%	0.0%	0.4%
W/AN/BN	0.5%	0.5%	0.3%	-0.3%	0.2%	0.1%	-0.7%	3.1%	1.3%	0.1%	0.1%	0.9%
D/C	0.3%	0.3%	0.6%	0.3%	3.2%	4.4%	0.6%	0.6%	0.2%	-0.3%	-0.1%	0.0%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.01%
1.89%
2.55%
0.03%
1.71%
0.69%
-0.12%
0.00%
0.36%
0.38%
0.41%
0.45%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

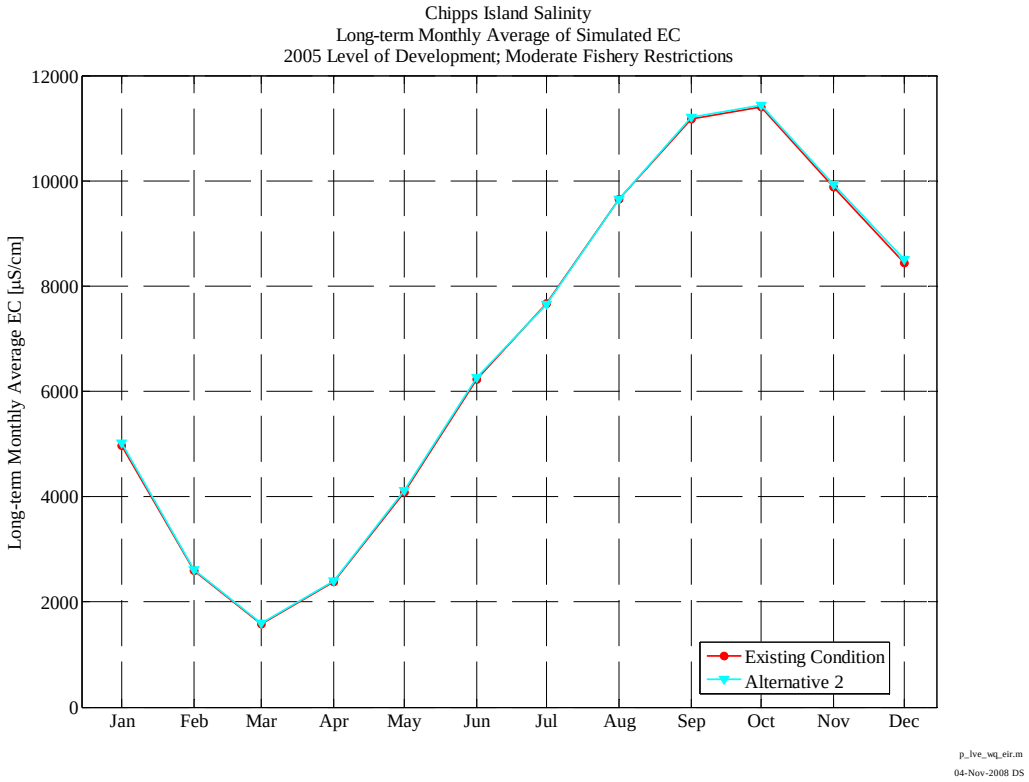
Alternative 2

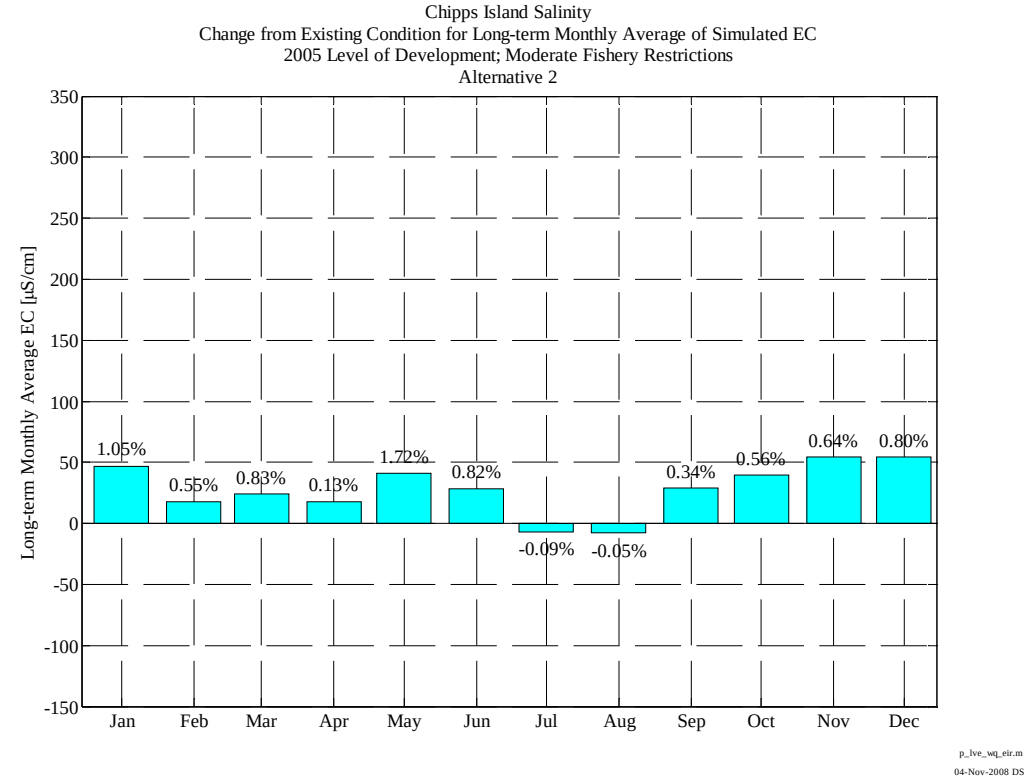
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

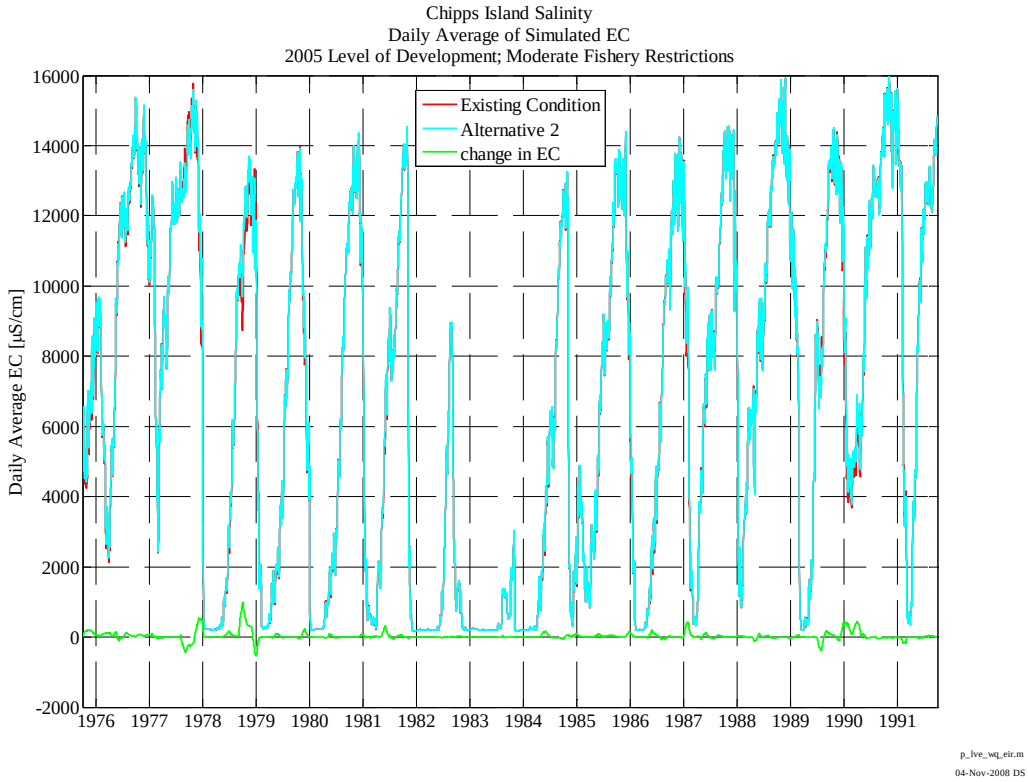
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,177	6,341	8,192	9,008	6,432	3,116	4,674	8,659	11,759	12,013	12,621	14,215
1977	13,685	13,975	12,027	11,687	6,332	6,499	8,736	10,612	12,298	12,526	12,778	13,722
1978	14,617	14,411	10,452	515	212	207	247	615	2,002	4,699	8,551	10,480
1979	12,084	13,044	11,779	4,086	347	325	1,034	1,735	3,190	6,221	9,541	12,366
1980	13,046	10,357	5,947	296	214	220	607	1,485	2,367	4,557	8,324	11,286
1981	12,819	13,214	11,433	2,825	628	416	1,613	4,223	7,586	8,083	9,575	12,401
1982	13,721	2,533	186	202	194	205	192	217	680	3,463	7,687	3,012
1983	1,285	355	201	232	218	206	205	200	198	274	1,084	794
1984	1,884	266	193	206	236	237	965	2,488	4,859	5,742	8,557	11,708
1985	12,371	2,317	1,679	3,765	2,361	1,355	2,547	4,059	7,315	8,454	9,813	12,588
1986	13,066	12,979	9,741	3,489	209	206	414	1,506	3,193	5,266	8,575	10,252
1987	11,785	12,748	12,856	10,083	3,144	576	2,674	5,783	8,058	8,380	9,862	12,373
1988	13,860	13,698	11,561	2,681	2,615	5,195	5,909	7,558	8,651	10,491	12,412	13,809
1989	14,910	14,542	12,934	10,588	8,311	662	376	1,457	6,069	7,422	9,569	12,696
1990	13,716	13,515	12,205	6,806	4,522	5,334	5,850	8,203	11,059	12,525	12,671	13,607
1991	14,960	14,644	14,648	13,754	5,818	824	2,435	7,194	10,929	12,466	12,674	13,892
Avg	11,437	9,934	8,502	5,014	2,612	1,599	2,405	4,125	6,263	7,661	9,643	11,200
W/AN/BN	9,957	7,706	5,500	1,289	233	230	523	1,178	2,356	4,318	7,474	8,557
D/C	12,587	11,666	10,837	7,911	4,463	2,664	3,868	6,416	9,303	10,262	11,331	13,256

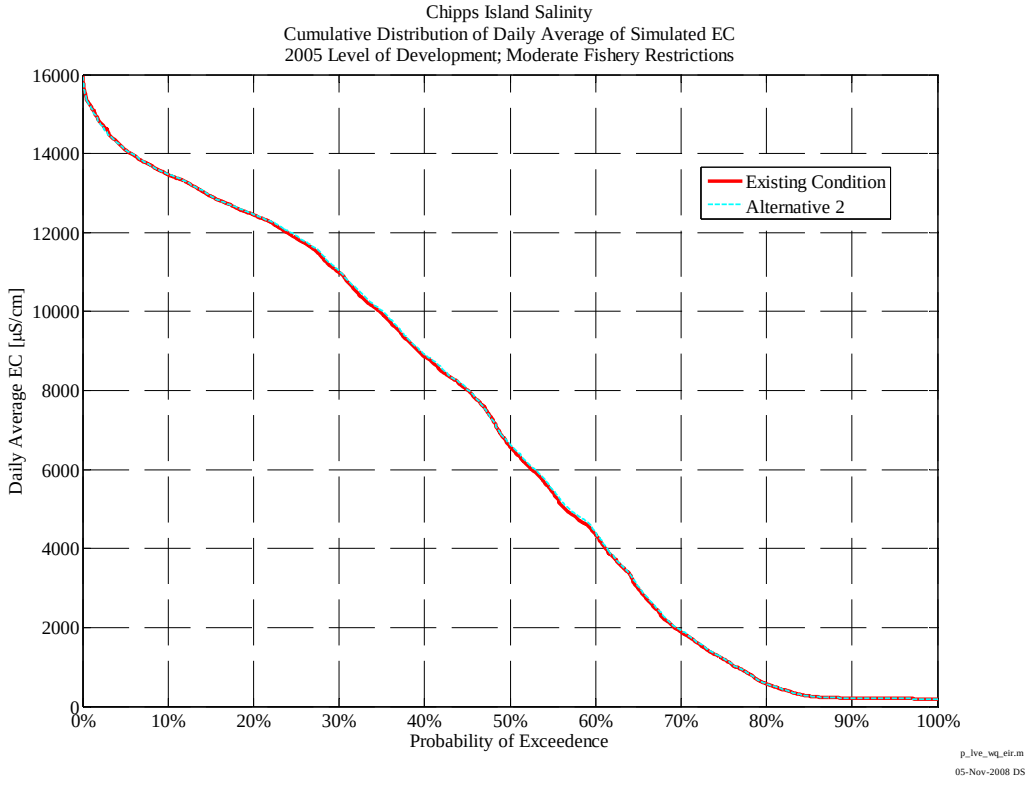
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2.5%	3.2%	1.4%	0.4%	1.1%	3.7%	1.5%	0.7%	-0.4%	0.6%	0.6%	0.1%
1977	0.4%	0.3%	0.5%	0.4%	0.0%	-0.4%	-0.1%	0.1%	0.0%	0.0%	-1.6%	-2.2%
1978	-1.4%	1.6%	5.0%	6.0%	-0.1%	-0.1%	-0.1%	1.8%	5.5%	2.0%	0.3%	6.0%
1979	5.2%	2.5%	-2.0%	-3.7%	1.8%	1.6%	-0.3%	4.3%	0.6%	-0.2%	-0.1%	0.0%
1980	-0.2%	1.2%	1.4%	0.0%	-0.2%	-0.1%	-2.4%	3.9%	0.3%	-0.3%	0.0%	0.0%
1981	0.0%	0.0%	0.4%	0.7%	-1.5%	3.5%	1.0%	3.9%	1.7%	-0.3%	0.1%	0.3%
1982	0.0%	-0.7%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.4%	-0.8%	-0.2%	0.1%	0.2%
1983	2.0%	1.3%	0.0%	-0.1%	0.0%	0.0%	0.2%	-0.2%	0.0%	-0.1%	0.3%	0.1%
1984	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	-0.2%	4.7%	1.9%	-0.1%	-0.2%	-0.3%
1985	0.2%	1.3%	3.7%	1.3%	0.3%	-0.1%	0.0%	1.3%	0.5%	0.2%	0.5%	0.3%
1986	0.0%	0.0%	1.1%	2.0%	0.1%	-0.2%	-1.8%	6.1%	3.5%	0.3%	-0.6%	0.0%
1987	0.1%	0.0%	-0.1%	2.8%	4.8%	0.5%	-0.1%	0.8%	0.6%	-0.4%	0.2%	0.2%
1988	0.0%	0.0%	0.0%	1.1%	0.7%	-0.1%	-0.7%	-0.3%	0.3%	0.2%	0.0%	-0.2%
1989	-0.1%	0.1%	-0.1%	-0.1%	0.4%	0.6%	0.2%	-0.3%	0.0%	-3.4%	-0.4%	1.0%
1990	0.5%	-0.4%	1.3%	5.9%	3.9%	5.9%	4.8%	0.6%	-0.3%	0.0%	-0.2%	-0.2%
1991	-0.1%	-0.1%	-0.1%	-0.1%	-2.5%	-1.7%	0.2%	-0.2%	-0.2%	0.2%	0.3%	0.1%
Avg	0.6%	0.6%	0.8%	1.1%	0.5%	0.8%	0.1%	1.7%	0.8%	-0.1%	0.0%	0.3%
W/AN/BN	0.8%	0.8%	0.8%	0.6%	0.2%	0.2%	-0.7%	3.0%	1.6%	0.2%	0.0%	0.9%
D/C	0.4%	0.5%	0.8%	1.4%	0.8%	1.3%	0.8%	0.7%	0.2%	-0.3%	-0.1%	-0.1%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.05%
0.55%
0.83%
0.13%
1.72%
0.82%
-0.09%
-0.05%
0.34%
0.56%
0.64%
0.80%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

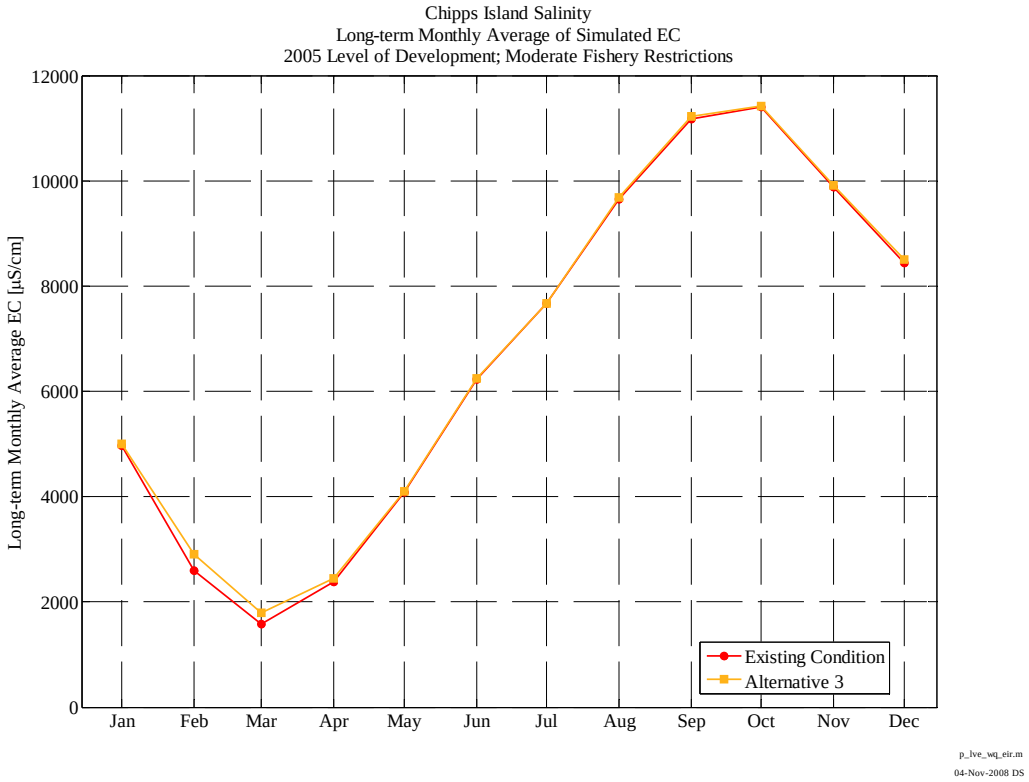
Alternative 3

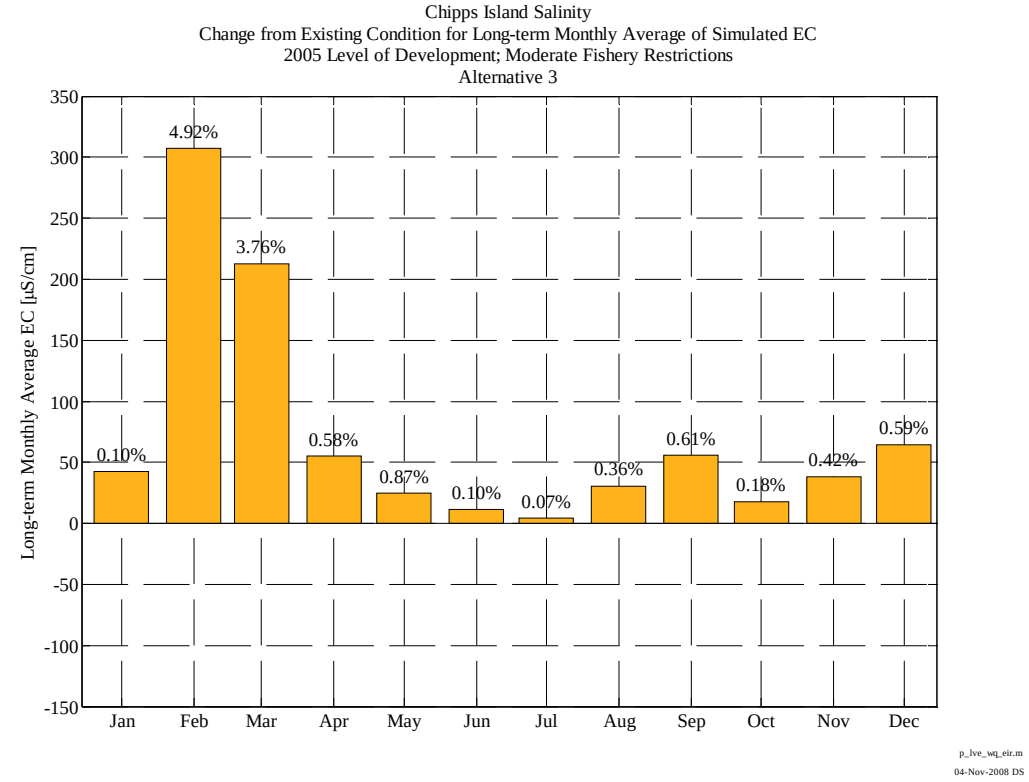
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

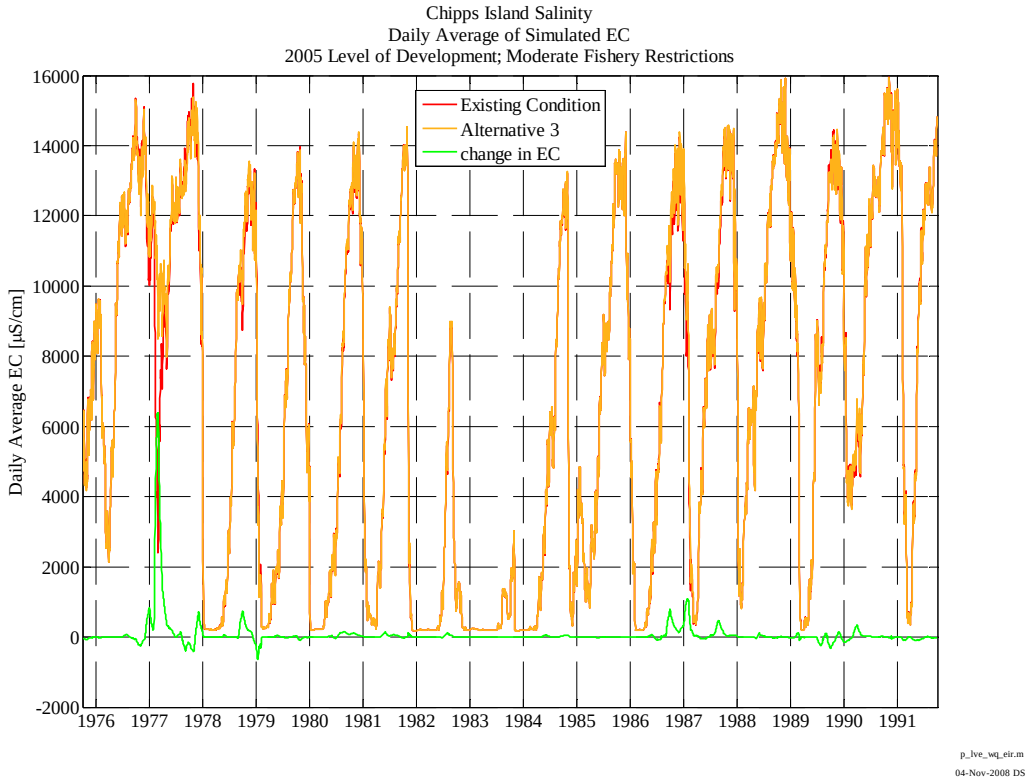
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,002	6,111	8,068	8,960	6,353	3,001	4,603	8,604	11,815	11,988	12,566	14,146
1977	13,448	13,796	12,467	12,049	10,921	9,710	9,498	10,873	12,374	12,572	12,873	13,793
1978	14,508	14,409	10,315	493	212	207	245	626	1,908	4,605	8,516	10,338
1979	11,915	12,899	11,922	3,826	322	324	1,043	1,691	3,185	6,221	9,542	12,378
1980	13,024	10,195	5,857	295	214	221	622	1,451	2,345	4,631	8,464	11,391
1981	12,917	13,293	11,416	2,811	638	402	1,598	4,138	7,527	8,159	9,621	12,362
1982	13,705	2,609	186	202	194	205	192	216	679	3,525	7,750	3,019
1983	1,260	351	202	233	218	206	205	200	198	274	1,083	794
1984	1,885	266	193	206	235	241	966	2,406	4,804	5,750	8,577	11,761
1985	12,395	2,302	1,620	3,715	2,355	1,356	2,548	3,994	7,275	8,431	9,768	12,554
1986	13,064	12,978	9,631	3,418	209	207	427	1,462	3,075	5,180	8,645	10,736
1987	12,247	12,943	13,107	10,652	3,429	632	2,679	5,688	7,998	8,465	10,166	12,612
1988	13,914	13,738	11,606	2,647	2,589	5,195	5,950	7,601	8,675	10,469	12,408	13,810
1989	14,922	14,538	12,935	10,580	8,354	635	371	1,463	6,073	7,517	9,597	12,427
1990	13,448	13,620	12,019	6,288	4,297	5,235	5,749	8,191	11,122	12,533	12,705	13,653
1991	14,978	14,635	14,648	13,774	5,889	821	2,381	7,123	10,890	12,437	12,634	13,860
Avg	11,415	9,918	8,512	5,009	2,902	1,787	2,442	4,108	6,246	7,672	9,682	11,227
W/AN/BN	9,909	7,672	5,472	1,239	229	230	528	1,150	2,314	4,312	7,511	8,631
D/C	12,586	11,664	10,876	7,942	4,980	2,999	3,931	6,408	9,305	10,286	11,371	13,246

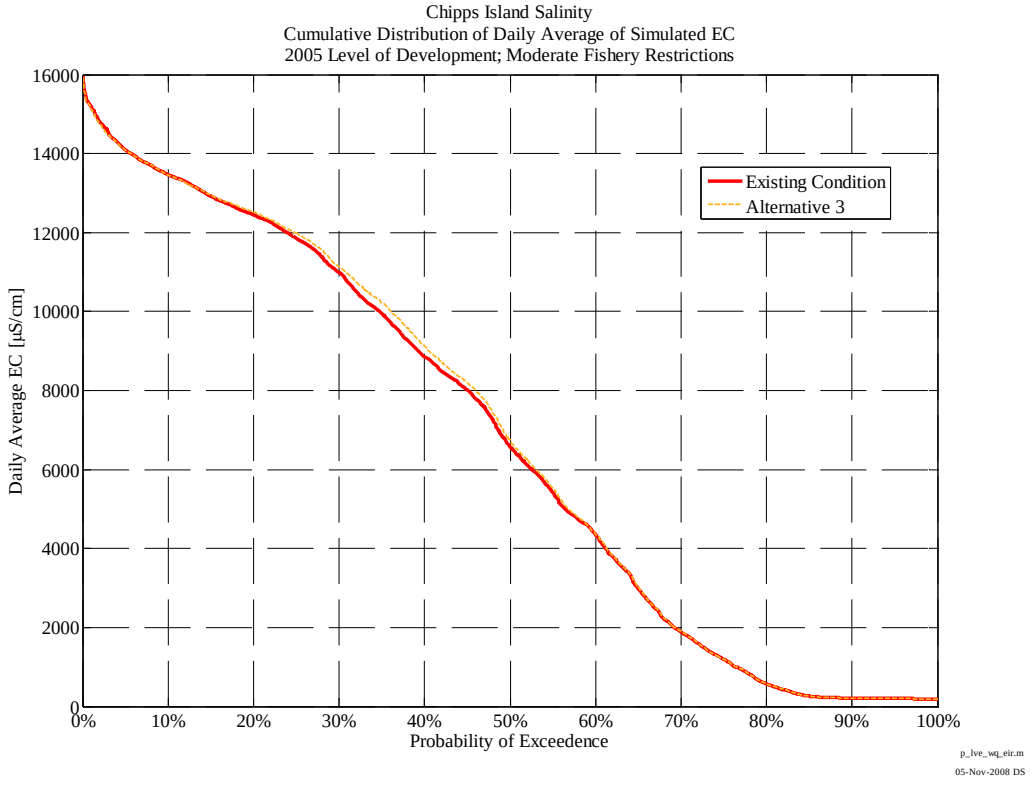
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.9%	-0.6%	-0.1%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.4%	0.2%	-0.3%
1977	-1.3%	-0.9%	4.2%	3.5%	72.5%	48.8%	8.7%	2.5%	0.6%	0.4%	-0.9%	-1.7%
1978	-2.2%	1.5%	3.7%	1.5%	-0.1%	-0.1%	-1.1%	3.6%	0.6%	-0.1%	-0.1%	4.6%
1979	3.7%	1.4%	-0.8%	-9.8%	-5.6%	1.3%	0.6%	1.7%	0.4%	-0.2%	-0.1%	0.1%
1980	-0.4%	-0.3%	-0.2%	-0.1%	0.0%	0.0%	0.0%	1.5%	-0.6%	1.3%	1.7%	0.9%
1981	0.8%	0.6%	0.3%	0.2%	0.0%	0.0%	0.0%	1.8%	0.9%	0.6%	0.5%	0.0%
1982	-0.1%	2.3%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	-1.0%	1.6%	0.9%	0.4%
1983	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
1984	0.1%	0.0%	0.0%	0.0%	-0.1%	2.0%	-0.1%	1.3%	0.7%	0.0%	0.0%	0.2%
1985	0.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.1%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.2%	1.3%	3.0%	-0.3%	-1.3%	0.3%	4.7%
1987	4.0%	1.5%	1.9%	8.6%	14.3%	10.1%	0.1%	-0.9%	-0.1%	0.6%	3.3%	2.1%
1988	0.4%	0.3%	0.4%	-0.1%	-0.3%	-0.1%	0.0%	0.2%	0.6%	0.0%	0.0%	-0.2%
1989	0.0%	0.0%	-0.1%	-0.2%	0.9%	-3.5%	-1.1%	0.2%	0.0%	-2.2%	-0.1%	-1.1%
1990	-1.5%	0.4%	-0.2%	-2.1%	-1.3%	4.0%	3.0%	0.4%	0.3%	0.1%	0.1%	0.1%
1991	0.0%	-0.2%	-0.1%	0.0%	-1.3%	-2.0%	-2.1%	-1.2%	-0.6%	-0.1%	0.0%	-0.1%
Avg	0.2%	0.4%	0.6%	0.1%	4.9%	3.8%	0.6%	0.9%	0.1%	0.1%	0.4%	0.6%
W/AN/BN	0.2%	0.7%	0.4%	-1.2%	-0.8%	0.4%	0.1%	1.6%	0.0%	0.2%	0.4%	1.6%
D/C	0.2%	0.2%	0.7%	1.1%	9.4%	6.4%	1.0%	0.3%	0.2%	0.0%	0.3%	-0.1%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.10%
4.92%
3.76%
0.58%
0.87%
0.10%
0.07%
0.36%
0.61%
0.18%
0.42%
0.59%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

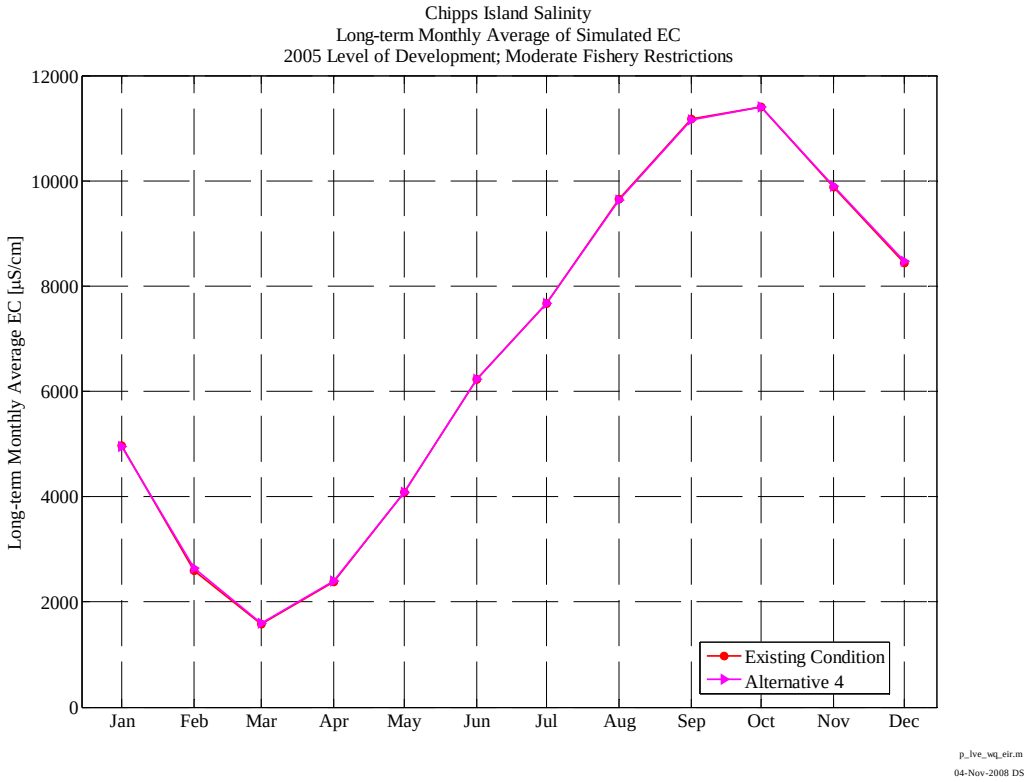
Alternative 4

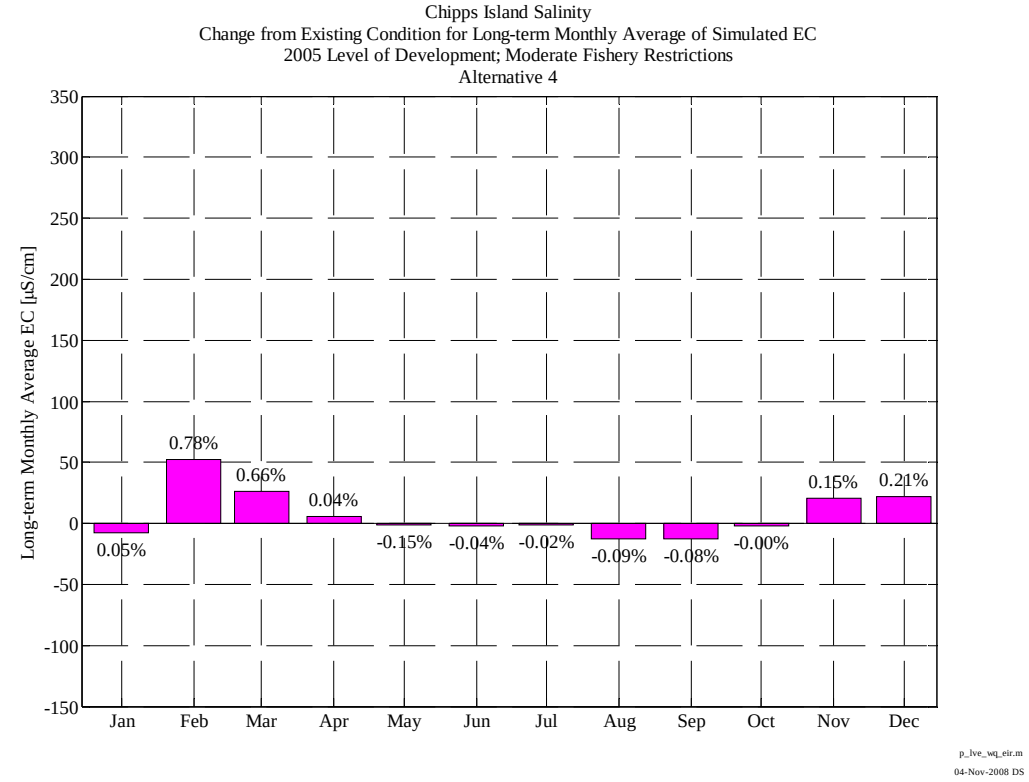
Chipps Island Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

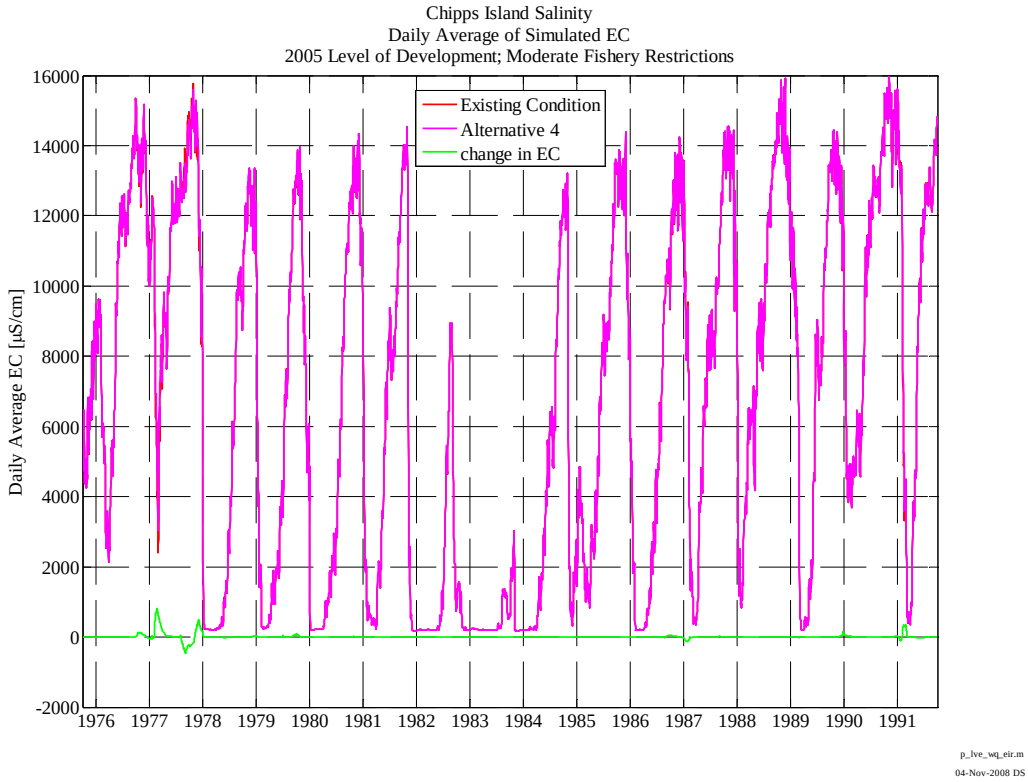
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5,053	6,149	8,077	8,970	6,362	3,003	4,605	8,600	11,809	11,942	12,546	14,197
1977	13,723	14,012	11,958	11,603	6,934	6,902	8,824	10,624	12,309	12,519	12,773	13,721
1978	14,614	14,408	10,226	493	212	207	247	592	1,884	4,605	8,525	9,889
1979	11,494	12,718	12,036	4,250	341	321	1,038	1,662	3,173	6,229	9,545	12,409
1980	13,114	10,224	5,866	295	214	221	622	1,429	2,361	4,576	8,328	11,293
1981	12,830	13,221	11,390	2,808	637	402	1,598	4,064	7,461	8,103	9,569	12,363
1982	13,713	2,554	186	202	194	205	192	216	686	3,473	7,682	3,006
1983	1,259	351	201	232	218	206	205	200	198	274	1,082	794
1984	1,884	266	193	206	235	237	967	2,376	4,770	5,747	8,577	11,744
1985	12,348	2,285	1,618	3,715	2,354	1,356	2,547	4,007	7,279	8,431	9,764	12,553
1986	13,063	12,977	9,635	3,420	209	207	419	1,415	3,083	5,247	8,625	10,289
1987	11,816	12,765	12,864	9,715	2,961	572	2,678	5,739	8,010	8,411	9,850	12,360
1988	13,859	13,695	11,558	2,650	2,597	5,201	5,952	7,583	8,622	10,466	12,407	13,832
1989	14,918	14,534	12,943	10,601	8,275	654	375	1,461	6,071	7,678	9,613	12,566
1990	13,649	13,569	12,090	6,474	4,371	5,039	5,584	8,152	11,085	12,530	12,699	13,635
1991	14,983	14,669	14,673	13,715	6,231	882	2,435	7,192	10,928	12,433	12,637	13,878
Avg	11,395	9,900	8,470	4,959	2,647	1,601	2,393	4,082	6,233	7,667	9,639	11,158
W/AN/BN	9,877	7,642	5,478	1,300	232	229	527	1,127	2,308	4,307	7,481	8,489
D/C	12,576	11,656	10,797	7,806	4,525	2,668	3,844	6,380	9,286	10,279	11,318	13,234

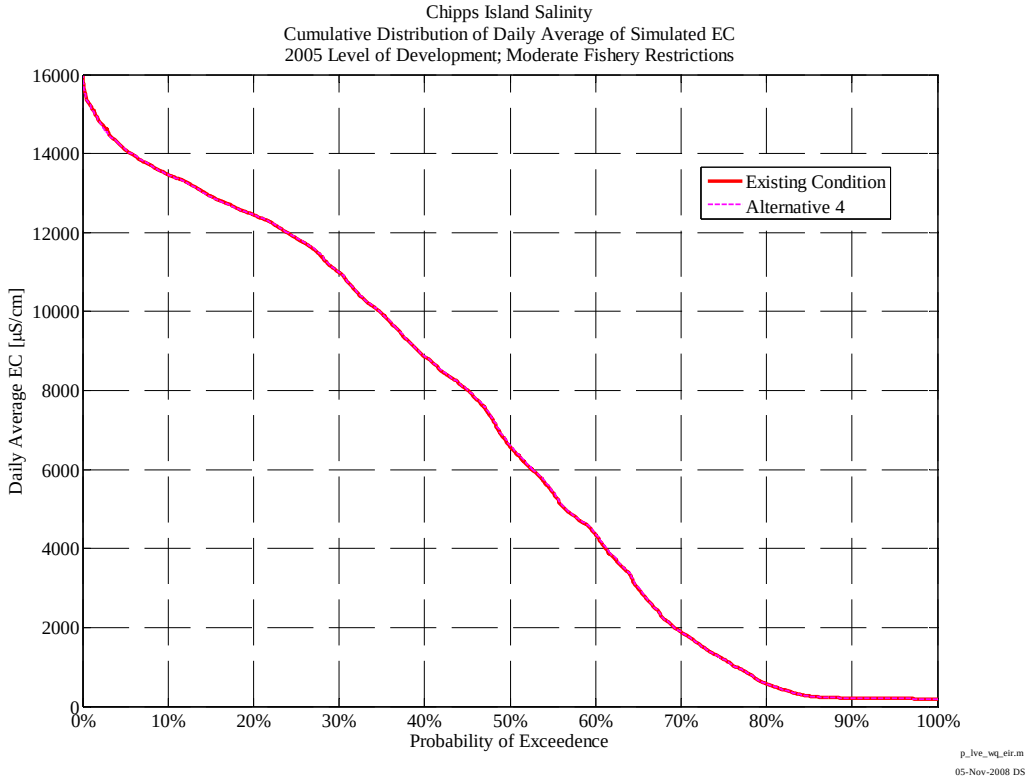
Percent (%) Change from Existing Condition for Chipps Island Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.7%	0.6%	0.0%	-0.4%	9.5%	5.8%	0.9%	0.2%	0.1%	0.0%	-1.7%	-2.2%
1978	-1.5%	1.5%	2.8%	1.5%	-0.1%	0.0%	0.0%	-1.9%	-0.7%	-0.1%	0.0%	0.0%
1979	0.0%	0.0%	0.2%	0.2%	0.0%	0.4%	0.1%	0.0%	0.1%	-0.1%	0.0%	0.4%
1980	0.3%	-0.1%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
1981	0.1%	0.1%	0.1%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%
1983	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.3%	-0.1%	0.0%	0.0%	0.4%
1987	0.3%	0.1%	0.0%	-0.9%	-1.3%	-0.3%	0.1%	0.0%	0.0%	-0.1%	0.1%	0.1%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1990	0.0%	0.0%	0.4%	0.8%	0.4%	0.1%	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%
1991	0.0%	0.0%	0.1%	-0.4%	4.4%	5.3%	0.1%	-0.2%	-0.2%	-0.1%	0.0%	0.0%
Avg	0.0%	0.2%	0.2%	0.1%	0.8%	0.7%	0.0%	-0.1%	0.0%	0.0%	-0.1%	-0.1%
W/AN/BN	-0.2%	0.2%	0.4%	0.2%	0.0%	0.1%	-0.1%	-0.3%	-0.1%	0.0%	0.0%	0.1%
D/C	0.1%	0.1%	0.1%	-0.1%	1.4%	1.1%	0.1%	0.0%	0.0%	0.0%	-0.2%	-0.2%


Chipps Island Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.05%
0.78%
0.66%
0.04%
-0.15%
-0.04%
-0.02%
-0.09%
-0.08%
-0.00%
0.15%
0.21%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Chipps Island Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
16000
14000
12000
10000
8000
6000
4000
2000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Collinsville

Existing Condition

Collinsville Salinity
Monthly Average of Simulated Values (EC, μS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1,943	2,712	4,028	4,709	2,784	938	1,877	4,746	7,508	7,244	7,840	9,458
1977	8,627	9,226	7,016	6,998	2,817	3,056	4,601	6,296	7,874	7,867	8,254	9,320
1978	10,240	9,435	5,258	297	205	204	217	262	596	1,884	4,537	5,369
1979	6,869	8,021	7,100	1,850	235	215	343	521	1,101	2,807	5,241	7,690
1980	8,359	5,539	2,389	218	201	214	272	434	740	1,843	4,336	6,672
1981	8,149	8,457	6,440	1,024	245	202	516	1,585	3,838	3,903	5,046	7,758
1982	9,066	1,074	183	200	190	202	185	190	258	1,362	3,868	1,121
1983	352	202	197	222	197	185	199	196	195	209	349	251
1984	576	195	185	203	201	189	329	747	1,977	2,442	4,628	7,258
1985	7,580	886	518	1,376	705	384	853	1,489	3,732	4,177	5,230	7,970
1986	8,339	8,054	4,916	1,204	186	192	240	460	1,088	2,225	4,574	5,730
1987	7,234	8,121	8,172	5,197	1,057	239	1,012	2,597	4,190	4,174	5,352	7,771
1988	9,177	8,977	6,641	1,044	920	2,231	2,625	3,830	4,546	6,084	7,839	9,196
1989	10,234	9,724	7,981	5,679	4,130	316	202	446	3,038	3,605	5,176	8,040
1990	8,815	8,752	7,192	2,753	1,601	2,023	2,377	4,427	6,903	7,917	8,002	8,942
1991	10,301	9,950	10,012	8,992	2,590	330	894	3,761	6,849	7,904	7,915	9,203
Avg	7,241	6,208	4,889	2,623	1,141	695	1,046	1,999	3,402	4,103	5,512	6,984
W/AN/BN	6,257	4,646	2,890	599	202	200	255	402	851	1,825	3,933	4,870
D/C	8,007	7,423	6,444	4,197	1,872	1,080	1,662	3,242	5,386	5,875	6,739	8,629

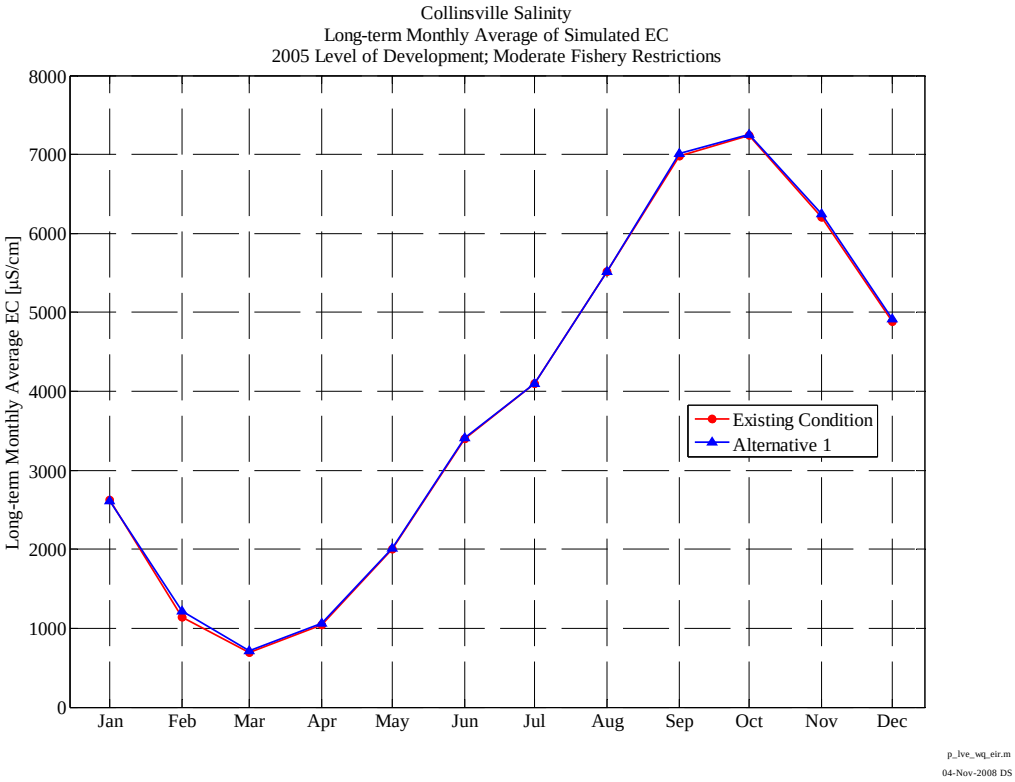
Alternative 1

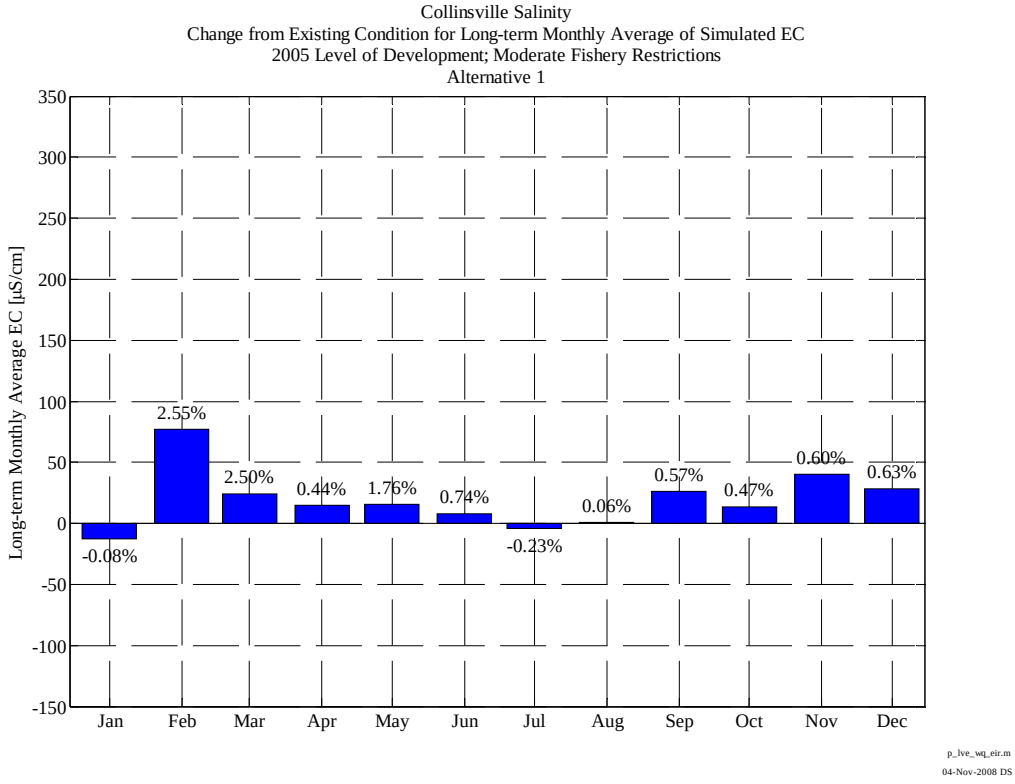
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

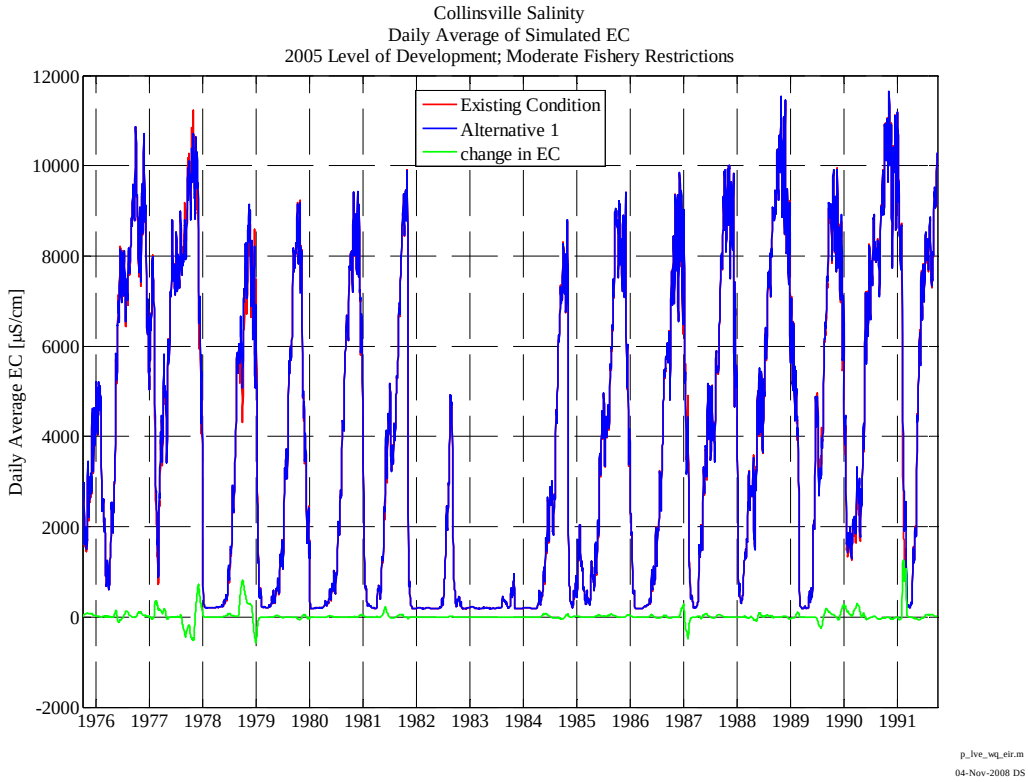
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1,997	2,786	4,071	4,722	2,789	944	1,880	4,787	7,434	7,319	7,897	9,460
1977	8,702	9,281	7,030	6,974	3,084	3,192	4,696	6,281	7,869	7,870	8,078	9,038
1978	9,795	9,694	5,603	302	205	204	217	265	637	1,927	4,553	5,882
1979	7,394	8,303	6,807	1,722	234	215	341	544	1,104	2,799	5,236	7,690
1980	8,317	5,566	2,378	217	201	214	271	452	739	1,834	4,334	6,669
1981	8,147	8,458	6,481	1,035	244	203	518	1,678	3,929	3,884	5,051	7,805
1982	9,066	1,062	183	201	190	202	185	190	257	1,358	3,874	1,124
1983	355	202	197	222	197	185	200	196	195	208	349	251
1984	576	195	185	203	201	189	328	792	2,021	2,435	4,610	7,221
1985	7,600	896	528	1,386	705	384	853	1,516	3,757	4,194	5,276	8,001
1986	8,333	8,053	4,950	1,218	186	191	240	483	1,094	2,203	4,597	5,722
1987	7,220	8,116	8,331	4,984	955	236	1,017	2,627	4,234	4,156	5,373	7,808
1988	9,182	8,978	6,638	1,044	924	2,219	2,602	3,809	4,589	6,112	7,857	9,185
1989	10,227	9,732	7,960	5,654	4,204	319	202	444	3,032	3,423	5,179	8,176
1990	8,874	8,727	7,347	2,926	1,654	2,194	2,553	4,452	6,859	7,918	7,977	8,911
1991	10,289	9,923	9,992	8,953	3,517	420	882	3,718	6,810	7,942	7,962	9,227
Avg	7,255	6,248	4,918	2,610	1,218	719	1,062	2,015	3,410	4,099	5,513	7,011
W/AN/BN	6,262	4,725	2,900	584	202	200	255	417	864	1,824	3,936	4,937
D/C	8,027	7,433	6,487	4,187	2,008	1,123	1,689	3,257	5,391	5,869	6,739	8,624

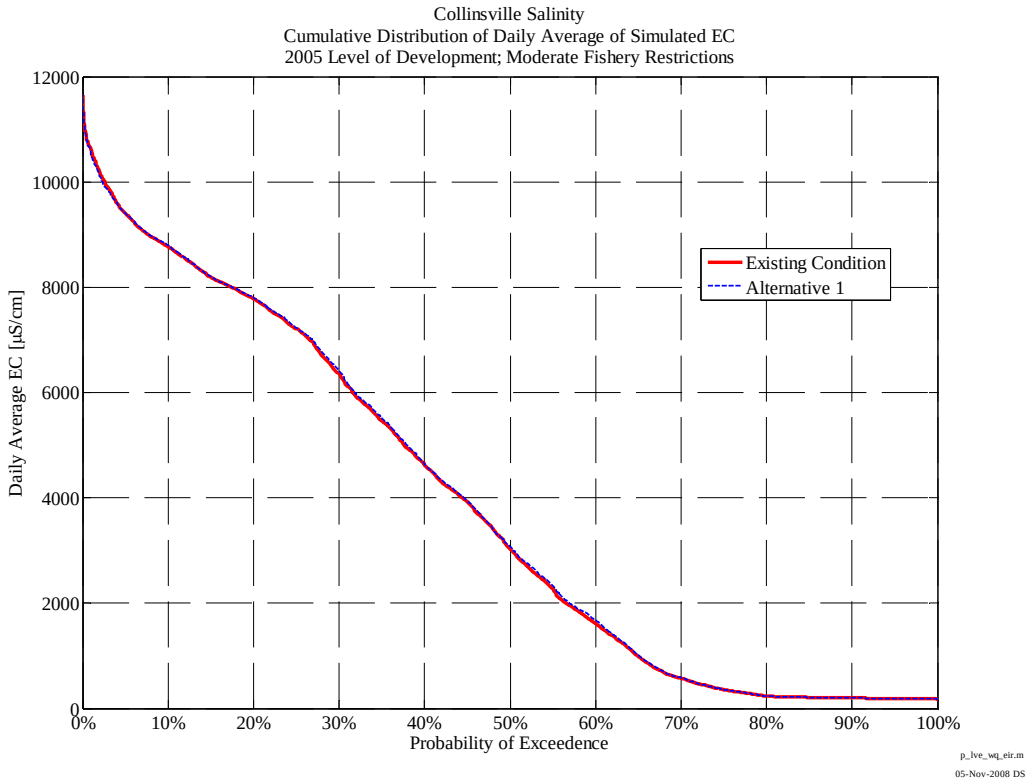
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2.8%	2.7%	1.1%	0.3%	0.2%	0.6%	0.1%	0.9%	-1.0%	1.0%	0.7%	0.0%
1977	0.9%	0.6%	0.2%	-0.3%	9.5%	4.4%	2.1%	-0.2%	-0.1%	0.0%	-2.1%	-3.0%
1978	-4.3%	2.7%	6.5%	1.9%	0.0%	-0.1%	-0.1%	1.2%	6.8%	2.3%	0.4%	9.6%
1979	7.6%	3.5%	-4.1%	-6.9%	-0.3%	-0.2%	-0.6%	4.4%	0.3%	-0.3%	-0.1%	0.0%
1980	-0.5%	0.5%	-0.4%	-0.5%	0.0%	0.0%	-0.7%	4.0%	-0.1%	-0.5%	0.0%	0.0%
1981	0.0%	0.0%	0.6%	1.1%	-0.3%	0.4%	0.4%	5.9%	2.4%	-0.5%	0.1%	0.6%
1982	0.0%	-1.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.2%	-0.5%	-0.3%	0.2%	0.3%
1983	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.2%	0.0%	-0.1%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.2%	6.0%	2.3%	-0.3%	-0.4%	-0.5%
1985	0.3%	1.1%	1.9%	0.7%	0.1%	-0.1%	0.0%	1.8%	0.7%	0.4%	0.9%	0.4%
1986	-0.1%	0.0%	0.7%	1.1%	0.0%	-0.1%	0.0%	5.0%	0.5%	-1.0%	0.5%	-0.1%
1987	-0.2%	-0.1%	2.0%	-4.1%	-9.7%	-1.3%	0.5%	1.1%	1.1%	-0.4%	0.4%	0.5%
1988	0.1%	0.0%	0.0%	0.0%	0.4%	-0.5%	-0.9%	-0.5%	0.9%	0.5%	0.2%	-0.1%
1989	-0.1%	0.1%	-0.3%	-0.4%	1.8%	1.1%	0.2%	-0.4%	-0.2%	-5.1%	0.1%	1.7%
1990	0.7%	-0.3%	2.2%	6.3%	3.3%	8.4%	7.4%	0.6%	-0.6%	0.0%	-0.3%	-0.3%
1991	-0.1%	-0.3%	-0.2%	-0.4%	35.8%	27.4%	-1.4%	-1.1%	-0.6%	0.5%	0.6%	0.3%
Avg	0.5%	0.6%	0.6%	-0.1%	2.5%	2.5%	0.4%	1.8%	0.7%	-0.2%	0.1%	0.6%
W/AN/BN	0.5%	0.8%	0.4%	-0.6%	0.0%	-0.1%	-0.2%	2.9%	1.3%	0.0%	0.1%	1.3%
D/C	0.5%	0.4%	0.8%	0.3%	4.6%	4.5%	0.9%	0.9%	0.3%	-0.4%	0.1%	0.0%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.08%
2.55%
2.50%
0.44%
1.76%
0.74%
-0.23%
0.06%
0.57%
0.47%
0.60%
0.63%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

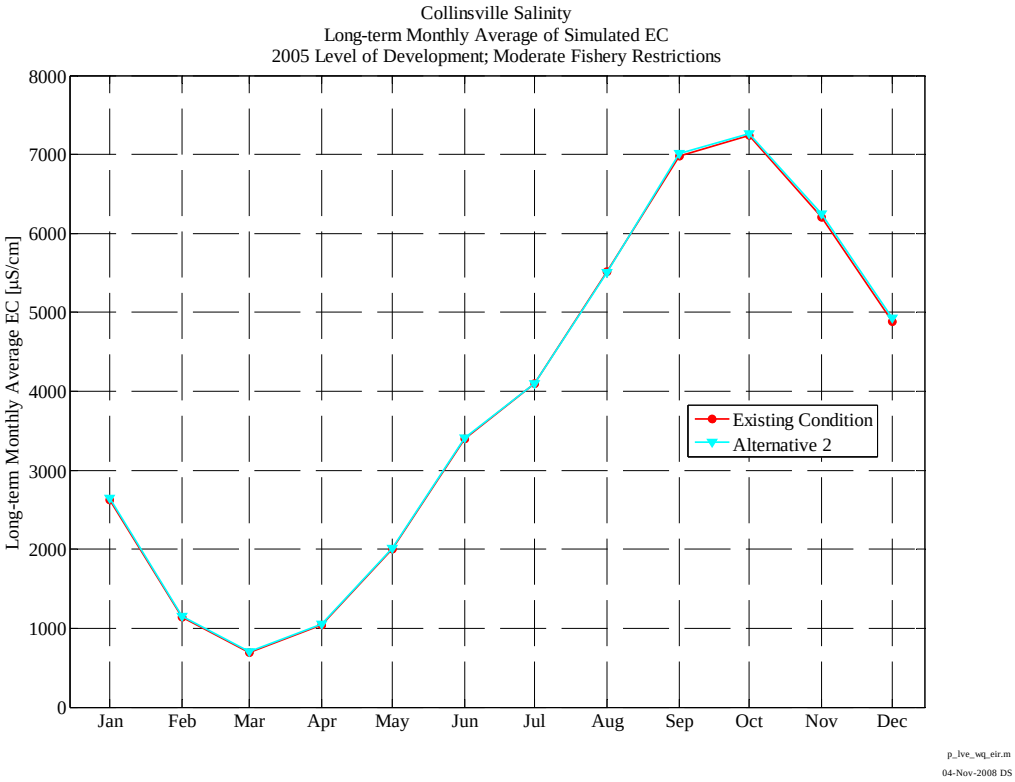
Alternative 2

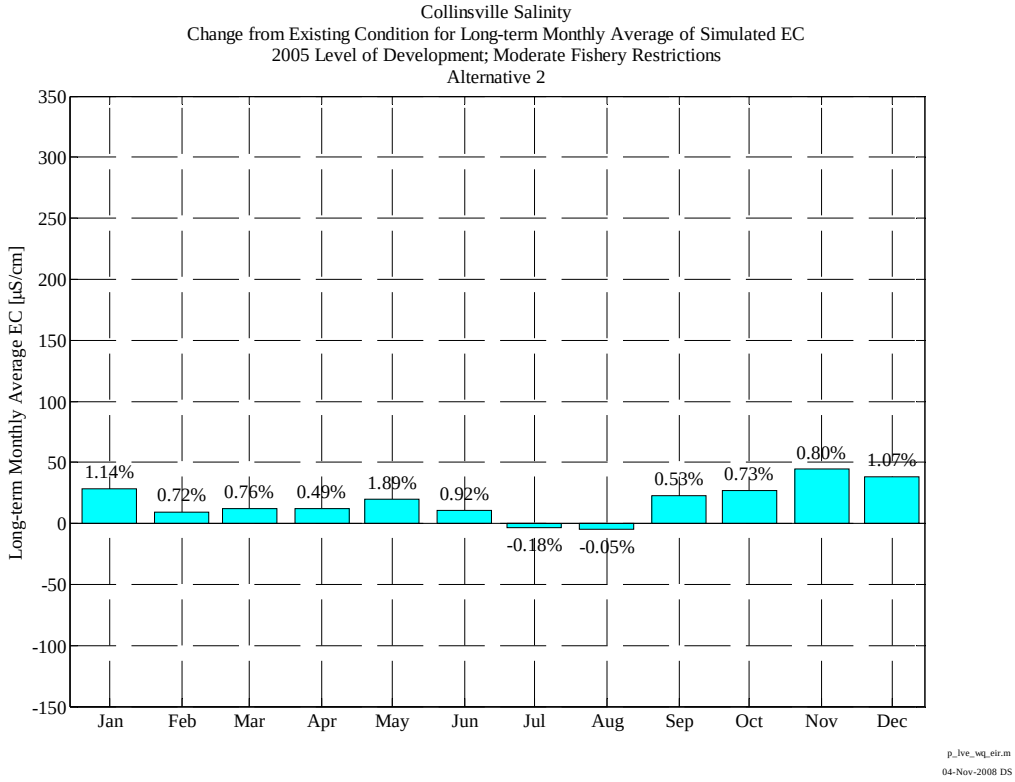
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

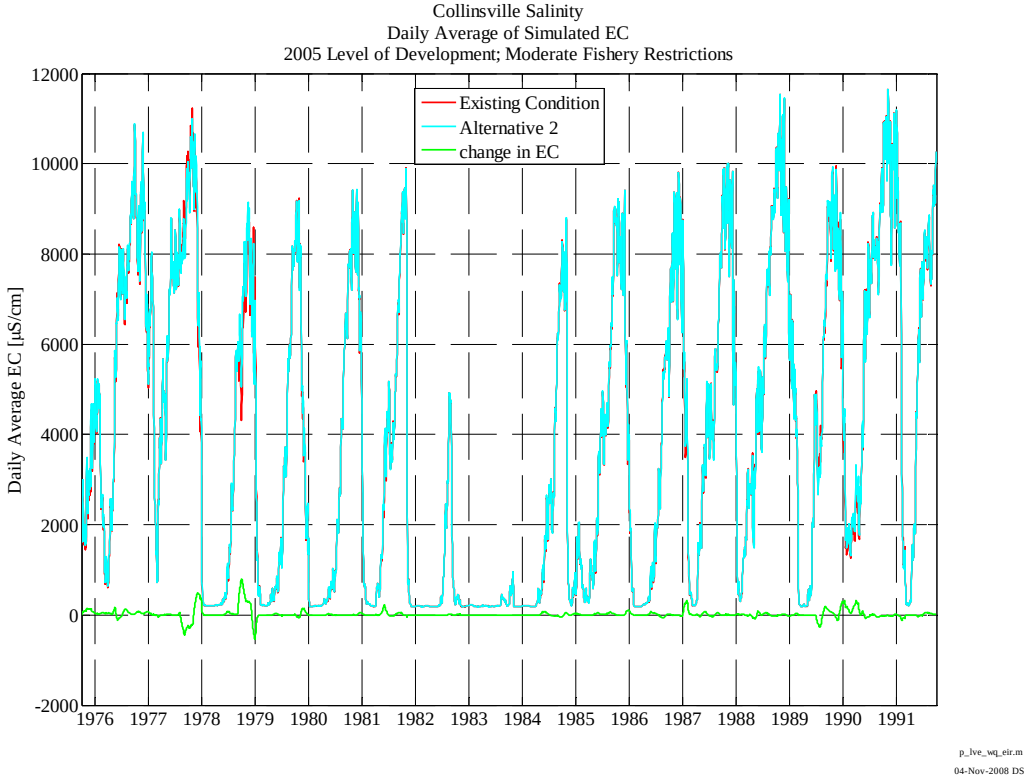
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2,016	2,837	4,108	4,735	2,824	983	1,912	4,799	7,440	7,323	7,912	9,473
1977	8,685	9,269	7,078	7,029	2,817	3,041	4,600	6,306	7,876	7,872	8,070	8,996
1978	9,988	9,676	5,668	311	205	204	217	263	634	1,926	4,555	5,875
1979	7,386	8,301	6,838	1,742	235	215	341	544	1,104	2,799	5,235	7,690
1980	8,324	5,633	2,439	218	200	214	270	452	739	1,834	4,334	6,669
1981	8,148	8,458	6,481	1,035	244	203	519	1,678	3,929	3,879	5,052	7,809
1982	9,068	1,065	183	200	190	202	185	190	257	1,358	3,873	1,124
1983	359	203	197	222	197	185	200	196	195	208	349	251
1984	576	195	185	203	201	189	328	792	2,021	2,435	4,610	7,223
1985	7,601	898	540	1,399	707	384	853	1,516	3,757	4,194	5,276	8,002
1986	8,333	8,053	4,991	1,237	186	191	240	491	1,134	2,234	4,521	5,730
1987	7,241	8,120	8,161	5,409	1,131	241	1,012	2,622	4,225	4,145	5,372	7,786
1988	9,179	8,979	6,641	1,052	928	2,220	2,602	3,810	4,573	6,120	7,849	9,172
1989	10,227	9,733	7,972	5,666	4,159	317	202	444	3,033	3,409	5,172	8,177
1990	8,876	8,686	7,351	2,988	1,684	2,202	2,555	4,453	6,851	7,916	7,979	8,915
1991	10,283	9,929	10,004	8,980	2,508	324	895	3,748	6,832	7,945	7,955	9,218
Avg	7,268	6,252	4,927	2,652	1,151	707	1,058	2,019	3,412	4,100	5,507	7,007
W/AN/BN	6,291	4,732	2,929	591	202	200	254	418	869	1,828	3,925	4,937
D/C	8,028	7,434	6,482	4,255	1,889	1,102	1,683	3,264	5,391	5,867	6,738	8,617

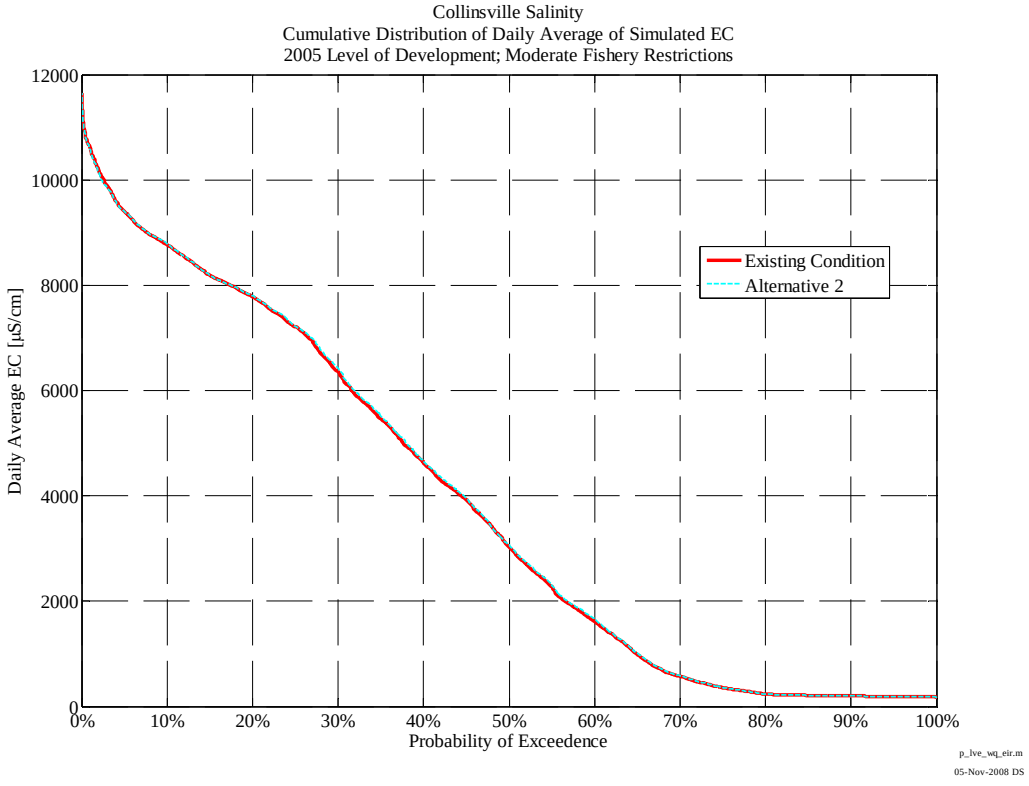
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	3.7%	4.6%	2.0%	0.5%	1.4%	4.8%	1.8%	1.1%	-0.9%	1.1%	0.9%	0.2%
1977	0.7%	0.5%	0.9%	0.4%	0.0%	-0.5%	0.0%	0.2%	0.0%	0.1%	-2.2%	-3.5%
1978	-2.5%	2.6%	7.8%	4.7%	-0.1%	-0.1%	-0.1%	0.2%	6.3%	2.2%	0.4%	9.4%
1979	7.5%	3.5%	-3.7%	-5.9%	-0.1%	-0.2%	-0.6%	4.5%	0.3%	-0.3%	-0.1%	0.0%
1980	-0.4%	1.7%	2.1%	0.0%	-0.1%	-0.1%	-0.7%	3.9%	-0.1%	-0.5%	0.0%	0.0%
1981	0.0%	0.0%	0.6%	1.1%	-0.3%	0.6%	0.6%	5.9%	2.4%	-0.6%	0.1%	0.7%
1982	0.0%	-0.8%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.2%	-0.5%	-0.3%	0.1%	0.3%
1983	1.8%	0.3%	-0.1%	0.0%	0.0%	0.0%	0.1%	-0.2%	0.0%	-0.1%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.3%	6.0%	2.2%	-0.3%	-0.4%	-0.5%
1985	0.3%	1.3%	4.1%	1.6%	0.3%	-0.1%	0.0%	1.8%	0.7%	0.4%	0.9%	0.4%
1986	-0.1%	0.0%	1.5%	2.8%	0.0%	-0.1%	0.0%	6.7%	4.2%	0.4%	-1.2%	0.0%
1987	0.1%	0.0%	-0.1%	4.1%	7.0%	0.8%	0.0%	1.0%	0.8%	-0.7%	0.4%	0.2%
1988	0.0%	0.0%	0.0%	0.7%	0.9%	-0.5%	-0.9%	-0.5%	0.6%	0.6%	0.1%	-0.3%
1989	-0.1%	0.1%	-0.1%	-0.2%	0.7%	0.5%	0.2%	-0.4%	-0.2%	-5.4%	-0.1%	1.7%
1990	0.7%	-0.7%	2.2%	8.5%	5.2%	8.8%	7.5%	0.6%	-0.7%	0.0%	-0.3%	-0.3%
1991	-0.2%	-0.2%	-0.1%	-0.1%	-3.2%	-1.8%	0.1%	-0.3%	-0.2%	0.5%	0.5%	0.2%
Avg	0.7%	0.8%	1.1%	1.1%	0.7%	0.8%	0.5%	1.9%	0.9%	-0.2%	-0.1%	0.5%
W/AN/BN	0.9%	1.0%	1.1%	0.2%	-0.1%	-0.1%	-0.2%	3.0%	1.8%	0.2%	-0.2%	1.3%
D/C	0.6%	0.6%	1.1%	1.9%	1.3%	1.4%	1.0%	1.0%	0.3%	-0.5%	0.0%	-0.1%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.14%
0.72%
0.76%
0.49%
1.89%
0.92%
-0.18%
-0.05%
0.53%
0.73%
0.80%
1.07%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

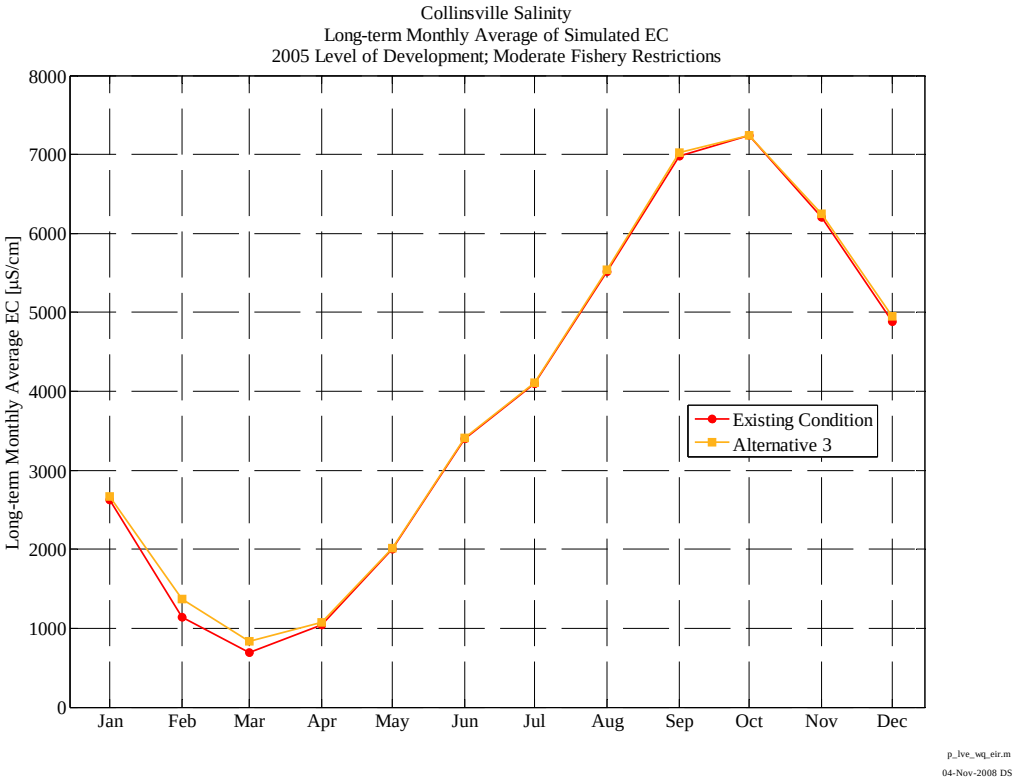
Alternative 3

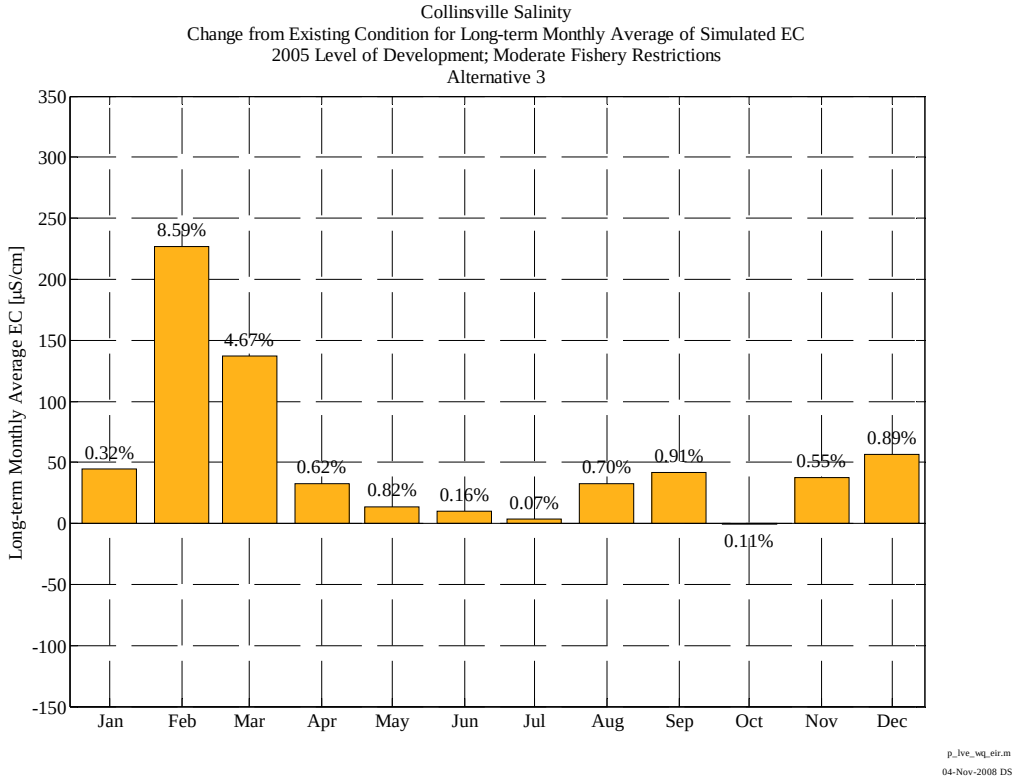
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

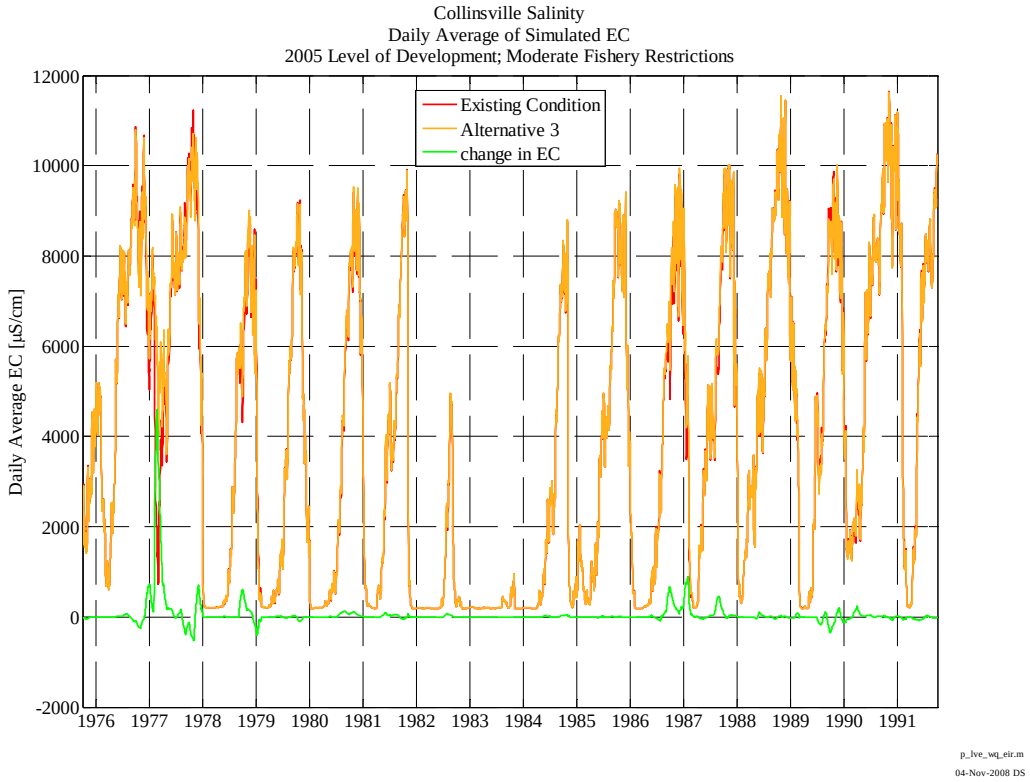
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1,916	2,690	4,023	4,702	2,777	937	1,876	4,754	7,518	7,293	7,857	9,376
1977	8,433	9,135	7,524	7,325	6,252	5,124	5,056	6,484	7,922	7,914	8,160	9,085
1978	9,828	9,667	5,567	301	205	204	218	268	596	1,880	4,529	5,754
1979	7,209	8,170	6,990	1,646	230	214	343	530	1,107	2,792	5,237	7,709
1980	8,295	5,509	2,385	218	201	214	272	440	733	1,883	4,446	6,762
1981	8,242	8,532	6,465	1,027	245	202	516	1,627	3,891	3,940	5,093	7,735
1982	9,046	1,094	184	201	190	202	185	190	257	1,395	3,919	1,128
1983	353	202	197	223	197	185	199	196	195	209	349	251
1984	576	195	185	203	201	189	327	759	1,997	2,442	4,628	7,280
1985	7,622	893	519	1,376	704	384	854	1,480	3,733	4,174	5,233	7,973
1986	8,344	8,056	4,913	1,203	186	191	240	473	1,081	2,168	4,630	6,175
1987	7,653	8,286	8,361	5,884	1,269	249	1,003	2,566	4,190	4,212	5,675	8,011
1988	9,186	9,012	6,673	1,045	919	2,229	2,623	3,839	4,602	6,084	7,842	9,163
1989	10,241	9,730	7,972	5,661	4,195	312	201	448	3,036	3,477	5,184	7,867
1990	8,607	8,840	7,171	2,669	1,572	2,146	2,481	4,448	6,939	7,928	8,009	8,962
1991	10,301	9,913	10,004	8,999	2,551	326	871	3,699	6,794	7,915	7,917	9,183
Avg	7,241	6,245	4,946	2,668	1,368	832	1,079	2,013	3,412	4,107	5,544	7,026
W/AN/BN	6,236	4,699	2,917	570	201	200	255	408	852	1,824	3,963	5,008
D/C	8,022	7,448	6,524	4,299	2,276	1,323	1,720	3,261	5,403	5,882	6,775	8,595

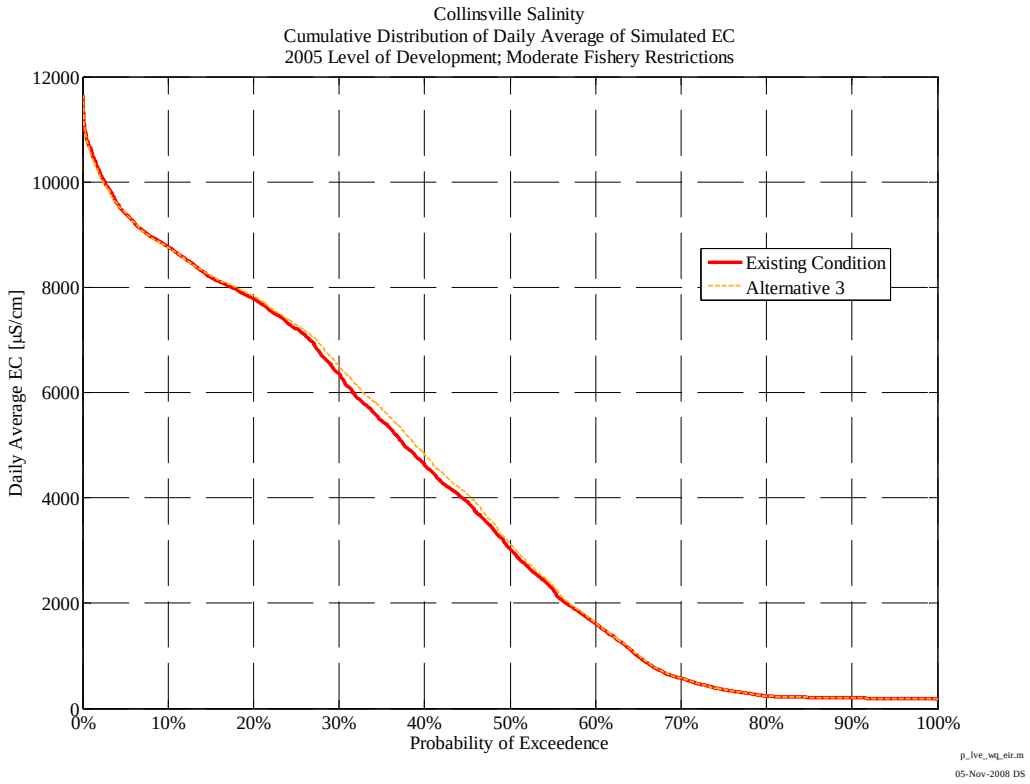
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-1.4%	-0.8%	-0.1%	-0.2%	-0.2%	-0.1%	-0.1%	0.2%	0.1%	0.7%	0.2%	-0.9%
1977	-2.2%	-1.0%	7.2%	4.7%	122.0%	67.7%	9.9%	3.0%	0.6%	0.6%	-1.1%	-2.5%
1978	-4.0%	2.5%	5.9%	1.3%	-0.1%	-0.1%	0.2%	2.0%	0.0%	-0.2%	-0.2%	7.2%
1979	4.9%	1.9%	-1.5%	-11.0%	-2.2%	-0.3%	0.2%	1.8%	0.6%	-0.5%	-0.1%	0.3%
1980	-0.8%	-0.5%	-0.2%	0.0%	0.0%	0.0%	0.0%	1.4%	-0.9%	2.2%	2.5%	1.3%
1981	1.1%	0.9%	0.4%	0.3%	0.0%	0.0%	0.0%	2.7%	1.4%	0.9%	0.9%	-0.3%
1982	-0.2%	1.9%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.5%	2.4%	1.3%	0.6%
1983	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1984	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.3%	-0.7%	1.7%	1.0%	0.0%	0.0%	0.3%
1985	0.6%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.6%	0.0%	-0.1%	0.1%	0.0%
1986	0.1%	0.0%	-0.1%	-0.1%	0.0%	-0.1%	-0.3%	2.9%	-0.6%	-2.6%	1.2%	7.8%
1987	5.8%	2.0%	2.3%	13.2%	20.0%	4.5%	-0.8%	-1.2%	0.0%	0.9%	6.0%	3.1%
1988	0.1%	0.4%	0.5%	0.1%	-0.1%	-0.1%	-0.1%	0.2%	1.2%	0.0%	0.0%	-0.4%
1989	0.1%	0.1%	-0.1%	-0.3%	1.6%	-1.2%	-0.2%	0.4%	-0.1%	-3.5%	0.2%	-2.1%
1990	-2.4%	1.0%	-0.3%	-3.1%	-1.8%	6.1%	4.4%	0.5%	0.5%	0.1%	0.1%	0.2%
1991	0.0%	-0.4%	-0.1%	0.1%	-1.5%	-1.2%	-2.6%	-1.6%	-0.8%	0.1%	0.0%	-0.2%
Avg	0.1%	0.5%	0.9%	0.3%	8.6%	4.7%	0.6%	0.8%	0.2%	0.1%	0.7%	0.9%
W/AN/BN	0.0%	0.8%	0.6%	-1.4%	-0.3%	-0.1%	-0.1%	1.4%	-0.1%	0.2%	0.7%	2.5%
D/C	0.2%	0.3%	1.1%	1.6%	15.5%	8.4%	1.2%	0.4%	0.3%	0.0%	0.7%	-0.3%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.32%
8.59%
4.67%
0.62%
0.82%
0.16%
0.07%
0.70%
0.91%
0.11%
0.55%
0.89%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

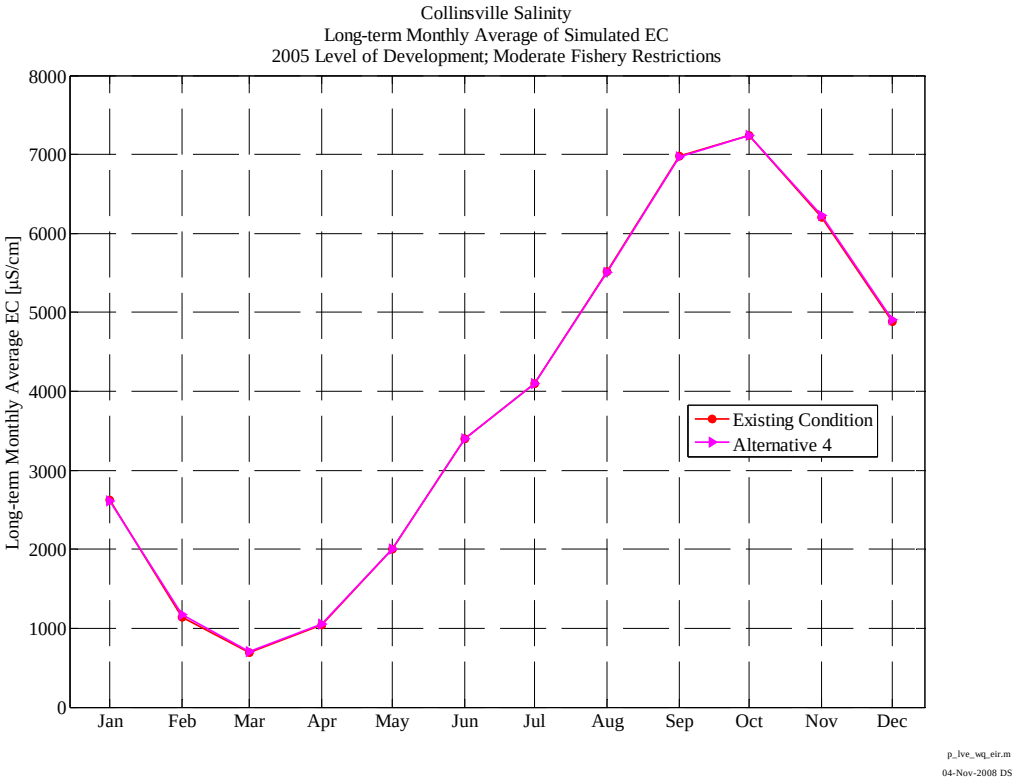
Alternative 4

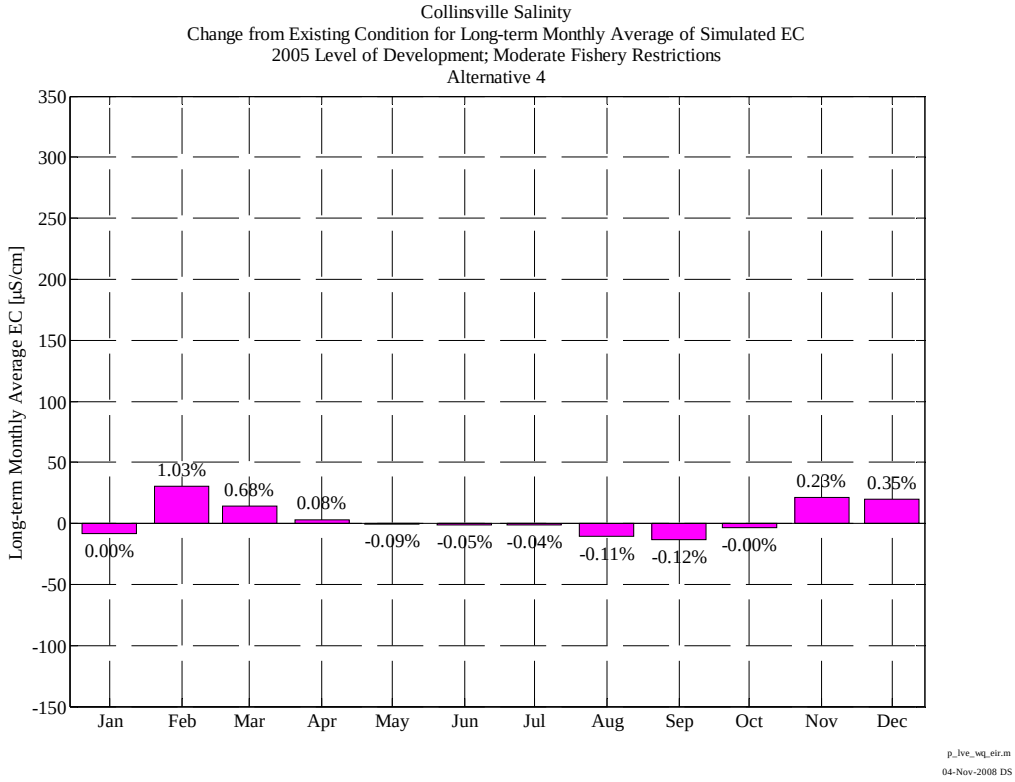
Collinsville Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

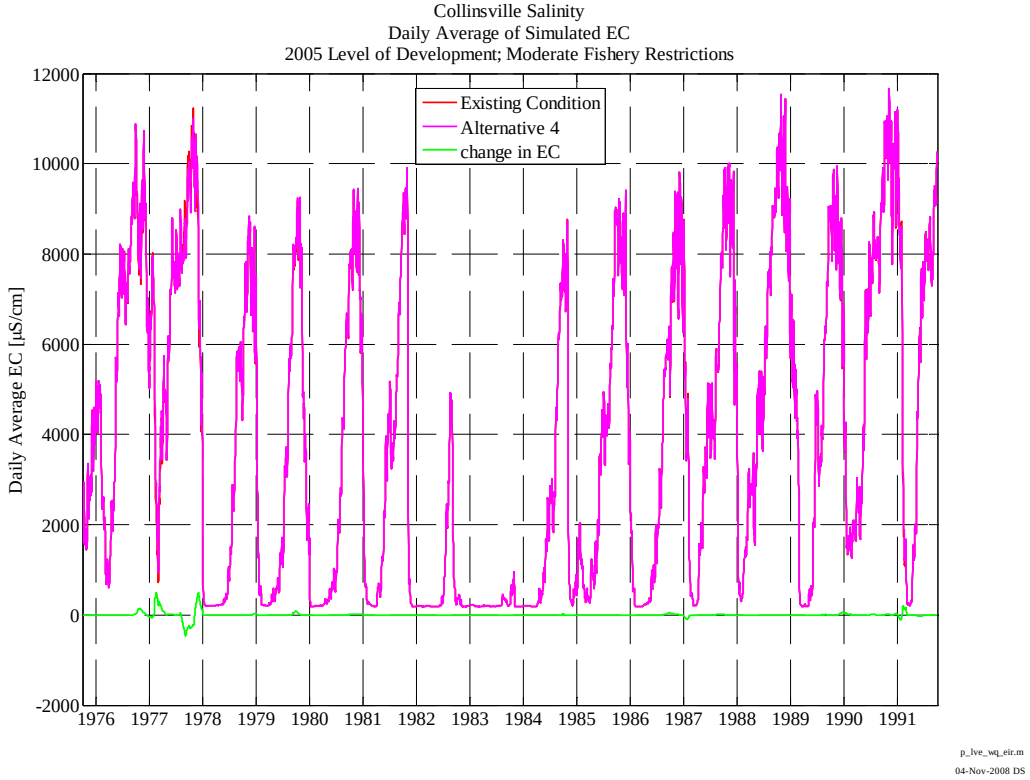
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	1,946	2,714	4,028	4,709	2,783	938	1,877	4,746	7,508	7,246	7,839	9,465
1977	8,733	9,307	7,013	6,953	3,180	3,265	4,645	6,306	7,881	7,862	8,065	8,996
1978	9,982	9,672	5,491	300	205	204	217	260	593	1,882	4,537	5,369
1979	6,870	8,016	7,124	1,856	235	215	343	521	1,101	2,800	5,239	7,739
1980	8,404	5,530	2,388	218	200	214	272	434	741	1,845	4,340	6,677
1981	8,159	8,466	6,447	1,026	245	202	516	1,584	3,838	3,900	5,046	7,758
1982	9,064	1,075	183	200	190	202	185	190	258	1,363	3,871	1,122
1983	352	202	197	222	197	185	199	196	195	209	349	251
1984	576	195	185	203	201	189	329	747	1,977	2,442	4,628	7,262
1985	7,578	885	518	1,376	704	384	853	1,489	3,732	4,174	5,230	7,972
1986	8,340	8,055	4,916	1,204	186	192	240	459	1,087	2,223	4,580	5,761
1987	7,267	8,135	8,167	5,127	1,035	238	1,013	2,598	4,190	4,170	5,359	7,785
1988	9,181	8,978	6,641	1,044	920	2,231	2,625	3,830	4,546	6,084	7,838	9,196
1989	10,234	9,724	7,981	5,678	4,131	315	202	446	3,038	3,602	5,179	8,040
1990	8,811	8,754	7,238	2,786	1,608	2,025	2,379	4,423	6,898	7,930	8,004	8,939
1991	10,308	9,954	10,029	8,934	2,729	344	896	3,746	6,829	7,894	7,913	9,203
Avg	7,238	6,229	4,909	2,615	1,172	709	1,049	1,998	3,401	4,101	5,501	6,971
W/AN/BN	6,227	4,678	2,926	601	202	200	255	401	850	1,823	3,935	4,883
D/C	8,024	7,435	6,451	4,181	1,926	1,105	1,667	3,241	5,384	5,873	6,719	8,595

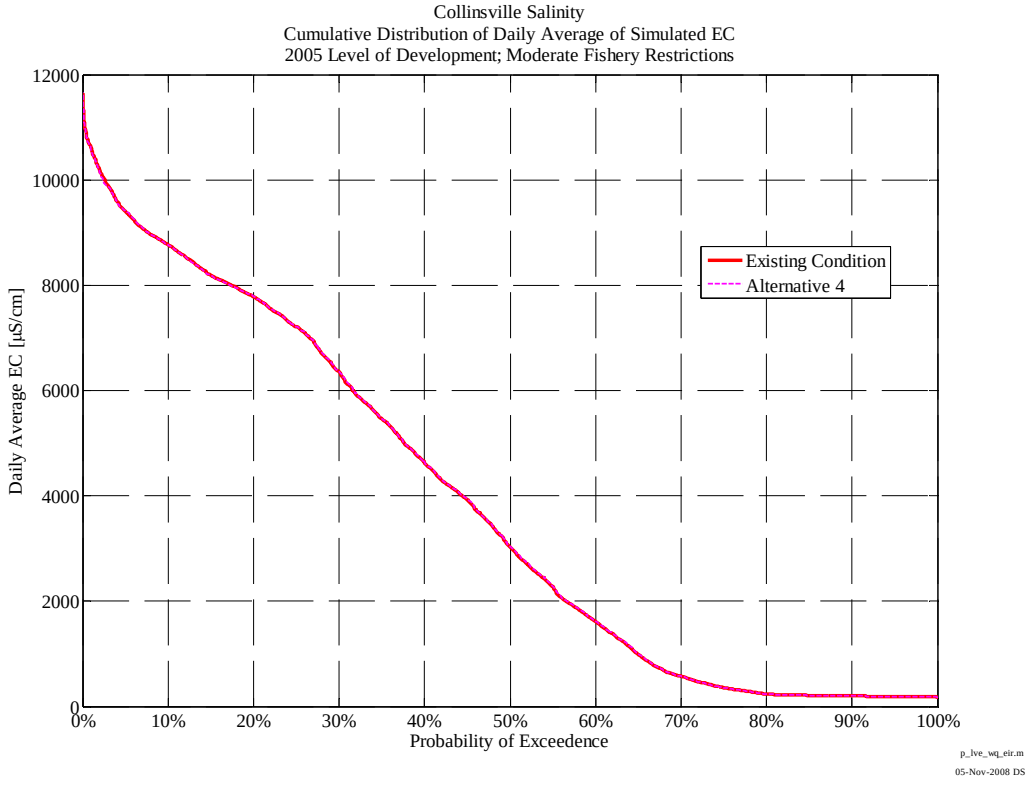
Percent (%) Change from Existing Condition for Collinsville Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1977	1.2%	0.9%	0.0%	-0.6%	12.9%	6.8%	1.0%	0.2%	0.1%	-0.1%	-2.3%	-3.5%
1978	-2.5%	2.5%	4.4%	1.2%	-0.1%	0.0%	0.0%	-0.9%	-0.6%	-0.1%	0.0%	0.0%
1979	0.0%	-0.1%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.6%
1980	0.5%	-0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
1981	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1982	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	-0.1%	0.1%	0.5%
1987	0.5%	0.2%	-0.1%	-1.3%	-2.0%	-0.3%	0.1%	0.0%	0.0%	-0.1%	0.1%	0.2%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.1%	0.1%	0.0%	-0.1%	0.1%	0.0%
1990	0.0%	0.0%	0.6%	1.2%	0.5%	0.1%	0.1%	-0.1%	-0.1%	0.2%	0.0%	0.0%
1991	0.1%	0.0%	0.2%	-0.6%	5.4%	4.5%	0.2%	-0.4%	-0.3%	-0.1%	0.0%	0.0%
Avg	0.0%	0.2%	0.3%	0.0%	1.0%	0.7%	0.1%	-0.1%	0.0%	0.0%	-0.1%	-0.1%
W/AN/BN	-0.3%	0.3%	0.7%	0.2%	0.0%	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.2%
D/C	0.2%	0.1%	0.1%	-0.2%	1.8%	1.2%	0.2%	0.0%	0.0%	0.0%	-0.2%	-0.4%


Collinsville Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
1.03%
0.68%
0.08%
-0.09%
-0.05%
-0.04%
-0.11%
-0.12%
-0.00%
0.23%
0.35%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
-2000
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Collinsville Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
12000
10000
8000
6000
4000
2000
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Emmaton

Existing Condition

Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	339	463	778	1,021	527	233	399	1,267	2,529	2,059	2,530	3,393
1977	2,461	2,977	1,732	1,995	597	730	1,076	1,953	2,691	2,698	2,845	3,538
1978	4,510	3,701	1,206	206	194	192	196	200	221	421	1,176	1,247
1979	1,830	2,273	1,810	465	205	193	206	216	269	555	1,320	2,350
1980	2,695	1,295	473	187	190	191	206	213	239	424	1,045	1,862
1981	2,512	2,514	1,464	318	192	184	208	348	928	796	1,198	2,602
1982	3,136	309	179	193	182	192	180	182	188	344	863	275
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	201	178	180	187	188	182	202	245	417	454	1,209	2,203
1985	2,044	262	201	281	217	197	241	314	894	860	1,250	2,643
1986	2,658	2,389	1,110	318	182	183	203	211	283	482	1,097	1,408
1987	2,119	2,415	2,379	1,171	275	190	275	519	1,003	853	1,295	2,563
1988	3,042	2,801	1,565	323	257	466	495	828	1,126	1,708	2,699	3,485
1989	3,889	3,225	2,211	1,194	980	190	183	193	753	724	1,263	2,796
1990	2,606	2,625	1,860	536	331	379	435	1,156	2,300	2,559	2,647	3,283
1991	3,925	3,691	3,660	3,163	555	202	253	925	2,389	2,674	2,623	3,471
Avg	2,384	1,957	1,312	735	329	255	309	560	1,026	1,113	1,578	2,331
W/AN/BN	2,173	1,476	735	250	189	188	197	207	257	410	986	1,361
D/C	2,549	2,330	1,761	1,111	437	308	396	834	1,624	1,659	2,039	3,086

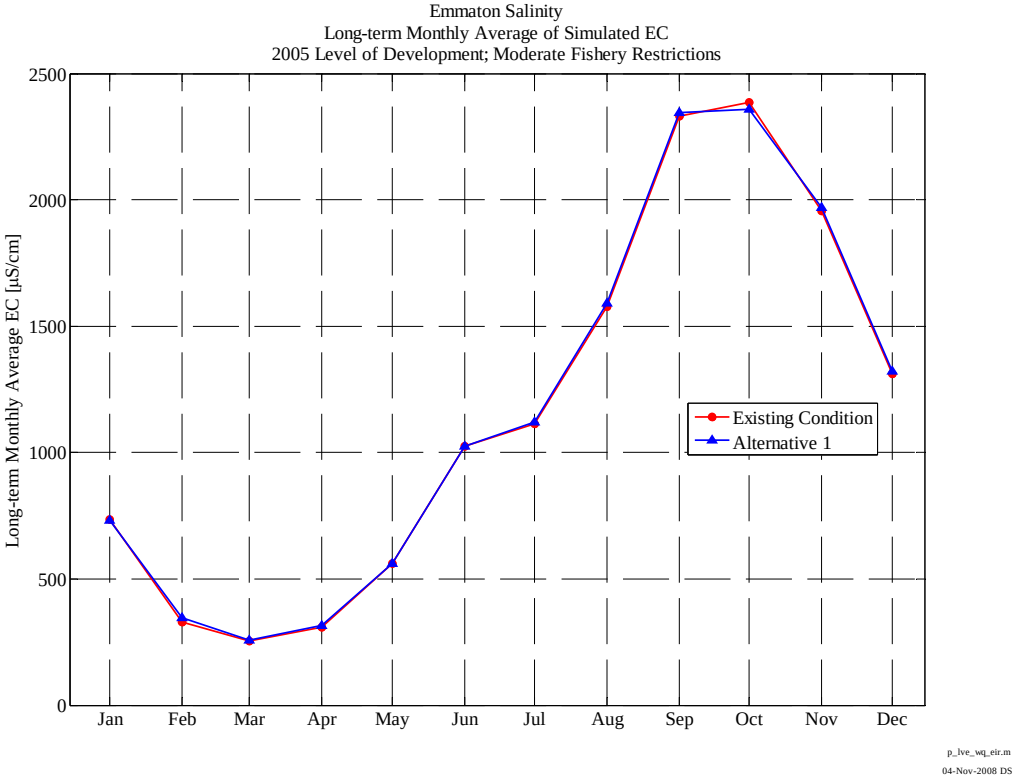
Alternative 1

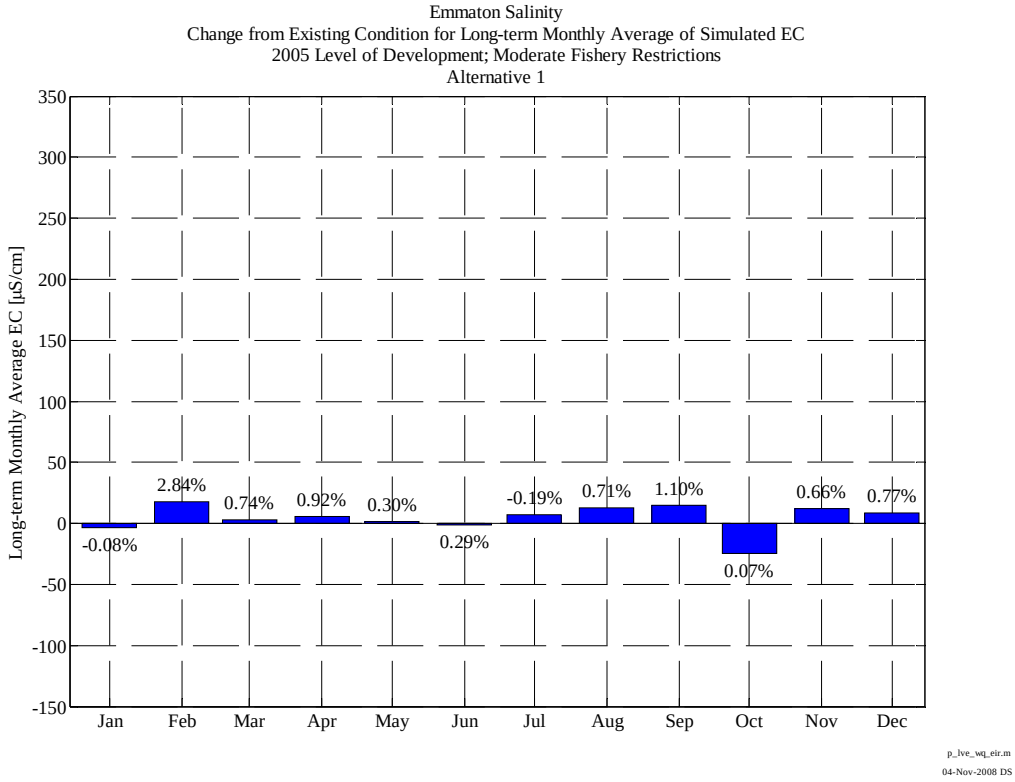
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

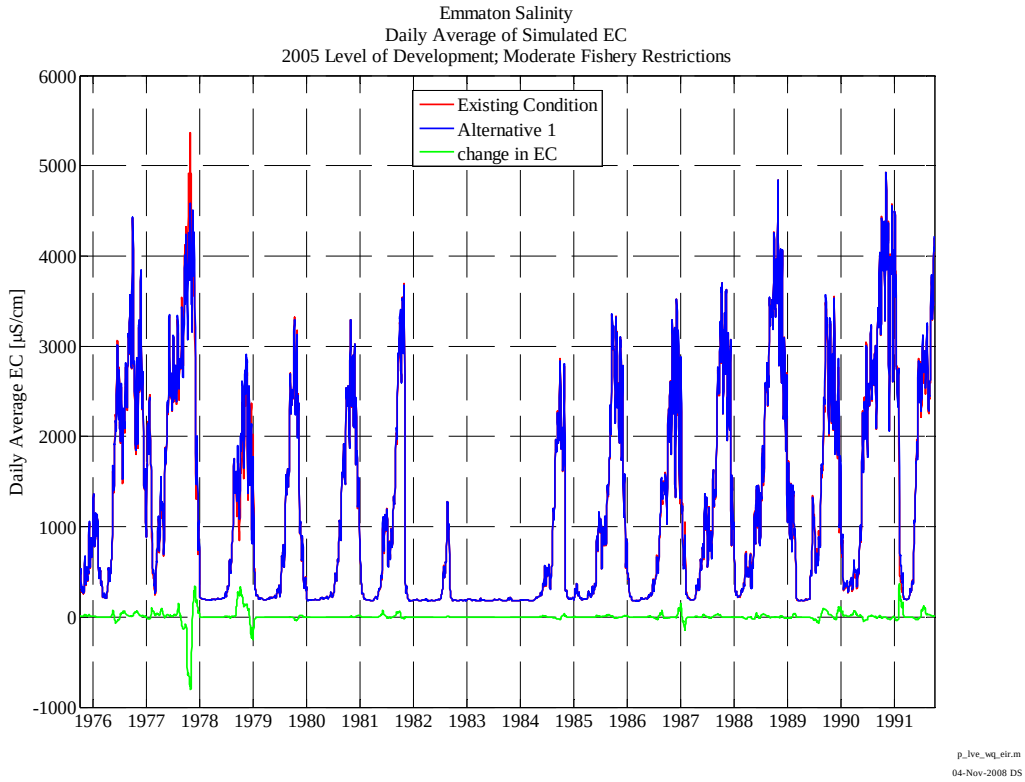
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	346	477	790	1,025	528	233	399	1,283	2,485	2,104	2,565	3,401
1977	2,509	2,999	1,740	1,980	659	761	1,131	1,965	2,703	2,720	2,881	3,425
1978	3,864	3,752	1,321	206	194	192	196	199	224	422	1,180	1,441
1979	2,048	2,394	1,684	436	205	193	206	217	268	554	1,320	2,348
1980	2,667	1,302	474	187	190	191	207	213	239	423	1,045	1,861
1981	2,512	2,515	1,477	321	193	184	208	361	960	789	1,201	2,655
1982	3,130	307	179	193	181	192	180	182	188	343	865	276
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	201	178	180	187	187	182	202	248	425	452	1,202	2,182
1985	2,054	264	202	283	217	197	241	314	906	864	1,269	2,654
1986	2,647	2,387	1,120	320	182	183	203	212	283	466	1,134	1,397
1987	2,112	2,413	2,438	1,143	258	190	279	519	1,020	848	1,303	2,588
1988	3,044	2,800	1,564	323	258	452	491	815	1,133	1,734	2,710	3,480
1989	3,885	3,229	2,202	1,185	1,009	191	184	193	741	682	1,277	2,878
1990	2,638	2,615	1,931	570	340	406	473	1,163	2,260	2,565	2,653	3,284
1991	3,919	3,678	3,648	3,138	750	210	252	913	2,371	2,757	2,656	3,486
Avg	2,360	1,969	1,321	731	346	259	315	561	1,024	1,120	1,591	2,346
W/AN/BN	2,106	1,501	735	247	189	188	197	208	259	407	991	1,383
D/C	2,558	2,332	1,777	1,108	468	314	406	836	1,620	1,674	2,057	3,095

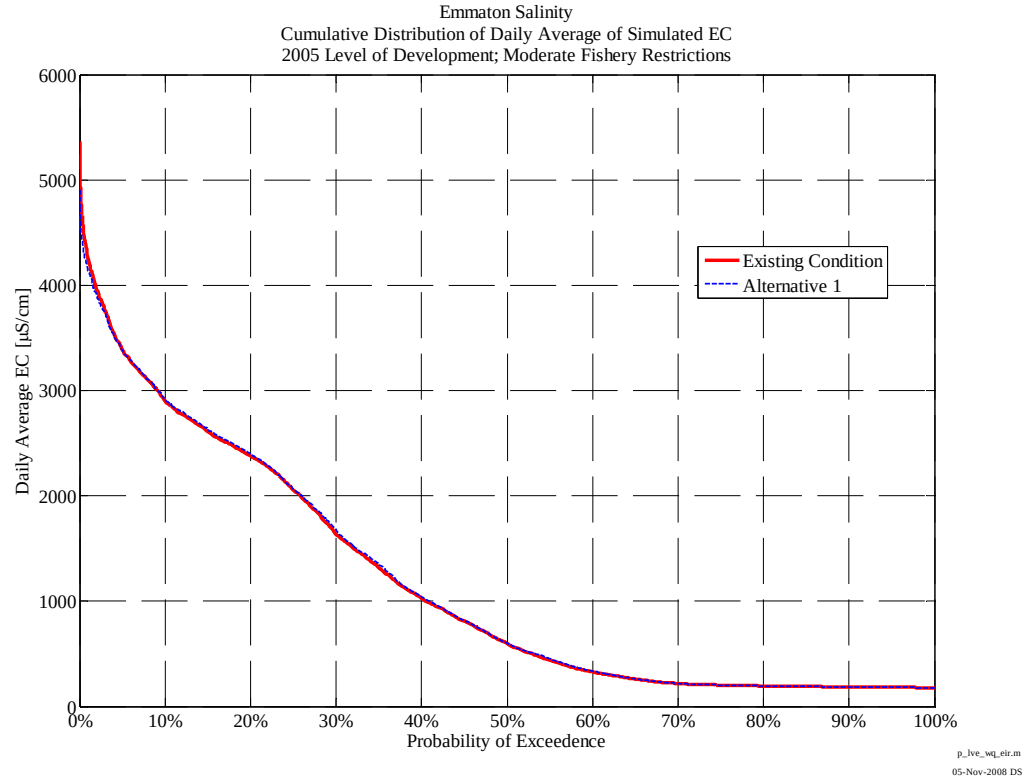
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2.2%	3.0%	1.5%	0.4%	0.2%	0.2%	0.1%	1.3%	-1.7%	2.2%	1.4%	0.2%
1977	2.0%	0.8%	0.5%	-0.8%	10.3%	4.3%	5.1%	0.6%	0.4%	0.8%	1.3%	-3.2%
1978	-14.3%	1.4%	9.6%	0.4%	0.0%	0.0%	0.0%	-0.3%	1.0%	0.2%	0.4%	15.6%
1979	11.9%	5.3%	-7.0%	-6.3%	0.0%	-0.2%	-0.1%	0.3%	-0.1%	-0.2%	-0.1%	-0.1%
1980	-1.0%	0.6%	0.1%	-0.1%	0.0%	0.0%	0.3%	0.2%	-0.3%	-0.3%	0.0%	-0.1%
1981	0.0%	0.0%	0.9%	0.9%	0.1%	0.0%	-0.3%	3.8%	3.5%	-0.8%	0.2%	2.0%
1982	-0.2%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.2%	0.2%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	2.1%	-0.5%	-0.6%	-1.0%
1985	0.5%	0.8%	0.4%	0.6%	0.1%	0.0%	0.1%	-0.3%	1.3%	0.5%	1.5%	0.4%
1986	-0.4%	-0.1%	0.9%	0.9%	0.0%	0.0%	0.2%	0.6%	0.1%	-3.3%	3.4%	-0.8%
1987	-0.4%	-0.1%	2.5%	-2.3%	-6.3%	-0.3%	1.4%	0.0%	1.7%	-0.7%	0.6%	1.0%
1988	0.1%	0.0%	-0.1%	0.0%	0.6%	-2.9%	-0.9%	-1.6%	0.6%	1.5%	0.4%	-0.1%
1989	-0.1%	0.1%	-0.4%	-0.7%	3.0%	0.1%	0.1%	-0.2%	-1.6%	-5.9%	1.1%	2.9%
1990	1.2%	-0.4%	3.8%	6.4%	2.5%	7.1%	8.9%	0.6%	-1.7%	0.2%	0.2%	0.0%
1991	-0.2%	-0.4%	-0.3%	-0.8%	35.0%	3.8%	-0.2%	-1.3%	-0.8%	3.1%	1.3%	0.5%
Avg	0.1%	0.7%	0.8%	-0.1%	2.8%	0.7%	0.9%	0.3%	0.3%	-0.2%	0.7%	1.1%
W/AN/BN	-0.6%	0.9%	0.5%	-0.7%	0.0%	0.0%	0.1%	0.3%	0.4%	-0.6%	0.5%	2.0%
D/C	0.6%	0.4%	1.0%	0.4%	5.1%	1.3%	1.6%	0.3%	0.2%	0.1%	0.9%	0.4%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
-0.08%
2.84%
0.74%
0.92%
0.30%
0.29%
-0.19%
0.71%
1.10%
0.07%
0.66%
0.77%
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

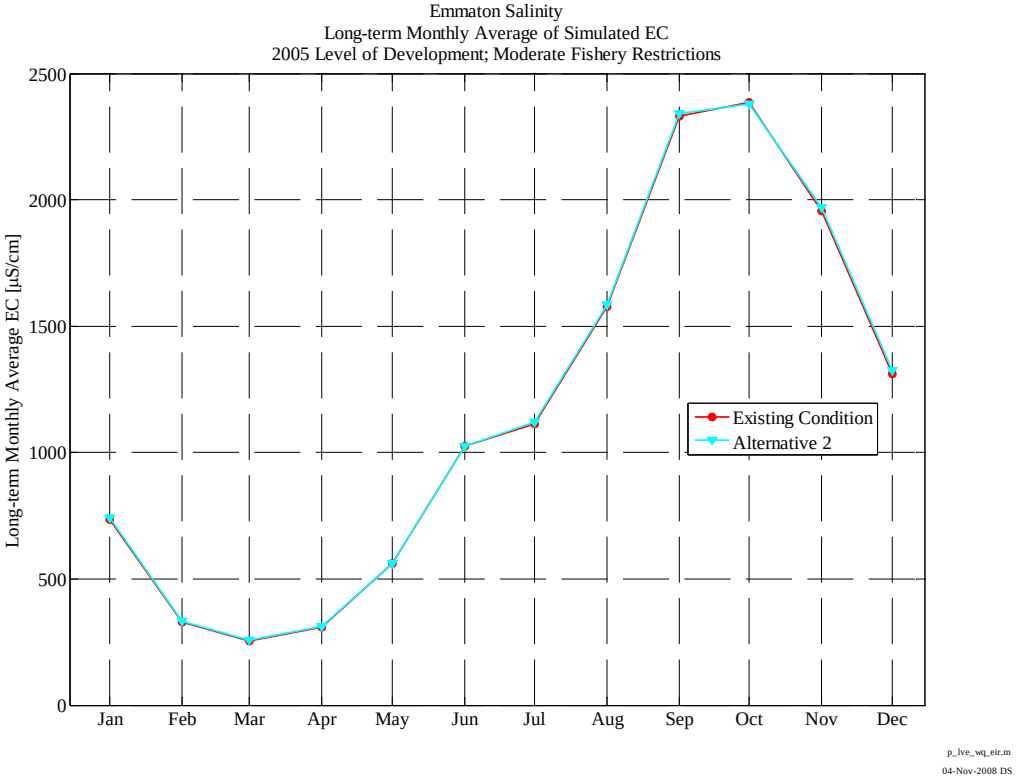
Alternative 2

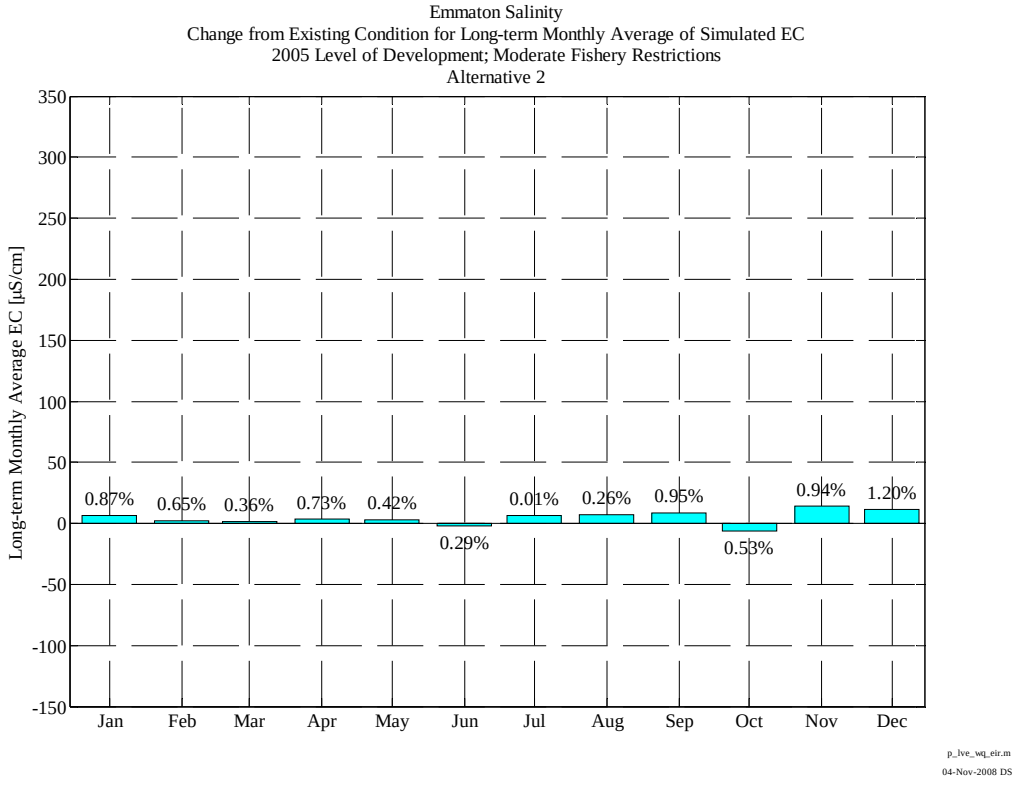
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

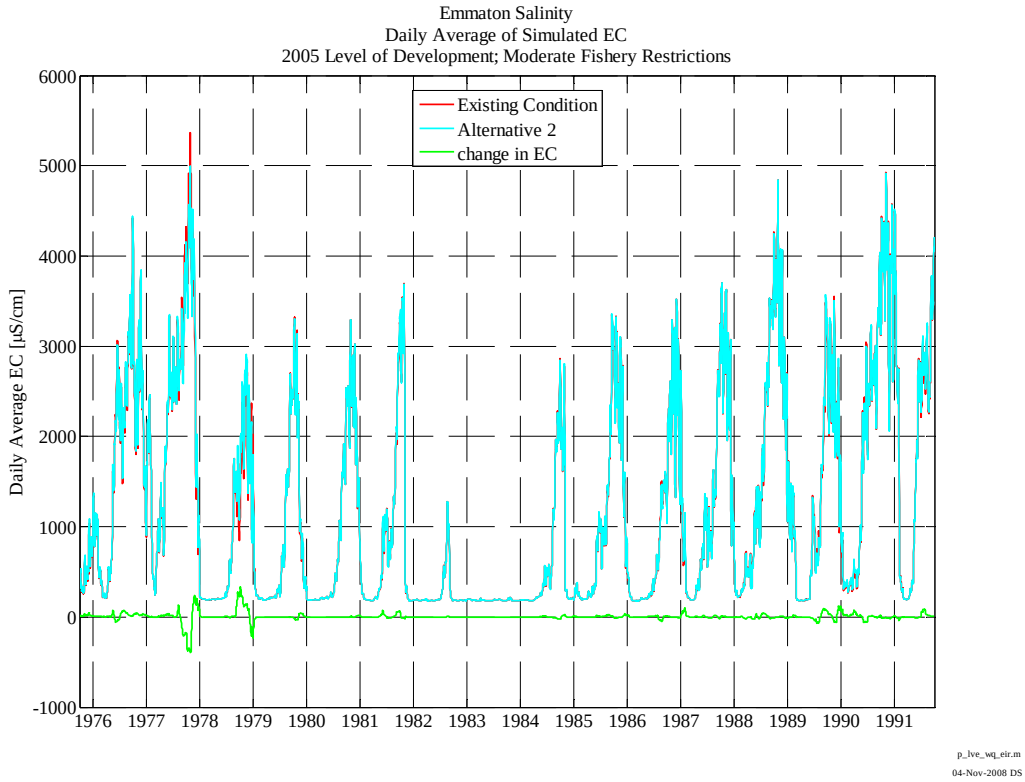
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	349	488	800	1,029	534	236	404	1,287	2,486	2,107	2,576	3,406
1977	2,499	2,999	1,759	2,003	599	731	1,088	1,976	2,708	2,702	2,866	3,351
1978	4,156	3,783	1,336	207	193	192	196	199	224	420	1,181	1,438
1979	2,045	2,393	1,698	439	205	193	206	217	268	554	1,319	2,348
1980	2,671	1,323	487	187	190	191	207	213	239	423	1,044	1,861
1981	2,512	2,515	1,477	321	193	184	207	361	960	788	1,202	2,657
1982	3,131	309	179	193	181	192	180	182	188	343	865	276
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	201	178	180	187	187	182	202	248	425	452	1,202	2,183
1985	2,054	265	203	285	217	197	241	314	906	864	1,269	2,655
1986	2,647	2,387	1,132	324	182	183	203	213	289	493	1,062	1,414
1987	2,124	2,415	2,375	1,226	289	191	278	518	1,011	845	1,303	2,558
1988	3,045	2,801	1,565	325	259	453	491	815	1,122	1,742	2,709	3,472
1989	3,885	3,229	2,207	1,189	994	191	184	193	741	679	1,276	2,878
1990	2,638	2,585	1,936	583	345	408	474	1,164	2,247	2,561	2,652	3,286
1991	3,915	3,680	3,655	3,161	541	202	253	920	2,382	2,742	2,650	3,481
Avg	2,378	1,971	1,323	741	331	257	312	563	1,024	1,119	1,585	2,340
W/AN/BN	2,148	1,508	742	248	189	188	197	208	259	411	981	1,386
D/C	2,558	2,331	1,775	1,125	441	310	402	839	1,618	1,670	2,056	3,083

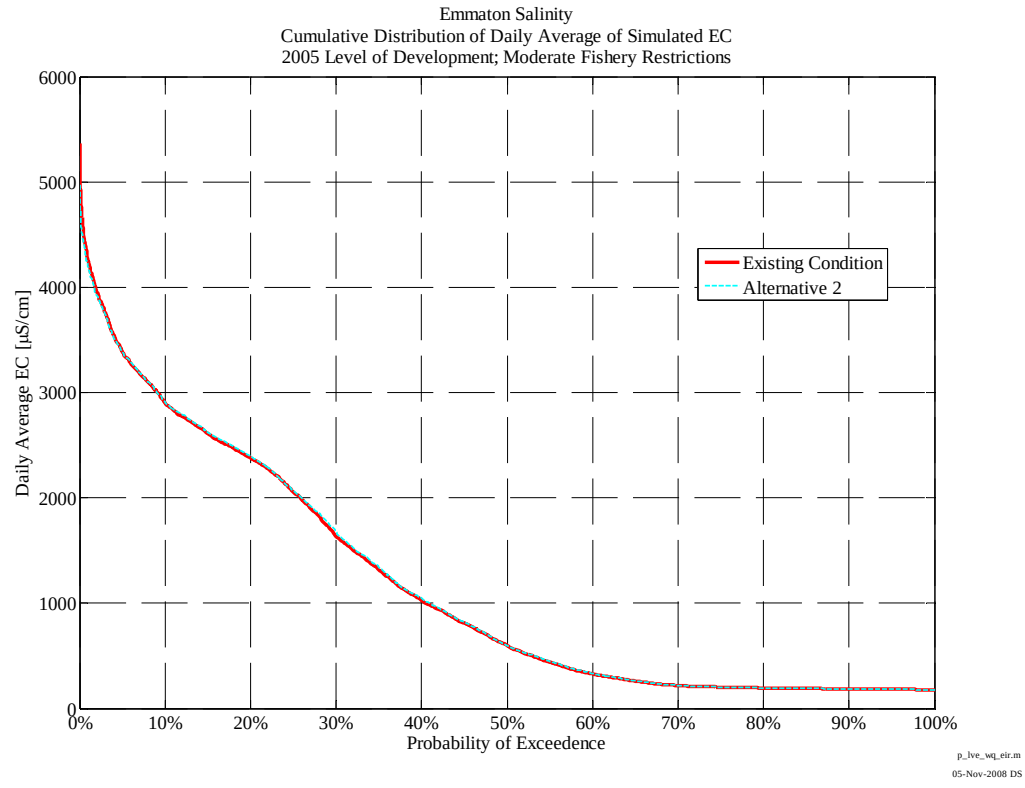
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	2.9%	5.2%	2.9%	0.8%	1.4%	1.4%	1.3%	1.6%	-1.7%	2.3%	1.8%	0.4%
1977	1.5%	0.8%	1.6%	0.4%	0.3%	0.1%	1.2%	1.2%	0.6%	0.1%	0.8%	-5.3%
1978	-7.8%	2.2%	10.8%	0.8%	-0.1%	0.0%	0.0%	-0.2%	1.1%	-0.2%	0.4%	15.4%
1979	11.7%	5.3%	-6.2%	-5.8%	0.0%	-0.2%	-0.1%	0.2%	-0.1%	-0.2%	-0.1%	-0.1%
1980	-0.9%	2.2%	3.0%	0.0%	0.0%	0.0%	0.3%	0.1%	-0.3%	-0.3%	0.0%	-0.1%
1981	0.0%	0.0%	0.9%	0.9%	0.1%	-0.1%	-0.4%	3.7%	3.5%	-1.0%	0.3%	2.1%
1982	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	0.2%	0.2%
1983	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	1.2%	2.1%	-0.5%	-0.6%	-0.9%
1985	0.5%	1.2%	0.8%	1.3%	0.2%	0.0%	0.1%	-0.3%	1.3%	0.5%	1.5%	0.4%
1986	-0.4%	-0.1%	1.9%	2.1%	0.0%	0.0%	0.2%	0.9%	2.0%	2.1%	-3.2%	0.4%
1987	0.2%	0.0%	-0.2%	4.7%	5.0%	0.3%	1.1%	-0.2%	0.9%	-1.0%	0.6%	-0.2%
1988	0.1%	0.0%	0.0%	0.5%	0.8%	-2.9%	-0.9%	-1.5%	-0.4%	2.0%	0.4%	-0.4%
1989	-0.1%	0.1%	-0.2%	-0.4%	1.5%	0.1%	0.1%	-0.1%	-1.6%	-6.3%	1.0%	2.9%
1990	1.2%	-1.5%	4.1%	8.7%	4.1%	7.4%	9.0%	0.6%	-2.3%	0.1%	0.2%	0.1%
1991	-0.3%	-0.3%	-0.1%	-0.1%	-2.6%	-0.3%	-0.1%	-0.5%	-0.3%	2.5%	1.0%	0.3%
Avg	0.5%	0.9%	1.2%	0.9%	0.7%	0.4%	0.7%	0.4%	0.3%	0.0%	0.3%	1.0%
W/AN/BN	0.4%	1.4%	1.4%	-0.4%	0.0%	0.0%	0.1%	0.3%	0.7%	0.1%	-0.5%	2.1%
D/C	0.7%	0.6%	1.1%	1.9%	1.2%	0.7%	1.3%	0.5%	0.0%	-0.1%	0.8%	0.0%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.87%
0.65%
0.36%
0.73%
0.42%
0.29%
0.01%
0.26%
0.95%
0.53%
0.94%
1.20%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

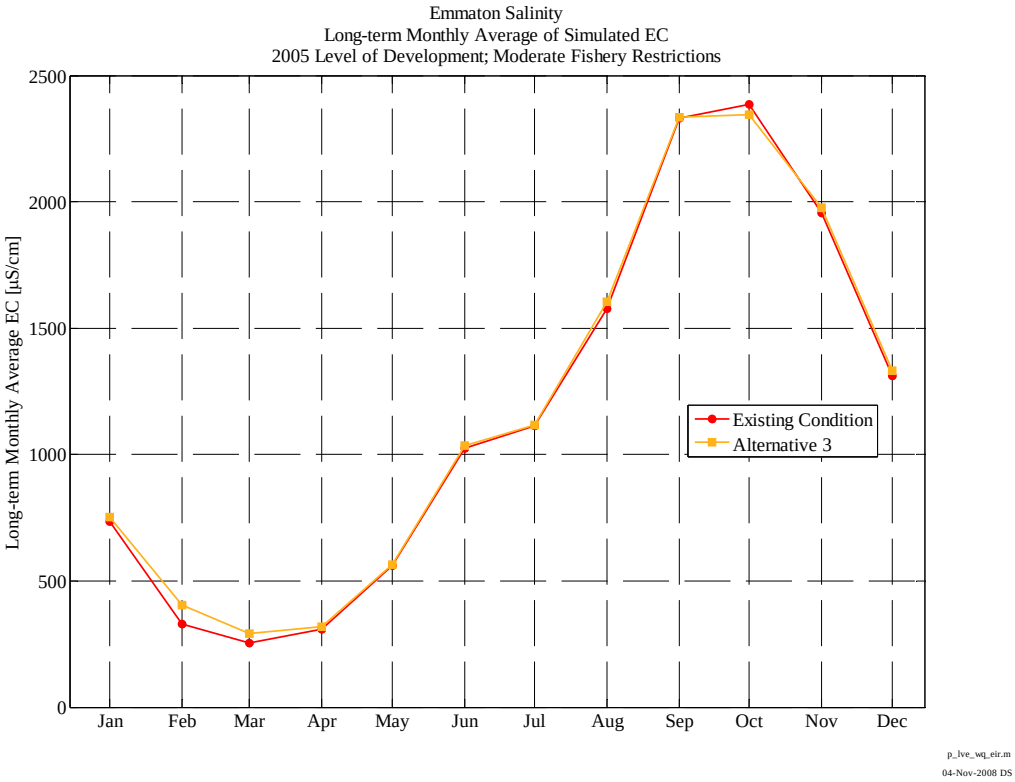
Alternative 3

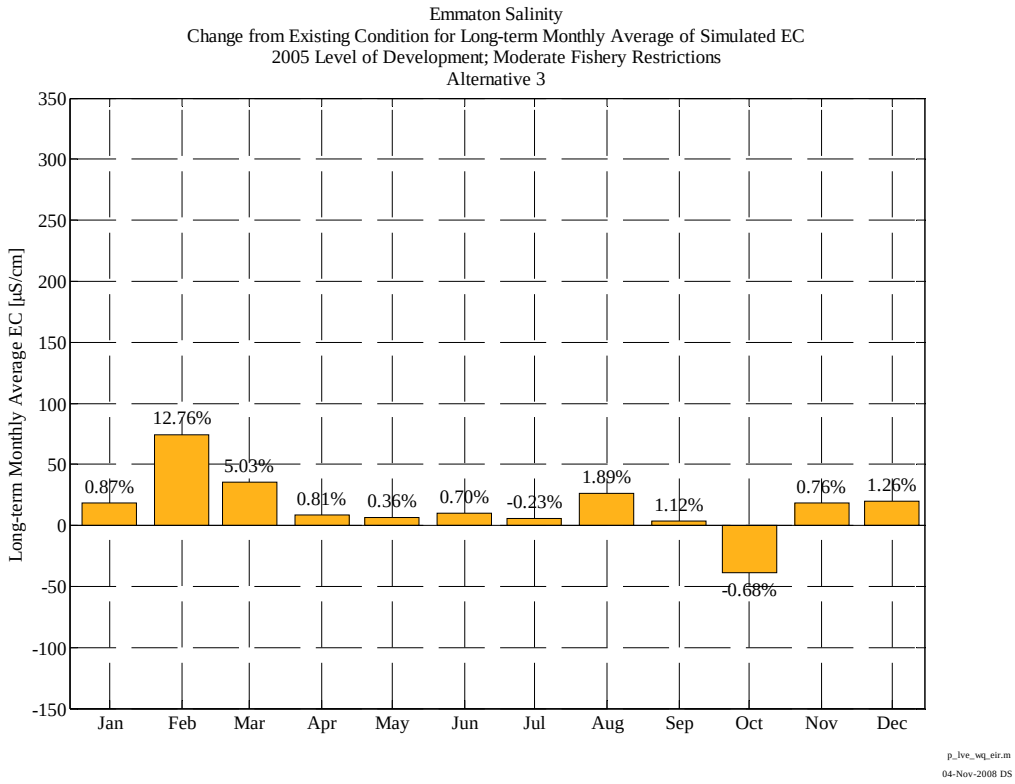
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

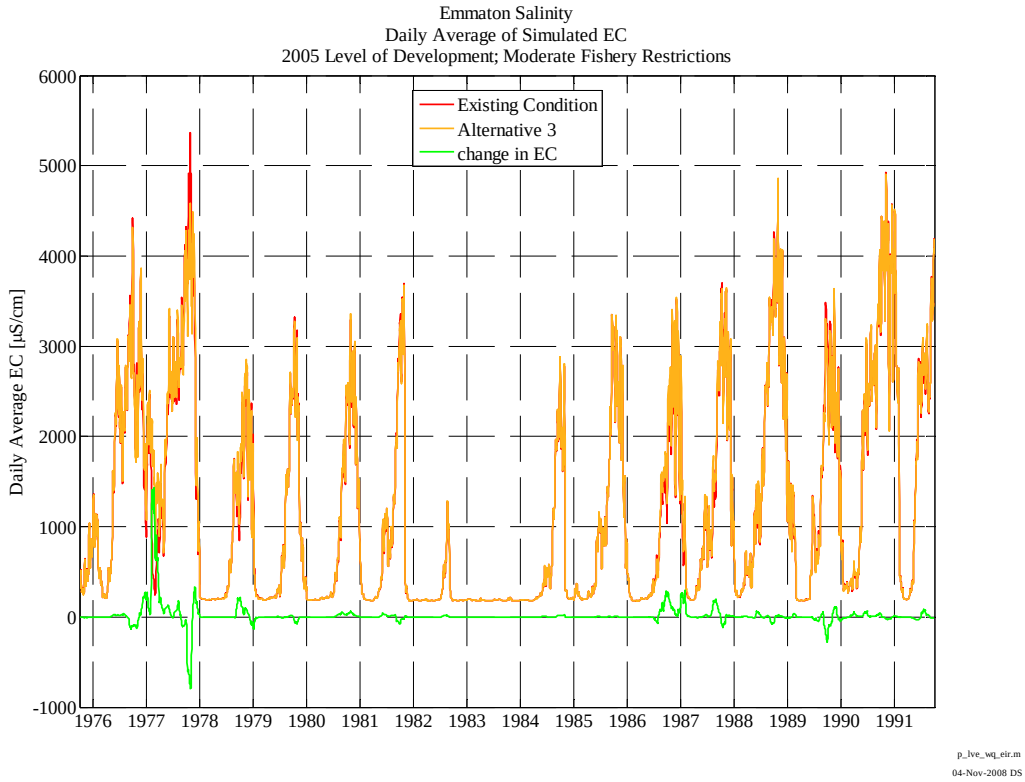
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	335	459	777	1,019	525	232	399	1,285	2,549	2,084	2,538	3,292
1977	2,359	2,999	1,945	2,116	1,737	1,276	1,198	2,055	2,724	2,750	2,901	3,461
1978	3,890	3,735	1,308	206	193	192	196	200	219	419	1,173	1,392
1979	1,939	2,343	1,760	426	204	193	206	216	271	548	1,322	2,363
1980	2,642	1,285	473	187	190	191	206	213	239	433	1,081	1,899
1981	2,555	2,549	1,472	318	193	184	208	354	958	804	1,217	2,550
1982	3,111	313	179	193	182	192	180	182	188	350	877	276
1983	185	184	185	197	186	181	186	182	183	191	191	180
1984	201	178	180	187	187	182	201	246	422	453	1,209	2,217
1985	2,061	264	201	281	217	197	241	311	900	858	1,251	2,646
1986	2,665	2,391	1,109	317	182	183	202	211	282	439	1,177	1,591
1987	2,305	2,486	2,430	1,395	311	191	270	514	1,018	863	1,446	2,649
1988	2,965	2,809	1,576	325	259	472	497	825	1,169	1,702	2,708	3,424
1989	3,890	3,231	2,206	1,188	1,007	190	183	194	744	694	1,274	2,643
1990	2,500	2,702	1,850	518	326	398	455	1,162	2,347	2,568	2,654	3,316
1991	3,925	3,670	3,654	3,169	551	203	251	907	2,362	2,731	2,649	3,459
Avg	2,345	1,975	1,332	753	403	291	317	566	1,036	1,118	1,604	2,335
W/AN/BN	2,090	1,490	742	245	189	188	197	207	258	405	1,004	1,417
D/C	2,544	2,352	1,790	1,148	570	371	411	845	1,641	1,673	2,071	3,049

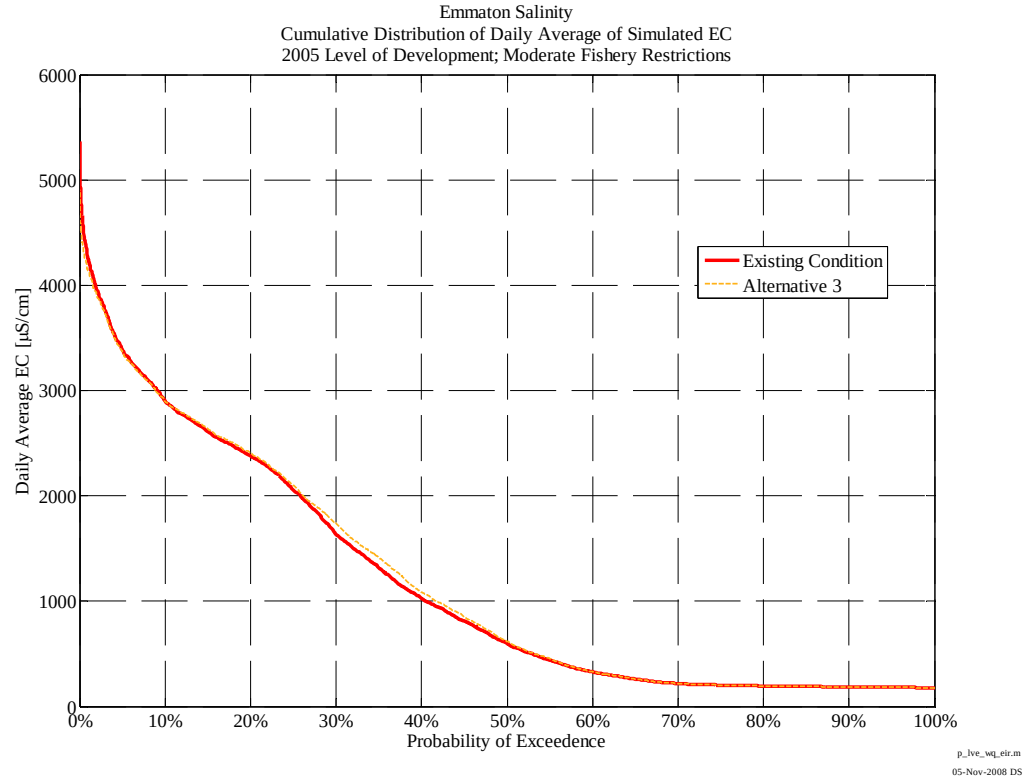
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-1.2%	-0.9%	-0.2%	-0.2%	-0.3%	-0.1%	-0.1%	1.5%	0.8%	1.2%	0.3%	-3.0%
1977	-4.2%	0.7%	12.3%	6.1%	190.8%	74.7%	11.3%	5.2%	1.2%	1.9%	2.0%	-2.2%
1978	-13.7%	0.9%	8.5%	0.2%	-0.1%	0.0%	0.1%	0.2%	-1.3%	-0.4%	-0.3%	11.6%
1979	6.0%	3.1%	-2.8%	-8.4%	-0.4%	-0.2%	-0.1%	0.1%	0.9%	-1.3%	0.1%	0.5%
1980	-2.0%	-0.8%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	2.1%	3.5%	2.0%
1981	1.7%	1.4%	0.5%	0.2%	0.0%	0.0%	0.0%	1.7%	3.3%	1.0%	1.5%	-2.0%
1982	-0.8%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	1.6%	0.4%
1983	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.6%	0.3%	1.2%	-0.2%	0.0%	0.6%
1985	0.9%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	-1.2%	0.6%	-0.2%	0.1%	0.1%
1986	0.3%	0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.3%	0.2%	-0.4%	-8.9%	7.3%	13.0%
1987	8.8%	2.9%	2.2%	19.2%	12.9%	0.4%	-1.7%	-0.9%	1.5%	1.1%	11.7%	3.3%
1988	-2.5%	0.3%	0.7%	0.6%	0.8%	1.2%	0.2%	-0.4%	3.9%	-0.3%	0.4%	-1.8%
1989	0.0%	0.2%	-0.2%	-0.5%	2.8%	-0.2%	0.0%	0.4%	-1.2%	-4.2%	0.9%	-5.5%
1990	-4.1%	2.9%	-0.5%	-3.4%	-1.6%	4.9%	4.7%	0.5%	2.0%	0.3%	0.3%	1.0%
1991	0.0%	-0.6%	-0.2%	0.2%	-0.7%	0.1%	-0.9%	-1.9%	-1.1%	2.1%	1.0%	-0.3%
Avg	-0.7%	0.8%	1.3%	0.9%	12.8%	5.0%	0.8%	0.4%	0.7%	-0.2%	1.9%	1.1%
W/AN/BN	-1.5%	0.7%	0.8%	-1.2%	-0.1%	-0.1%	-0.1%	0.1%	0.0%	-1.0%	1.7%	4.0%
D/C	-0.1%	0.8%	1.6%	2.5%	22.7%	9.0%	1.5%	0.5%	1.2%	0.3%	2.0%	-1.1%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.87%
12.76%
5.03%
0.81%
0.36%
0.70%
-0.23%
1.89%
1.12%
-0.68%
0.76%
1.26%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

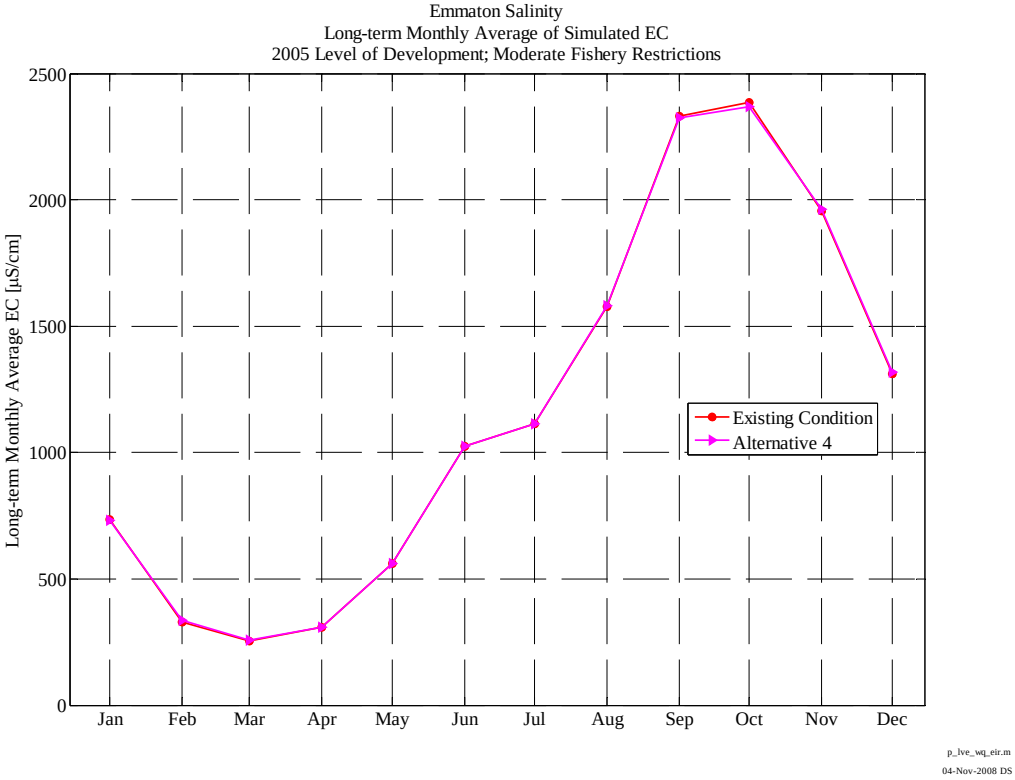
Alternative 4

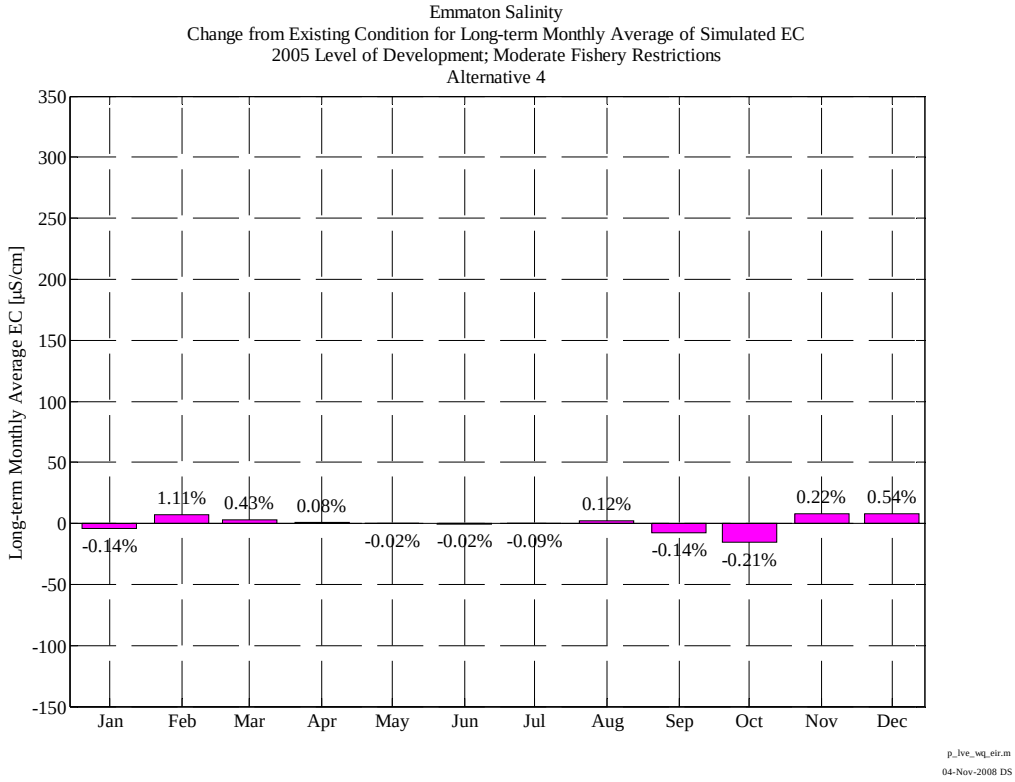
Emmaton Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

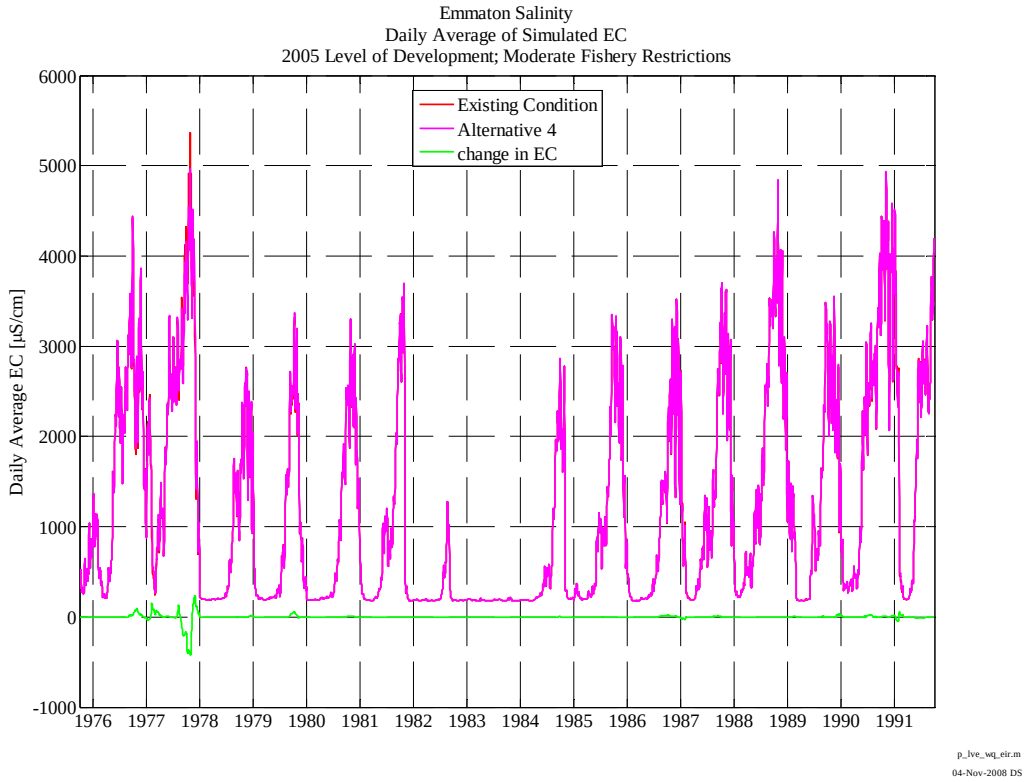
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	339	464	778	1,021	527	233	399	1,266	2,529	2,060	2,529	3,409
1977	2,528	3,015	1,733	1,970	683	777	1,083	1,957	2,691	2,694	2,865	3,350
1978	4,133	3,777	1,283	206	193	193	196	200	222	419	1,176	1,247
1979	1,831	2,271	1,821	467	205	193	206	216	269	551	1,321	2,379
1980	2,731	1,290	473	187	190	191	206	213	239	425	1,046	1,864
1981	2,517	2,519	1,466	318	193	184	208	348	928	795	1,198	2,601
1982	3,134	309	179	193	182	192	180	182	188	344	864	275
1983	185	184	184	197	186	181	186	182	183	191	191	180
1984	201	178	180	187	188	182	202	245	417	454	1,209	2,205
1985	2,042	262	201	281	217	197	241	314	895	859	1,250	2,645
1986	2,658	2,390	1,110	318	182	183	203	211	283	480	1,104	1,419
1987	2,135	2,421	2,376	1,152	271	190	275	519	1,003	852	1,298	2,574
1988	3,043	2,801	1,565	323	257	466	495	828	1,126	1,708	2,699	3,485
1989	3,889	3,225	2,211	1,194	985	190	183	194	753	723	1,264	2,796
1990	2,604	2,627	1,883	541	332	379	436	1,155	2,304	2,580	2,650	3,281
1991	3,929	3,694	3,669	3,137	580	203	253	919	2,379	2,665	2,623	3,471
Avg	2,369	1,964	1,320	731	336	258	310	559	1,025	1,112	1,580	2,324
W/AN/BN	2,125	1,486	747	251	189	188	197	207	257	409	987	1,367
D/C	2,558	2,336	1,765	1,104	449	313	397	833	1,623	1,660	2,042	3,068

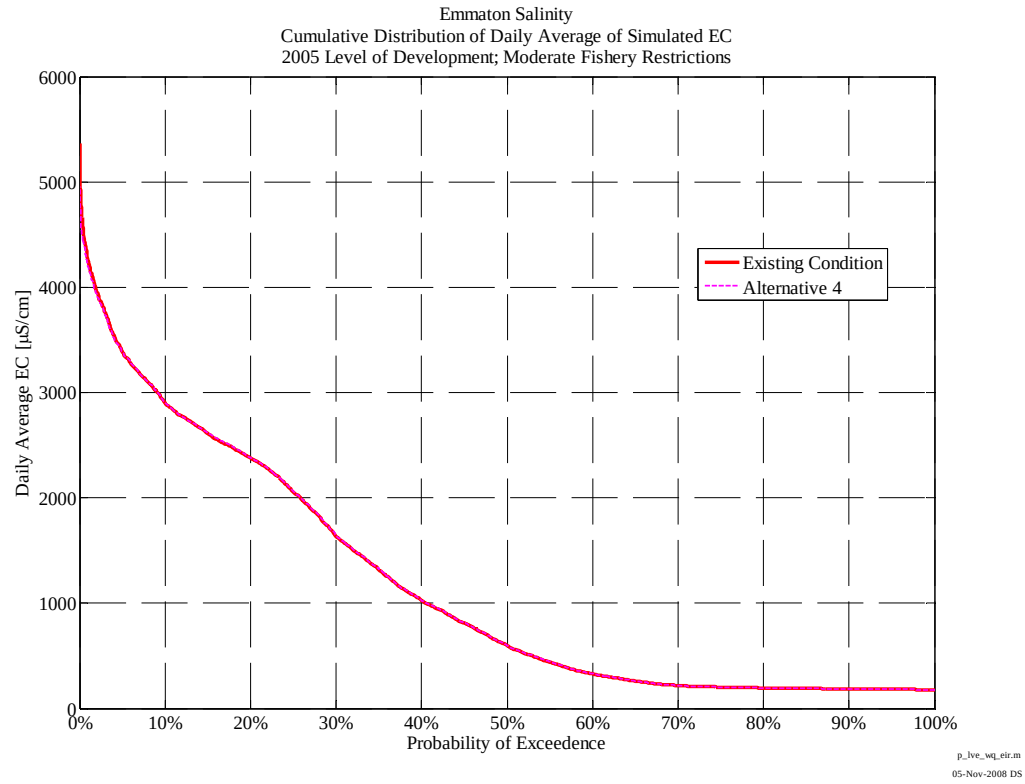
Percent (%) Change from Existing Condition for Emmaton Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.5%
1977	2.7%	1.3%	0.1%	-1.2%	14.4%	6.4%	0.7%	0.2%	0.0%	-0.2%	0.7%	-5.3%
1978	-8.4%	2.0%	6.4%	0.2%	-0.1%	0.0%	0.0%	0.1%	0.0%	-0.3%	0.0%	0.0%
1979	0.0%	-0.1%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.6%	0.1%	1.2%
1980	1.3%	-0.4%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1981	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%
1982	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.6%	0.7%
1987	0.7%	0.2%	-0.1%	-1.6%	-1.4%	-0.1%	0.1%	0.0%	0.0%	-0.2%	0.3%	0.4%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.1%	0.2%	0.0%	-0.1%	0.1%	0.0%
1990	-0.1%	0.1%	1.2%	1.0%	0.1%	0.0%	0.3%	-0.1%	0.2%	0.8%	0.1%	-0.1%
1991	0.1%	0.1%	0.3%	-0.8%	4.4%	0.5%	0.1%	-0.6%	-0.5%	-0.3%	0.0%	0.0%
Avg	-0.2%	0.2%	0.5%	-0.1%	1.1%	0.4%	0.1%	0.0%	0.0%	-0.1%	0.1%	-0.1%
W/AN/BN	-1.0%	0.2%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.1%	0.3%
D/C	0.4%	0.2%	0.2%	-0.3%	2.0%	0.8%	0.1%	0.0%	0.0%	0.0%	0.1%	-0.5%


Emmaton Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.14%
1.11%
0.43%
0.08%
-0.02%
-0.02%
-0.09%
0.12%
-0.14%
-0.21%
0.22%
0.54%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
-1000
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Emmaton Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
6000
5000
4000
3000
2000
1000
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Jersey Point

Existing Condition

Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	344	513	1,209	1,343	727	280	278	765	1,763	2,143	2,118	2,996
1977	2,686	2,709	2,272	1,809	750	484	724	1,045	1,840	1,758	1,888	2,480
1978	2,763	2,493	1,384	334	256	268	274	252	228	285	789	1,441
1979	1,784	2,509	2,479	711	276	239	238	248	231	536	1,297	2,483
1980	2,679	1,799	843	265	289	286	263	247	235	280	862	1,957
1981	2,070	2,136	2,454	838	239	205	221	305	613	1,400	1,734	2,303
1982	2,846	1,059	208	241	229	244	218	200	203	253	770	323
1983	187	203	246	315	298	262	243	230	226	219	200	186
1984	192	195	235	254	230	206	230	266	300	411	831	2,103
1985	2,278	806	243	320	265	220	241	300	597	1,339	1,708	2,514
1986	2,614	2,618	1,877	510	263	272	250	225	235	311	878	1,513
1987	1,607	2,035	2,502	1,471	459	232	242	399	695	1,349	1,794	2,336
1988	2,472	2,414	2,473	819	276	319	381	560	718	1,236	1,730	2,335
1989	2,561	2,672	2,105	1,657	938	267	203	211	484	1,315	1,815	2,492
1990	2,873	2,625	2,276	910	358	327	342	647	1,411	2,024	1,882	2,254
1991	2,701	2,458	2,619	2,132	739	271	236	574	1,395	1,906	1,835	2,324
Avg	2,041	1,828	1,589	870	412	274	286	405	698	1,048	1,383	2,003
W/AN/BN	1,867	1,554	1,039	375	263	254	245	239	237	328	804	1,430
D/C	2,177	2,041	2,017	1,255	528	289	319	534	1,057	1,608	1,834	2,448

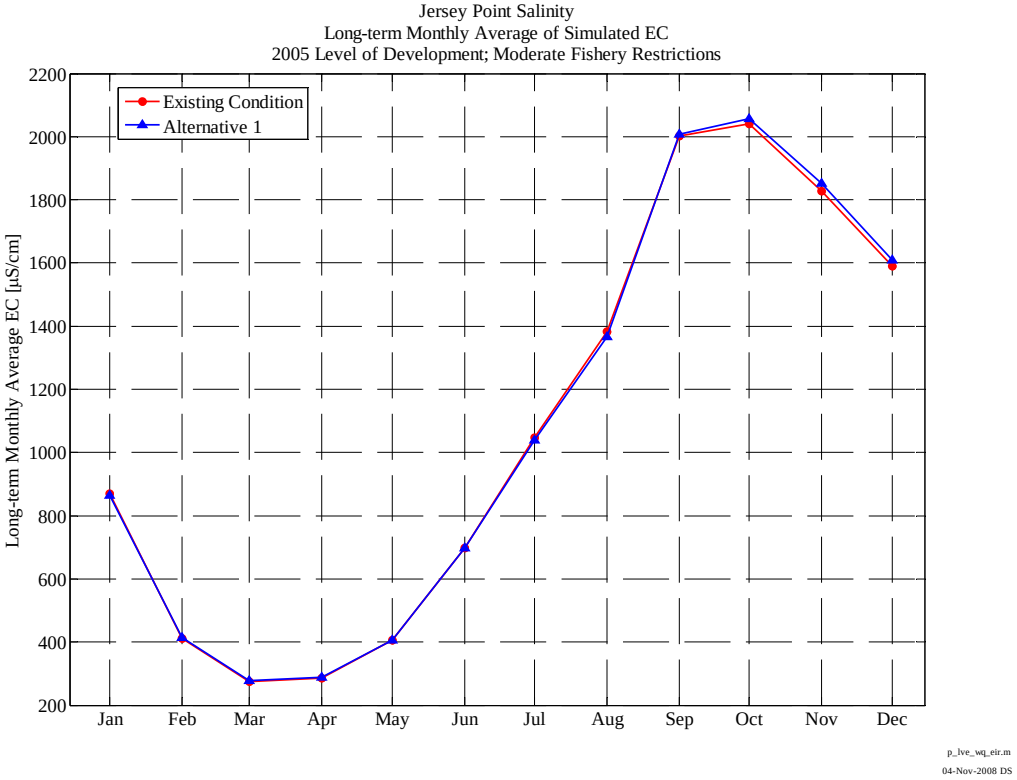
Alternative 1

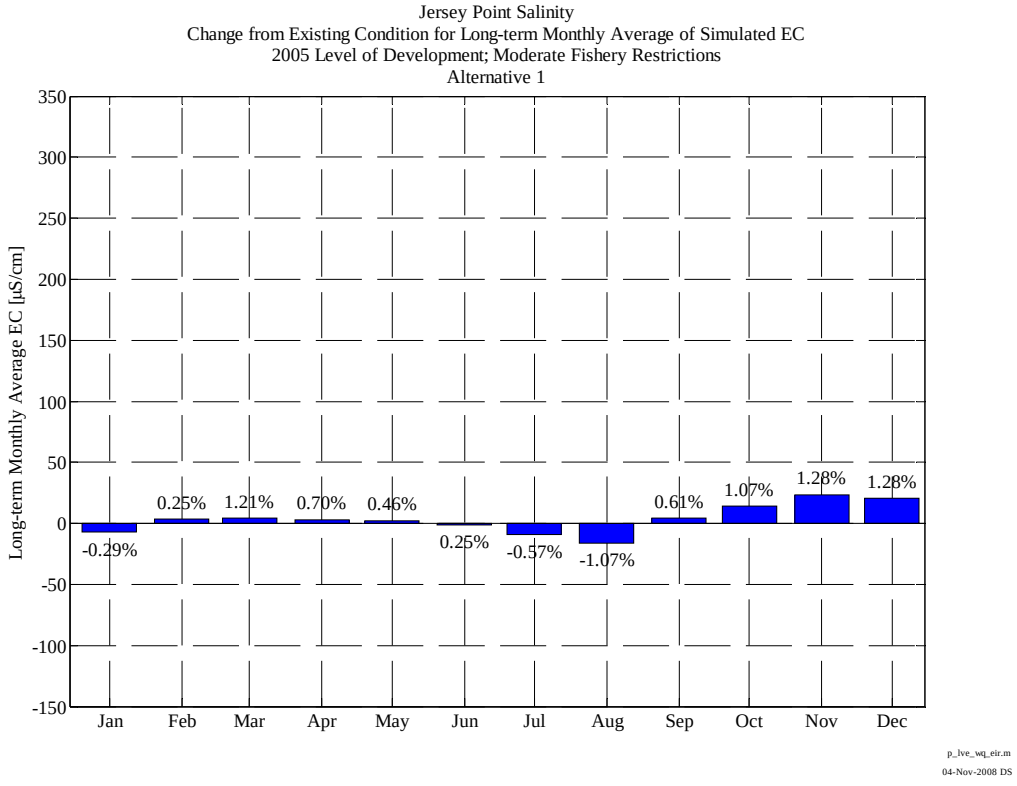
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	357	537	1,232	1,351	730	281	278	769	1,722	2,132	2,111	2,968
1977	2,673	2,729	2,254	1,789	769	500	736	1,039	1,827	1,743	1,712	2,295
1978	2,687	2,629	1,549	343	256	267	273	250	226	287	792	1,713
1979	2,069	2,691	2,379	657	273	237	238	246	230	528	1,287	2,494
1980	2,670	1,828	840	262	289	285	265	245	235	280	863	1,956
1981	2,070	2,137	2,492	853	240	205	219	312	627	1,390	1,735	2,277
1982	2,843	1,062	208	242	229	244	218	200	203	253	774	324
1983	187	203	246	315	298	262	244	229	226	219	200	186
1984	192	195	235	254	230	206	230	265	301	410	826	2,089
1985	2,299	823	246	323	265	220	242	300	595	1,327	1,706	2,530
1986	2,633	2,629	1,905	518	262	271	252	225	234	312	823	1,480
1987	1,599	2,032	2,682	1,363	400	229	244	425	708	1,336	1,803	2,345
1988	2,470	2,414	2,472	820	276	323	378	574	747	1,236	1,738	2,330
1989	2,557	2,678	2,094	1,643	943	268	203	213	496	1,295	1,811	2,567
1990	2,890	2,583	2,306	959	370	361	368	651	1,399	2,012	1,845	2,213
1991	2,692	2,444	2,610	2,118	817	289	237	566	1,380	1,860	1,850	2,338
Avg	2,055	1,851	1,609	863	415	278	289	407	697	1,039	1,367	2,007
W/AN/BN	1,897	1,605	1,052	370	262	253	246	237	236	327	795	1,463
D/C	2,179	2,042	2,043	1,246	534	297	323	539	1,056	1,592	1,812	2,429

Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	3.6%	4.7%	1.9%	0.6%	0.4%	0.4%	0.1%	0.5%	-2.4%	-0.5%	-0.4%	-0.9%
1977	-0.5%	0.8%	-0.8%	-1.1%	2.6%	3.4%	1.7%	-0.6%	-0.7%	-0.8%	-9.3%	-7.5%
1978	-2.8%	5.4%	12.0%	2.9%	0.1%	-0.3%	-0.1%	-0.9%	-0.9%	0.8%	0.4%	18.8%
1979	16.0%	7.3%	-4.0%	-7.5%	-1.1%	-0.8%	-0.1%	-0.8%	-0.5%	-1.4%	-0.8%	0.4%
1980	-0.3%	1.6%	-0.5%	-0.9%	-0.1%	-0.1%	0.8%	-0.8%	-0.3%	0.0%	0.1%	0.0%
1981	0.0%	0.0%	1.5%	1.8%	0.5%	-0.3%	-1.0%	2.2%	2.3%	-0.7%	0.0%	-1.2%
1982	-0.1%	0.3%	0.0%	0.5%	0.0%	-0.1%	0.0%	-0.4%	0.1%	0.1%	0.5%	0.4%
1983	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.2%	-0.4%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	-0.1%	-0.1%	0.0%	-0.1%	0.0%	0.0%	-0.6%	0.4%	-0.4%	-0.6%	-0.7%
1985	0.9%	2.1%	1.2%	0.9%	0.2%	0.1%	0.2%	0.2%	-0.4%	-0.8%	-0.1%	0.6%
1986	0.7%	0.4%	1.5%	1.6%	0.0%	-0.4%	0.6%	-0.2%	-0.1%	0.3%	-6.3%	-2.2%
1987	-0.5%	-0.2%	7.2%	-7.4%	-12.9%	-1.3%	0.9%	6.5%	1.9%	-0.9%	0.5%	0.4%
1988	-0.1%	0.0%	-0.1%	0.2%	0.0%	1.4%	-0.9%	2.5%	4.1%	0.1%	0.5%	-0.2%
1989	-0.2%	0.2%	-0.5%	-0.8%	0.6%	0.4%	0.3%	0.8%	2.4%	-1.5%	-0.2%	3.0%
1990	0.6%	-1.6%	1.3%	5.3%	3.4%	10.2%	7.8%	0.5%	-0.8%	-0.6%	-2.0%	-1.8%
1991	-0.4%	-0.6%	-0.3%	-0.7%	10.5%	6.7%	0.7%	-1.4%	-1.0%	-2.4%	0.8%	0.6%
Avg	1.1%	1.3%	1.3%	-0.3%	0.2%	1.2%	0.7%	0.5%	0.2%	-0.6%	-1.1%	0.6%
W/AN/BN	1.9%	2.1%	1.3%	-0.5%	-0.2%	-0.2%	0.2%	-0.6%	-0.2%	-0.1%	-1.0%	2.4%
D/C	0.4%	0.6%	1.3%	-0.1%	0.6%	2.3%	1.1%	1.3%	0.6%	-0.9%	-1.1%	-0.8%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.29%
0.25%
1.21%
0.70%
0.46%
0.25%
-0.57%
-1.07%
0.61%
1.07%
1.28%
1.28%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
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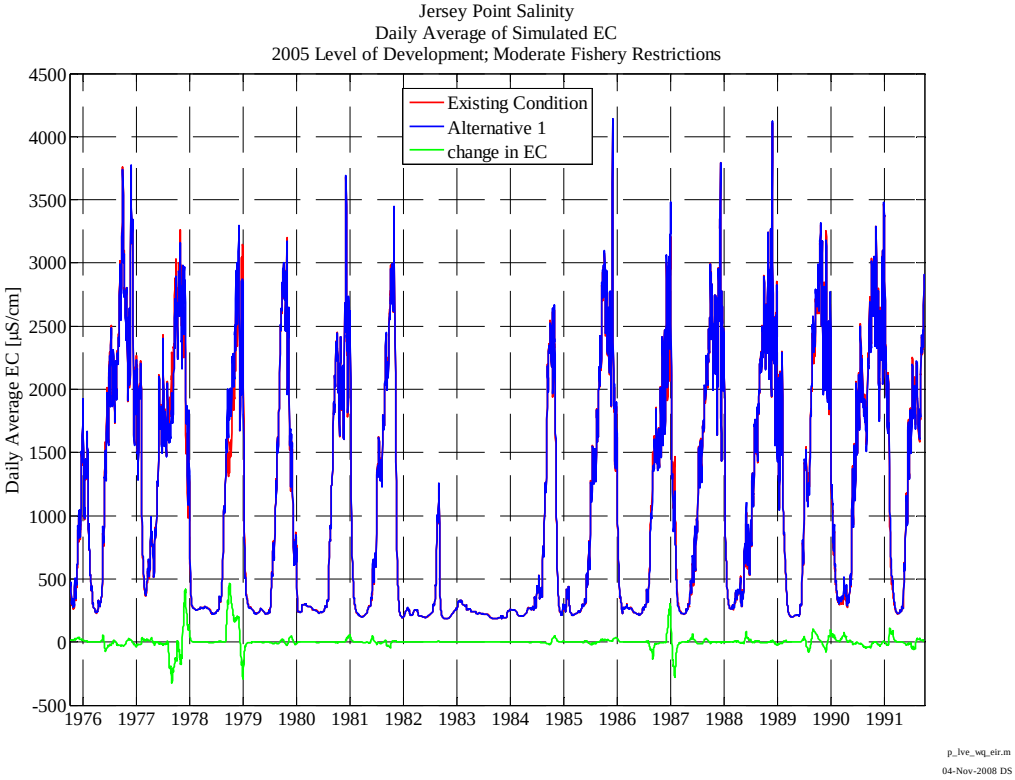
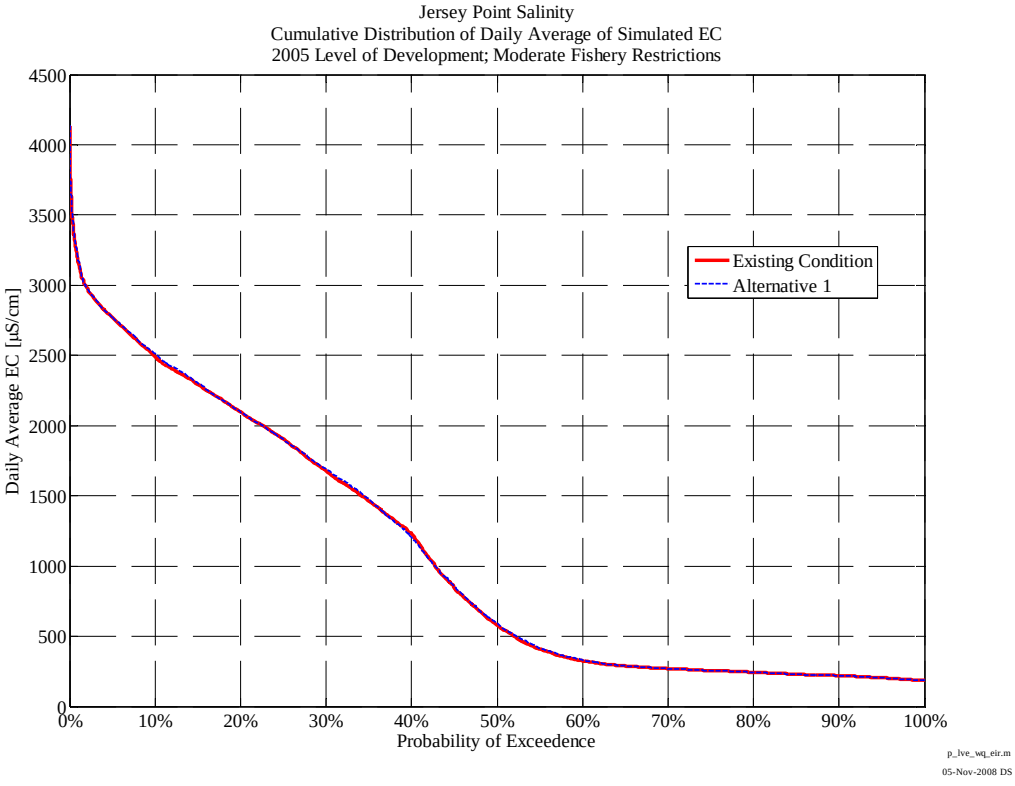
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

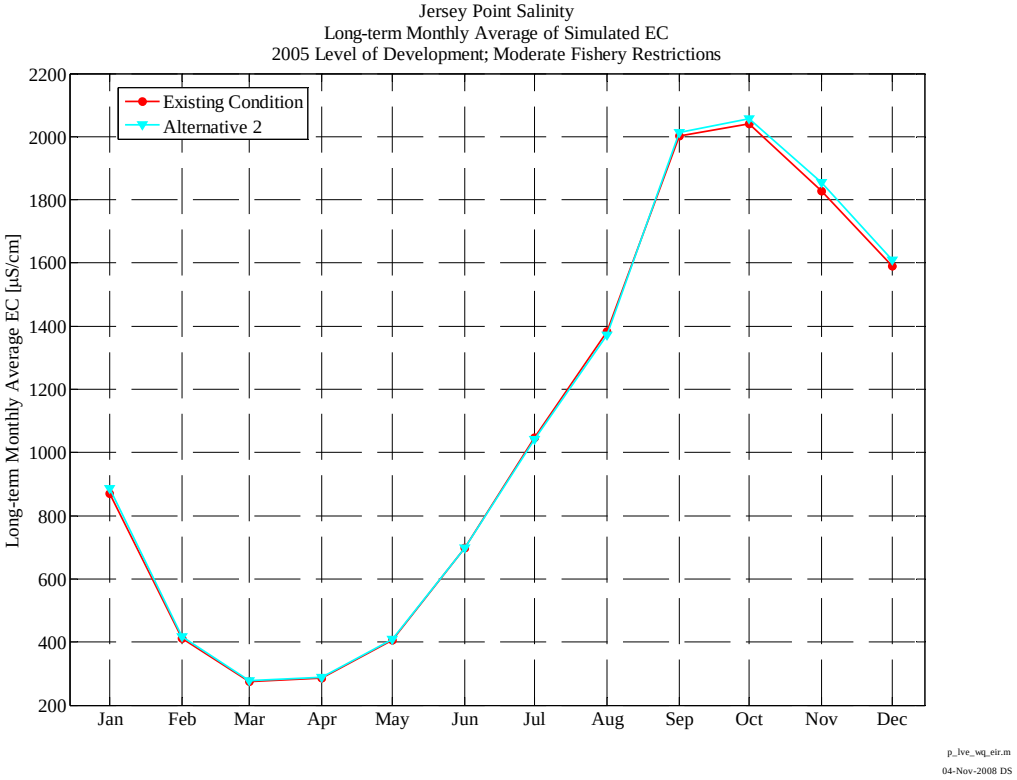
Alternative 2

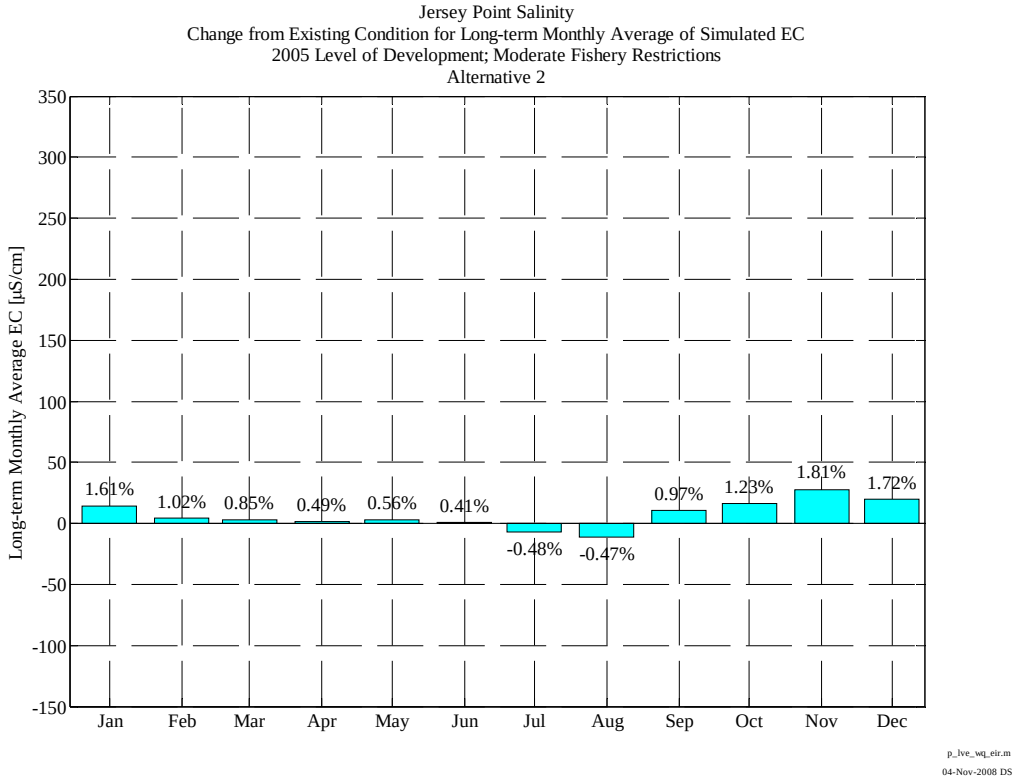
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

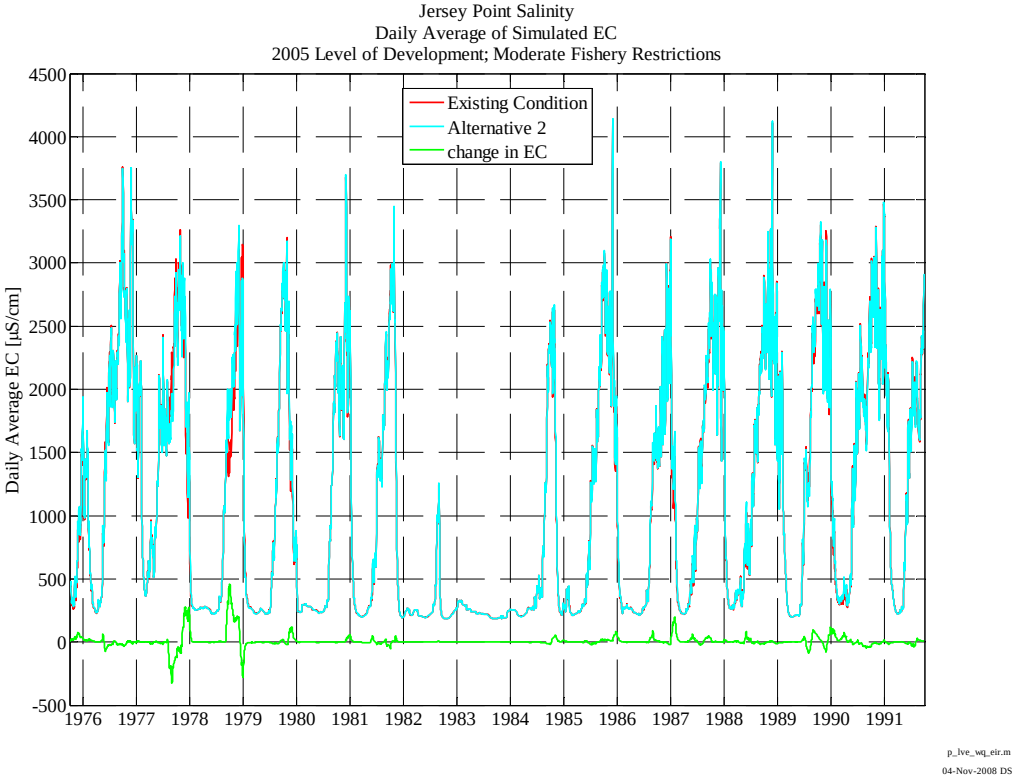
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	361	556	1,252	1,357	743	287	280	771	1,724	2,127	2,113	2,977
1977	2,668	2,712	2,268	1,813	749	484	715	1,045	1,832	1,759	1,710	2,317
1978	2,698	2,613	1,600	355	255	267	273	250	226	287	793	1,710
1979	2,065	2,691	2,379	661	273	237	238	246	230	528	1,288	2,493
1980	2,671	1,880	879	264	288	285	265	245	234	280	862	1,956
1981	2,070	2,137	2,492	853	240	204	218	311	627	1,389	1,735	2,278
1982	2,843	1,078	209	241	229	244	218	200	203	253	774	324
1983	187	203	246	315	298	262	244	229	226	219	200	186
1984	192	195	235	254	230	205	230	265	301	410	826	2,089
1985	2,299	832	249	326	266	220	242	300	595	1,327	1,706	2,530
1986	2,634	2,631	1,936	529	262	271	252	225	235	311	911	1,538
1987	1,613	2,034	2,490	1,593	506	236	244	425	715	1,336	1,802	2,375
1988	2,480	2,416	2,476	829	276	323	378	574	748	1,233	1,729	2,322
1989	2,558	2,678	2,100	1,650	938	268	203	214	496	1,295	1,804	2,567
1990	2,897	2,586	2,314	990	380	363	369	651	1,402	2,018	1,850	2,216
1991	2,687	2,447	2,617	2,129	729	269	235	570	1,388	1,879	1,850	2,334
Avg	2,058	1,856	1,609	885	416	277	288	408	699	1,041	1,372	2,013
W/AN/BN	1,899	1,613	1,069	374	262	253	246	237	236	327	808	1,471
D/C	2,181	2,044	2,029	1,282	536	295	320	540	1,058	1,596	1,811	2,435

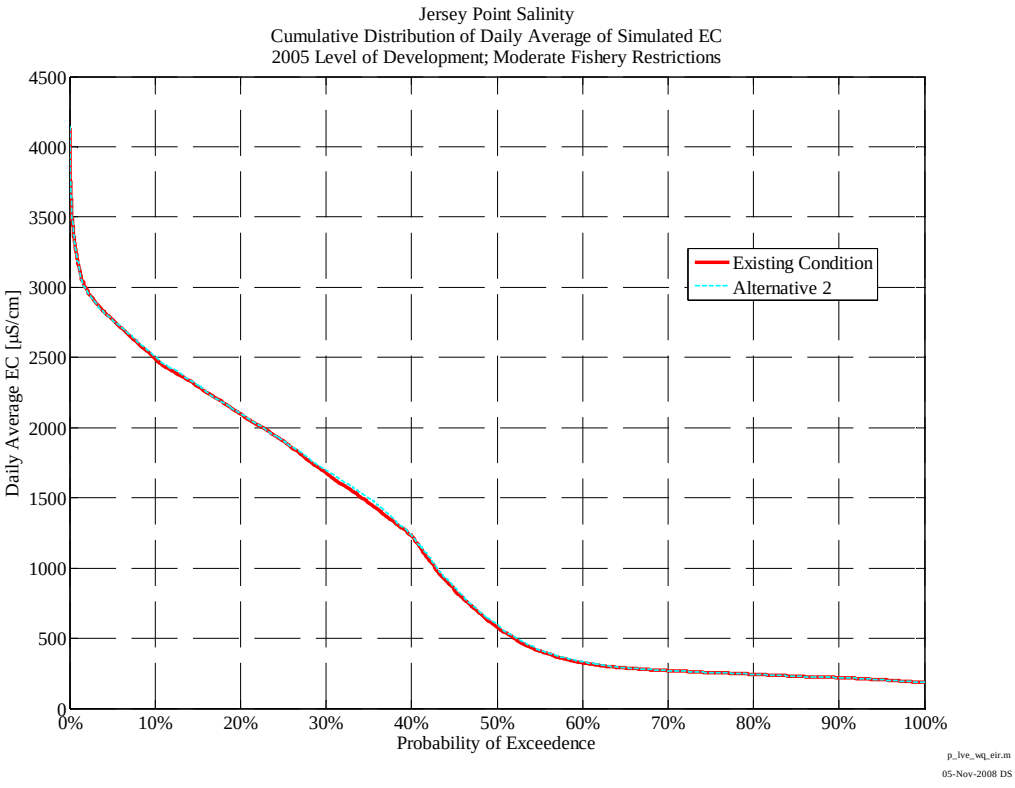
Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	5.0%	8.6%	3.6%	1.1%	2.3%	2.6%	0.8%	0.7%	-2.2%	-0.8%	-0.3%	-0.6%
1977	-0.7%	0.1%	-0.2%	0.2%	-0.1%	0.0%	-1.1%	0.0%	-0.4%	0.1%	-9.4%	-6.6%
1978	-2.4%	4.8%	15.7%	6.4%	0.0%	-0.3%	-0.1%	-0.8%	-0.6%	0.9%	0.5%	18.6%
1979	15.7%	7.3%	-4.0%	-7.0%	-1.2%	-0.9%	-0.2%	-0.8%	-0.5%	-1.4%	-0.7%	0.4%
1980	-0.3%	4.5%	4.2%	-0.2%	-0.4%	-0.1%	0.8%	-0.9%	-0.4%	0.0%	0.1%	0.0%
1981	0.0%	0.0%	1.5%	1.8%	0.5%	-0.4%	-1.3%	2.1%	2.3%	-0.8%	0.1%	-1.1%
1982	-0.1%	1.8%	0.4%	0.1%	-0.2%	-0.1%	0.0%	-0.4%	0.1%	0.1%	0.5%	0.4%
1983	0.0%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	0.2%	-0.4%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	-0.1%	-0.1%	-0.1%	-0.2%	-0.2%	-0.1%	-0.6%	0.4%	-0.4%	-0.6%	-0.6%
1985	0.9%	3.2%	2.4%	2.0%	0.4%	0.1%	0.2%	0.2%	-0.4%	-0.8%	-0.1%	0.6%
1986	0.7%	0.5%	3.1%	3.8%	-0.1%	-0.4%	0.6%	-0.1%	0.1%	0.0%	3.8%	1.6%
1987	0.3%	0.0%	-0.5%	8.3%	10.4%	1.5%	1.0%	6.4%	3.0%	-0.9%	0.5%	1.7%
1988	0.3%	0.1%	0.1%	1.3%	0.2%	1.4%	-0.9%	2.6%	4.1%	-0.2%	-0.1%	-0.6%
1989	-0.1%	0.2%	-0.2%	-0.4%	0.0%	0.2%	0.3%	1.0%	2.4%	-1.5%	-0.6%	3.0%
1990	0.9%	-1.5%	1.7%	8.7%	6.1%	10.8%	7.9%	0.6%	-0.6%	-0.3%	-1.7%	-1.7%
1991	-0.5%	-0.4%	-0.1%	-0.2%	-1.3%	-0.6%	-0.3%	-0.8%	-0.5%	-1.4%	0.8%	0.4%
Avg	1.2%	1.8%	1.7%	1.6%	1.0%	0.9%	0.5%	0.6%	0.4%	-0.5%	-0.5%	1.0%
W/AN/BN	2.0%	2.7%	2.7%	0.4%	-0.3%	-0.3%	0.2%	-0.6%	-0.1%	-0.1%	0.5%	2.9%
D/C	0.7%	1.1%	0.9%	2.5%	2.1%	1.7%	0.7%	1.4%	0.8%	-0.7%	-1.2%	-0.5%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.61%
1.02%
0.85%
0.49%
0.56%
0.41%
-0.48%
-0.47%
0.97%
1.23%
1.81%
1.72%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

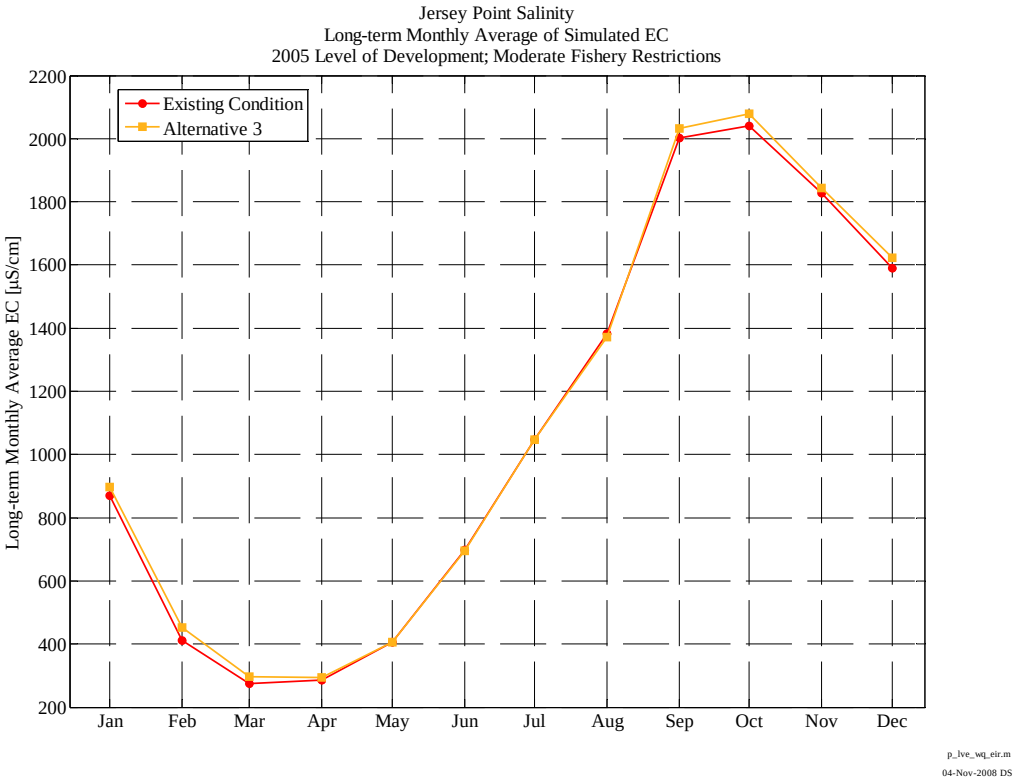
Alternative 3

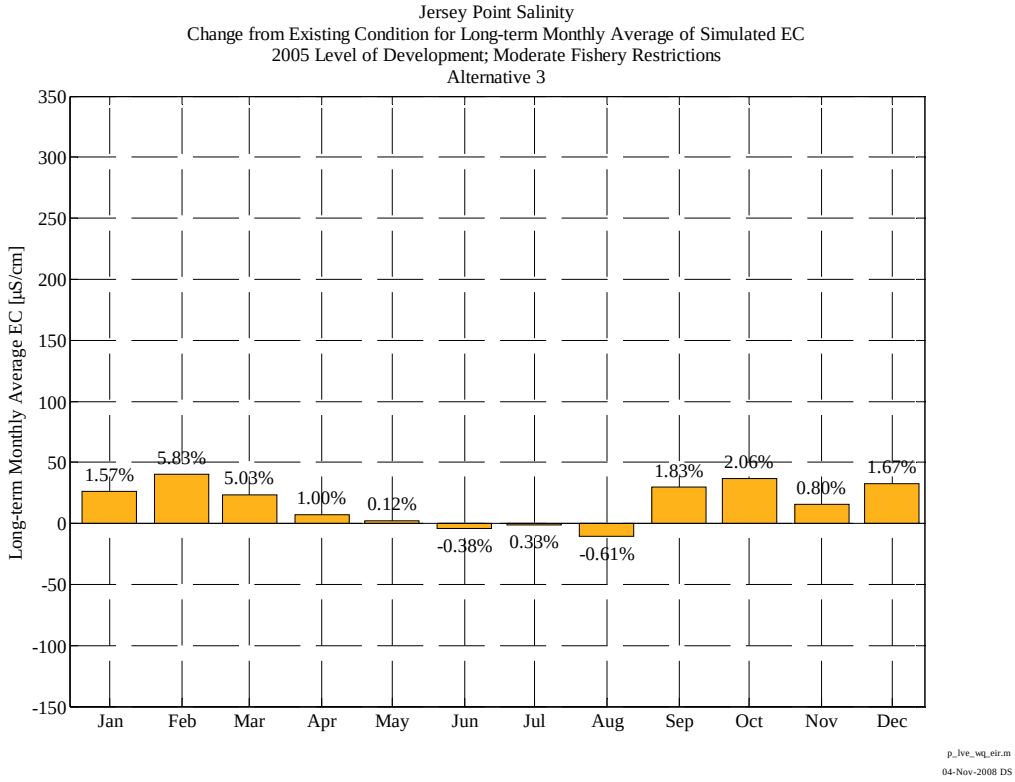
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

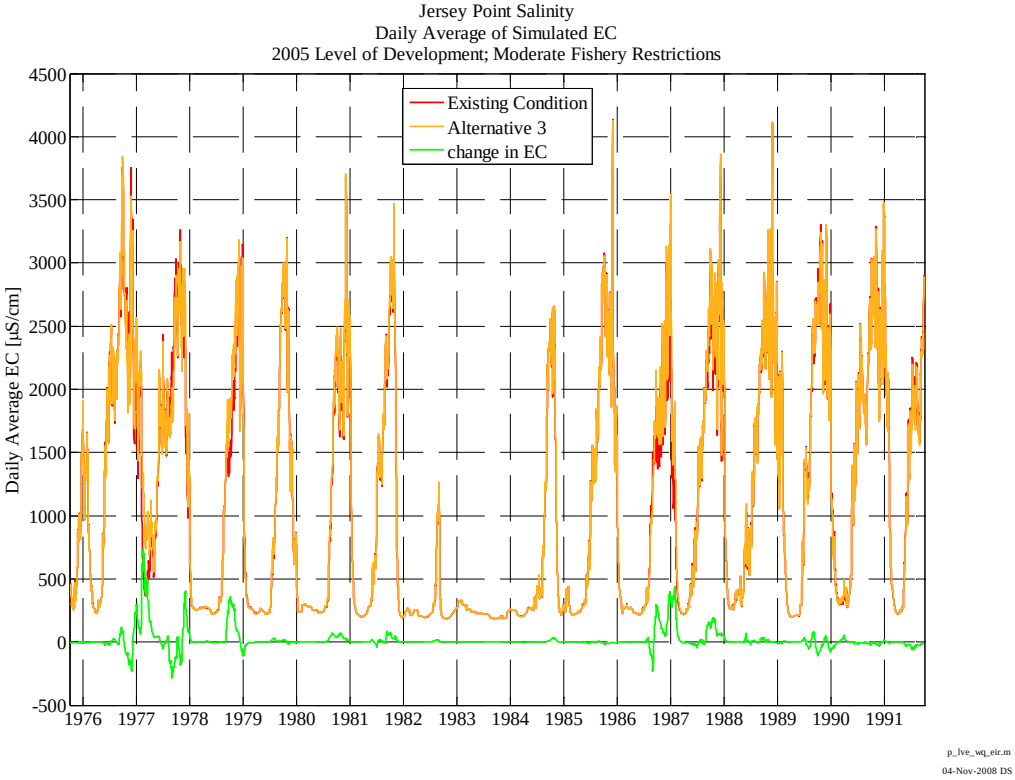
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	341	508	1,207	1,339	723	279	278	756	1,747	2,152	2,121	3,066
1977	2,637	2,537	2,389	1,944	1,293	840	826	1,085	1,837	1,748	1,759	2,304
1978	2,707	2,611	1,532	341	255	266	276	253	224	282	787	1,642
1979	2,082	2,622	2,443	669	272	237	237	248	231	551	1,307	2,494
1980	2,688	1,790	841	265	289	286	263	246	235	284	906	2,009
1981	2,125	2,175	2,470	841	239	205	221	308	608	1,409	1,737	2,362
1982	2,885	1,081	209	242	229	244	218	200	204	255	785	325
1983	187	203	247	315	298	262	243	230	226	219	200	186
1984	192	195	235	254	230	204	227	266	300	414	833	2,110
1985	2,306	817	243	320	265	220	241	299	590	1,336	1,710	2,512
1986	2,601	2,610	1,874	509	263	271	249	224	234	319	791	1,636
1987	1,791	2,108	2,764	1,823	575	237	236	389	674	1,352	1,797	2,462
1988	2,636	2,489	2,532	832	276	319	383	576	726	1,243	1,729	2,359
1989	2,572	2,674	2,102	1,649	942	267	203	213	494	1,308	1,820	2,493
1990	2,801	2,638	2,244	868	349	350	358	651	1,408	2,017	1,880	2,241
1991	2,695	2,437	2,616	2,136	734	272	236	563	1,373	1,856	1,807	2,309
Avg	2,078	1,843	1,622	897	452	298	294	407	694	1,047	1,373	2,032
W/AN/BN	1,906	1,587	1,054	371	262	253	245	238	236	332	801	1,486
D/C	2,212	2,042	2,063	1,306	600	332	331	538	1,051	1,602	1,818	2,457

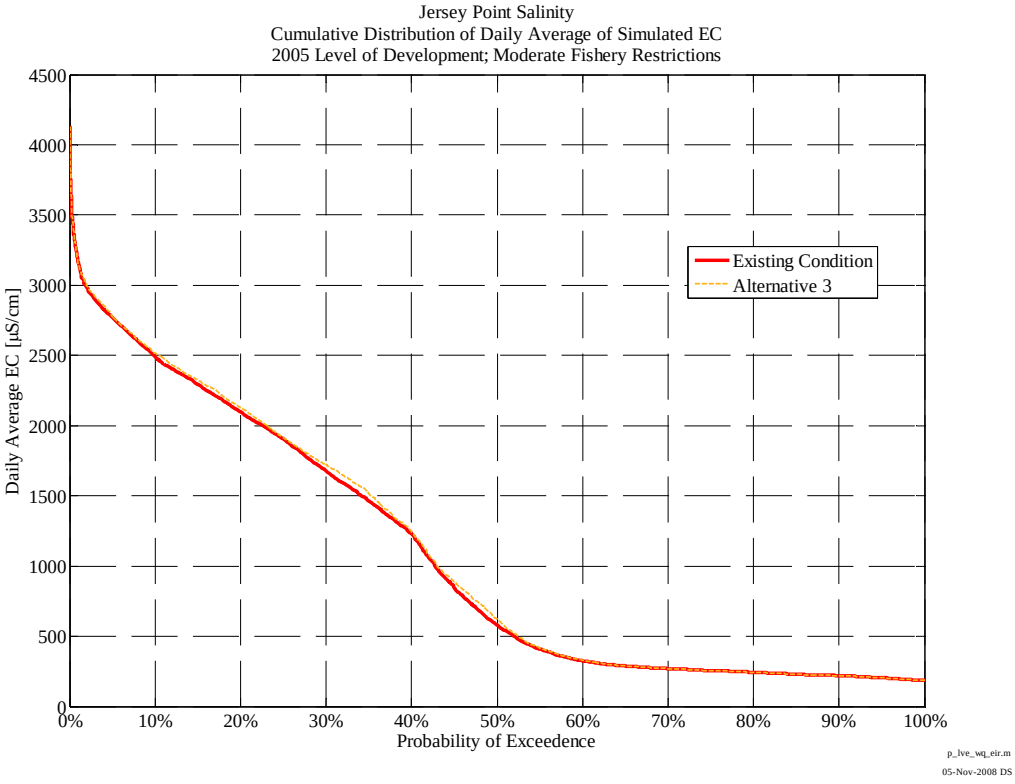
Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.8%	-0.9%	-0.2%	-0.3%	-0.4%	-0.1%	-0.1%	-1.2%	-0.9%	0.4%	0.1%	2.4%
1977	-1.8%	-6.3%	5.1%	7.5%	72.5%	73.7%	14.2%	3.9%	-0.2%	-0.6%	-6.8%	-7.1%
1978	-2.0%	4.7%	10.7%	2.2%	0.0%	-0.4%	0.7%	0.4%	-1.6%	-0.8%	-0.3%	13.9%
1979	16.7%	4.5%	-1.5%	-5.9%	-1.5%	-0.9%	-0.3%	-0.2%	-0.2%	2.9%	0.8%	0.4%
1980	0.3%	-0.5%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.4%	-0.1%	1.3%	5.1%	2.7%
1981	2.7%	1.8%	0.6%	0.4%	0.1%	0.0%	0.0%	1.0%	-0.7%	0.7%	0.2%	2.6%
1982	1.4%	2.1%	0.4%	0.4%	0.2%	0.0%	0.0%	-0.1%	0.1%	1.0%	1.9%	0.7%
1983	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-1.0%	-1.3%	-0.3%	0.2%	0.7%	0.3%	0.3%
1985	1.2%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.4%	-1.1%	-0.2%	0.1%	-0.1%
1986	-0.5%	-0.3%	-0.2%	-0.2%	0.0%	-0.4%	-0.7%	-0.4%	-0.1%	2.5%	-9.9%	8.1%
1987	11.4%	3.6%	10.5%	24.0%	25.5%	2.0%	-2.3%	-2.6%	-3.0%	0.3%	0.2%	5.4%
1988	6.6%	3.1%	2.4%	1.6%	0.0%	0.2%	0.6%	3.0%	1.1%	0.6%	-0.1%	1.0%
1989	0.4%	0.1%	-0.2%	-0.5%	0.5%	-0.1%	0.2%	0.9%	2.1%	-0.6%	0.3%	0.0%
1990	-2.5%	0.5%	-1.4%	-4.6%	-2.6%	6.9%	4.7%	0.5%	-0.3%	-0.4%	-0.1%	-0.6%
1991	-0.2%	-0.9%	-0.1%	0.2%	-0.8%	0.6%	0.2%	-2.0%	-1.6%	-2.7%	-1.5%	-0.6%
Avg	2.1%	0.8%	1.7%	1.6%	5.8%	5.0%	1.0%	0.1%	-0.4%	0.3%	-0.6%	1.8%
W/AN/BN	2.3%	1.5%	1.4%	-0.5%	-0.2%	-0.4%	-0.2%	-0.1%	-0.2%	1.1%	-0.3%	3.7%
D/C	1.9%	0.3%	1.9%	3.1%	10.5%	9.2%	2.0%	0.3%	-0.5%	-0.3%	-0.9%	0.3%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.57%
5.83%
5.03%
1.00%
0.12%
-0.38%
0.33%
-0.61%
1.83%
2.06%
0.80%
1.67%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

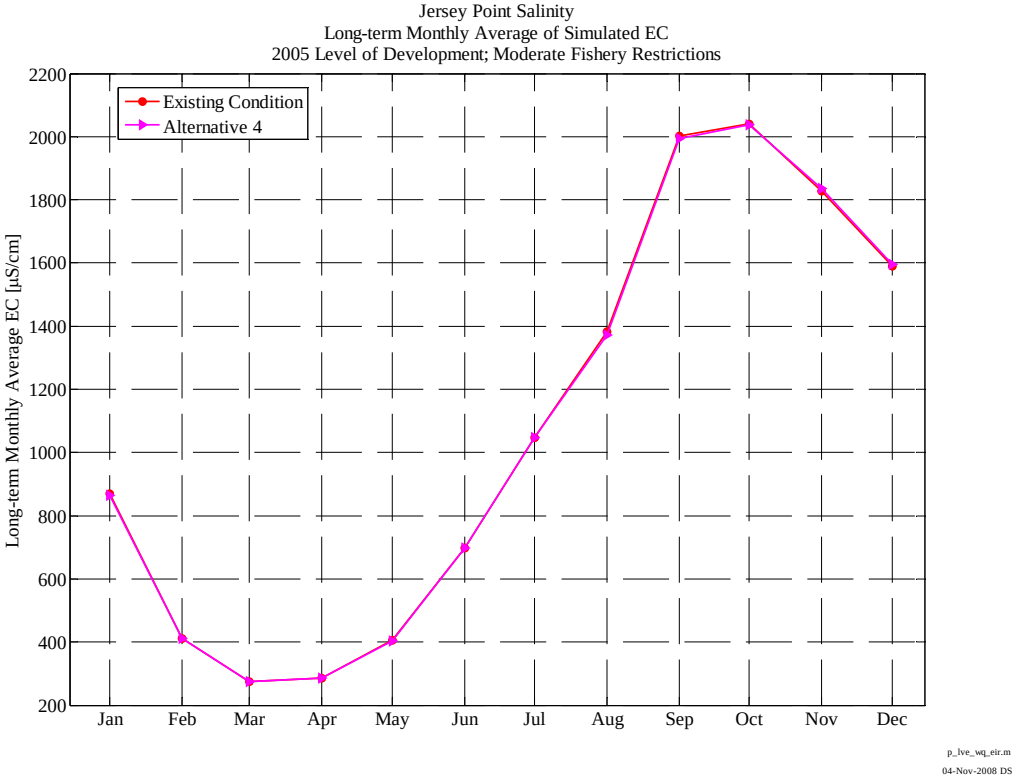
Alternative 4

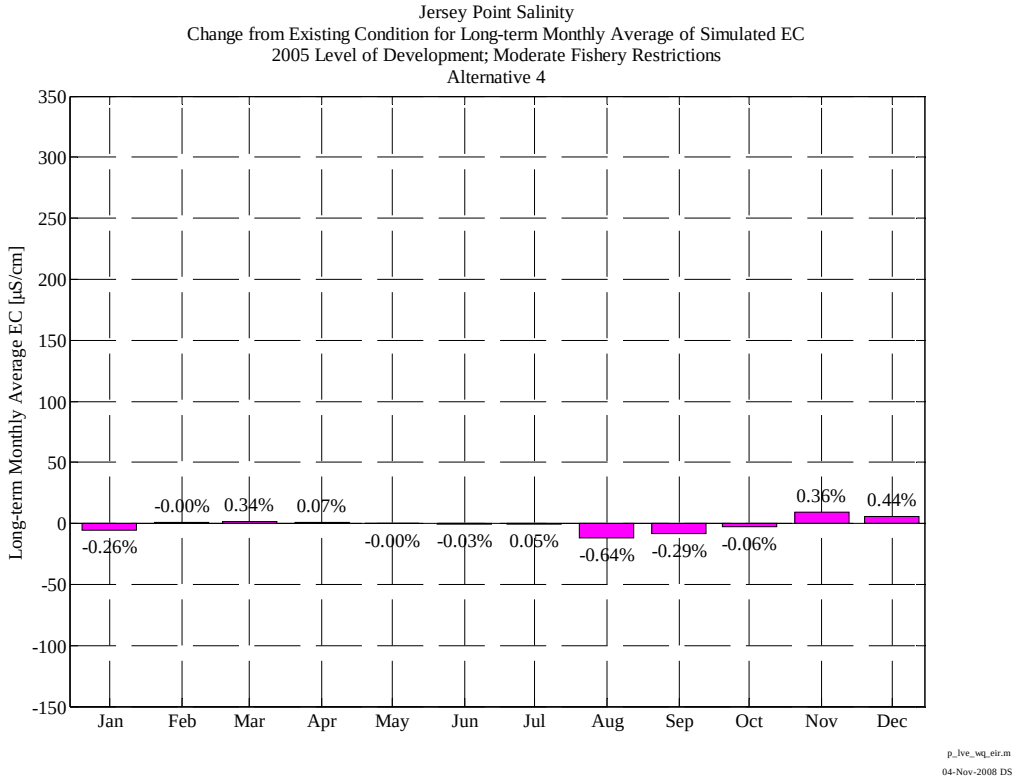
Jersey Point Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

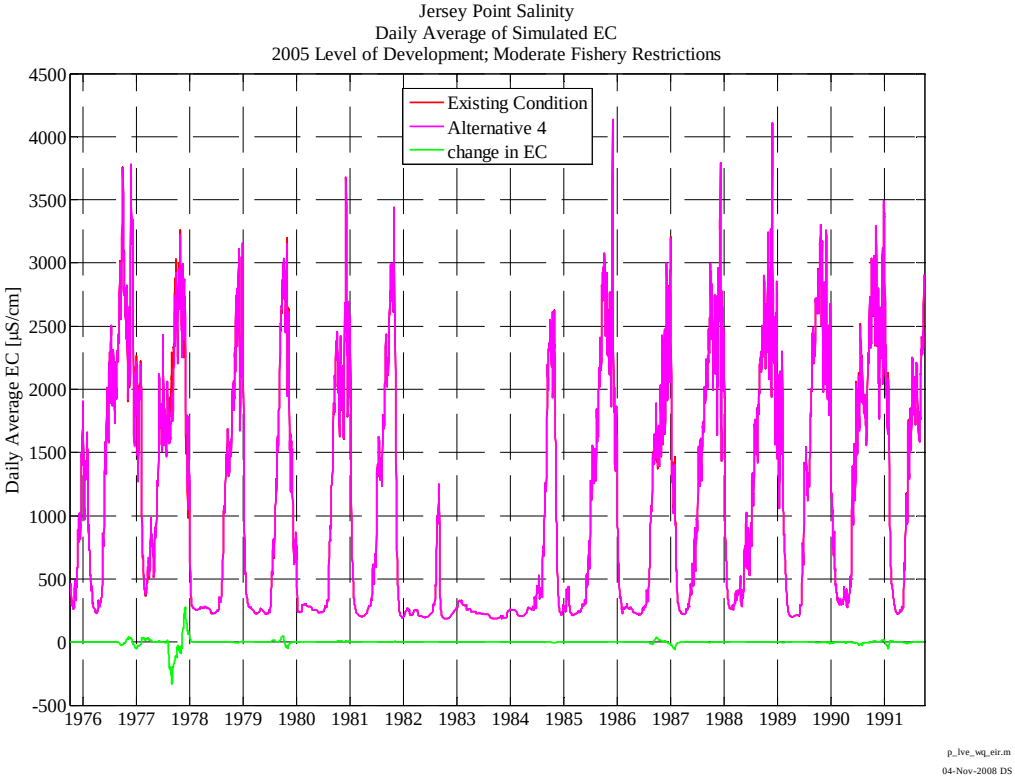
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	345	513	1,209	1,343	726	280	278	765	1,763	2,143	2,117	2,976
1977	2,689	2,740	2,246	1,778	775	509	733	1,046	1,844	1,756	1,705	2,317
1978	2,705	2,608	1,493	340	255	268	274	253	229	285	789	1,445
1979	1,787	2,506	2,481	712	276	239	238	248	231	546	1,304	2,512
1980	2,665	1,787	843	264	288	286	263	247	235	280	863	1,960
1981	2,077	2,141	2,459	840	239	205	221	305	613	1,400	1,735	2,306
1982	2,849	1,061	208	241	229	244	218	200	203	253	771	323
1983	187	203	246	315	298	262	243	230	226	219	200	186
1984	192	195	235	254	230	206	230	266	300	411	831	2,104
1985	2,274	804	243	320	265	220	241	300	597	1,339	1,709	2,515
1986	2,614	2,618	1,877	509	263	272	251	225	235	311	869	1,529
1987	1,624	2,041	2,497	1,432	445	232	242	399	695	1,350	1,794	2,333
1988	2,471	2,414	2,472	819	276	319	381	559	718	1,235	1,730	2,335
1989	2,561	2,672	2,105	1,656	935	267	203	213	485	1,314	1,816	2,491
1990	2,870	2,625	2,273	907	357	327	340	646	1,405	2,005	1,874	2,251
1991	2,706	2,460	2,630	2,109	742	273	236	569	1,386	1,906	1,835	2,324
Avg	2,038	1,837	1,595	865	412	275	287	405	698	1,047	1,371	1,994
W/AN/BN	1,857	1,568	1,055	376	263	254	245	239	237	329	804	1,437
D/C	2,180	2,046	2,015	1,245	529	292	319	534	1,056	1,605	1,813	2,428

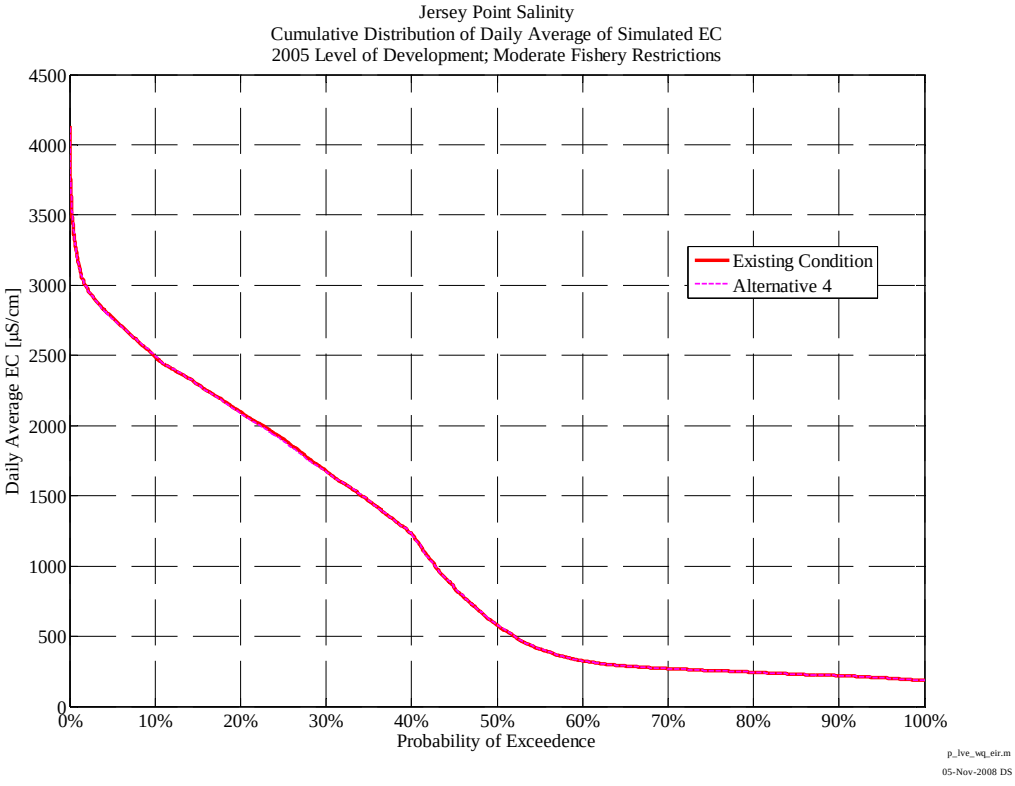
Percent (%) Change from Existing Condition for Jersey Point Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%
1977	0.1%	1.2%	-1.2%	-1.7%	3.3%	5.2%	1.3%	0.2%	0.2%	-0.1%	-9.7%	-6.6%
1978	-2.1%	4.6%	7.9%	1.8%	0.0%	0.1%	0.0%	0.1%	0.3%	0.0%	0.1%	0.2%
1979	0.1%	-0.1%	0.1%	0.1%	0.1%	-0.1%	-0.1%	0.0%	0.0%	1.8%	0.5%	1.1%
1980	-0.5%	-0.7%	-0.1%	-0.5%	-0.4%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.2%	0.2%
1981	0.3%	0.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1982	0.1%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	-1.0%	1.1%
1987	1.0%	0.3%	-0.2%	-2.6%	-2.9%	-0.4%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.1%
1988	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	-0.3%	0.0%	0.3%	0.6%	0.1%	0.0%	0.1%	-0.1%
1990	-0.1%	0.0%	-0.1%	-0.4%	-0.1%	0.0%	-0.5%	-0.1%	-0.4%	-0.9%	-0.5%	-0.1%
1991	0.2%	0.1%	0.4%	-1.1%	0.3%	0.7%	0.1%	-0.8%	-0.6%	0.0%	0.0%	0.0%
Avg	-0.1%	0.4%	0.4%	-0.3%	0.0%	0.3%	0.1%	0.0%	0.0%	0.1%	-0.6%	-0.3%
W/AN/BN	-0.3%	0.6%	1.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.4%
D/C	0.2%	0.2%	-0.1%	-0.6%	0.0%	0.6%	0.1%	0.0%	-0.1%	-0.1%	-1.1%	-0.8%


Jersey Point Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Long-term Monthly Average EC [µS/cm]
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.26%
-0.00%
0.34%
0.07%
-0.00%
-0.03%
0.05%
-0.64%
-0.29%
-0.06%
0.36%
0.44%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jersey Point Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Clifton Court Forebay

Existing Condition

Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	283	279	417	588	742	747	576	513	560	611	593	705
1977	771	656	820	763	966	897	658	613	621	618	584	636
1978	788	874	733	686	679	654	413	329	399	406	350	400
1979	450	573	693	698	431	362	394	323	376	270	346	542
1980	683	561	470	432	362	410	379	373	384	393	332	439
1981	552	562	695	727	691	682	491	427	437	391	470	594
1982	707	575	372	650	326	341	229	217	348	369	307	273
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	226	307	342	277	368	381	365	424	288	295	463
1985	577	469	370	409	606	738	534	465	449	379	469	596
1986	701	655	710	582	479	326	252	242	380	434	332	400
1987	447	518	678	729	776	770	563	497	446	387	485	592
1988	685	659	769	778	723	866	620	564	462	370	472	613
1989	731	764	812	690	997	760	580	512	360	379	471	651
1990	734	708	773	654	778	708	569	583	479	561	613	609
1991	758	799	829	948	1,165	804	636	537	465	555	594	604
Avg	584	572	614	627	646	607	473	427	427	415	433	522
W/AN/BN	544	533	524	536	412	391	335	302	365	342	311	392
D/C	615	602	685	699	827	775	581	523	476	472	528	622

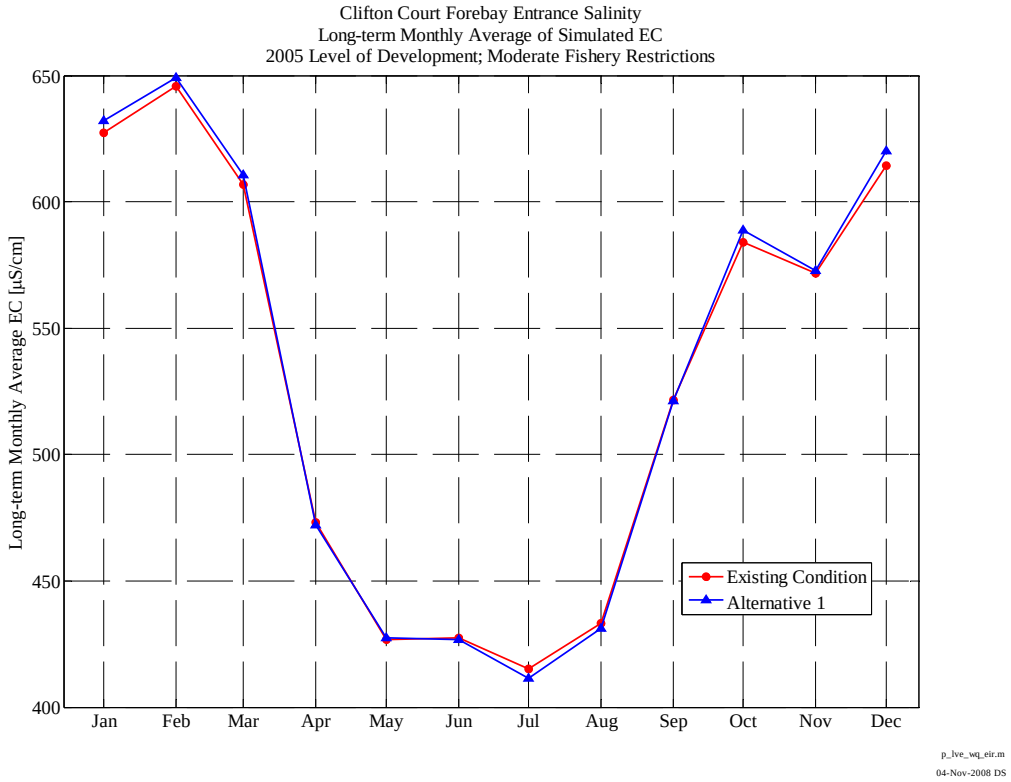
Alternative 1

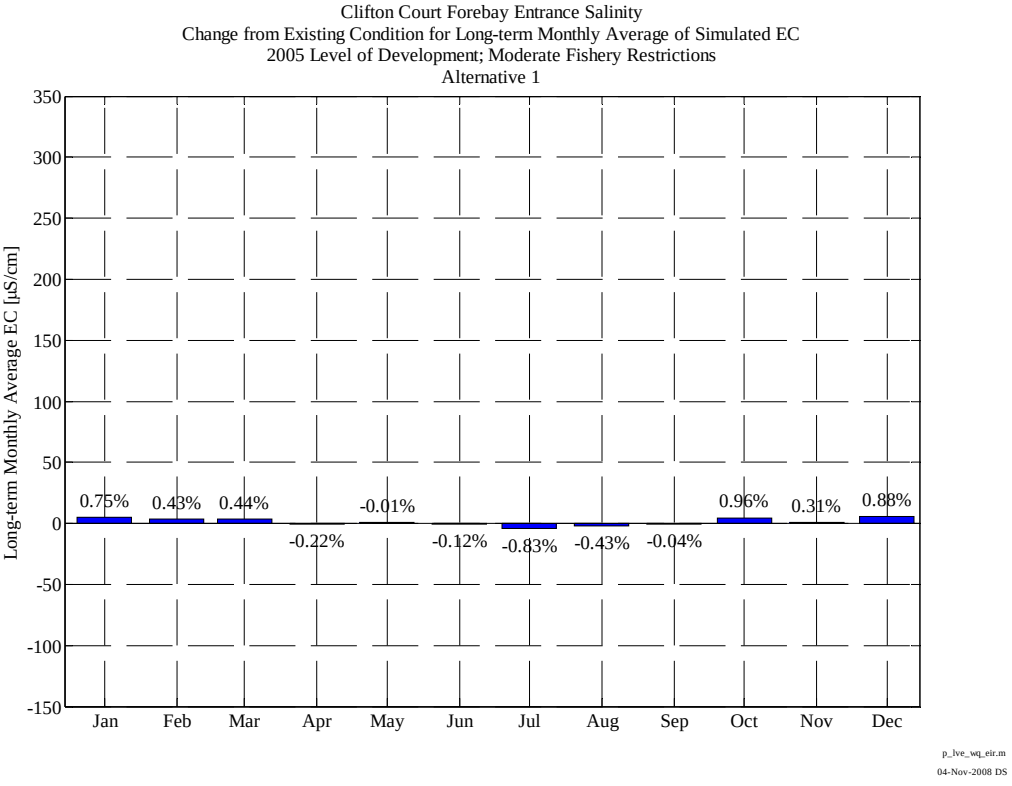
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

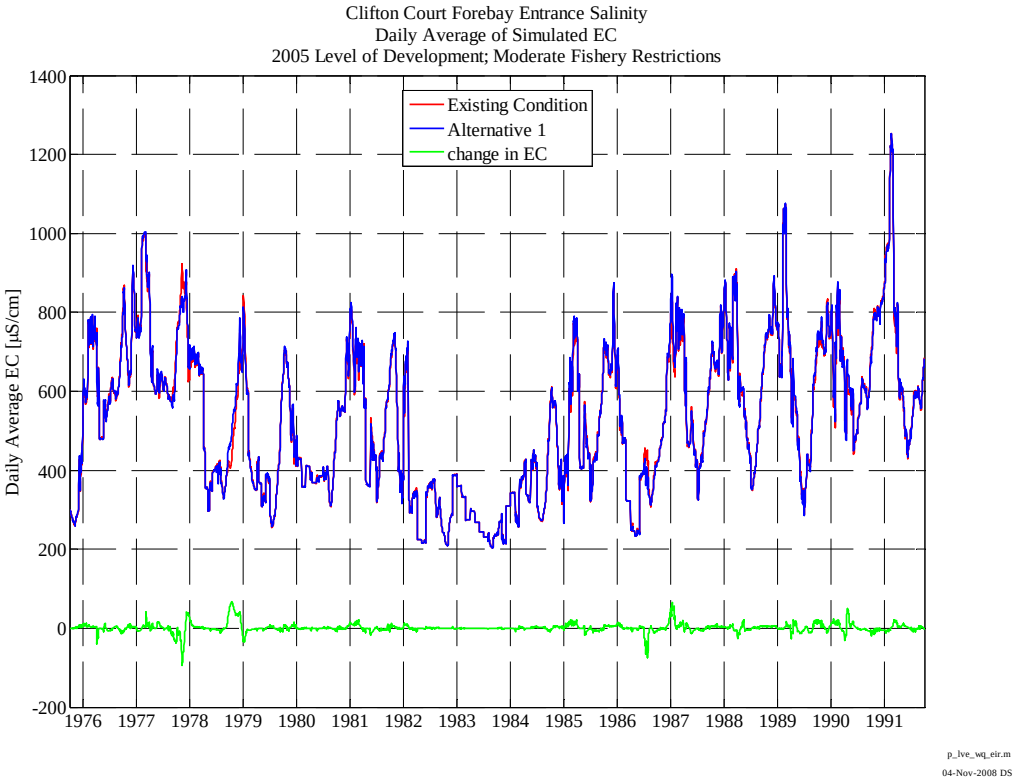
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	283	280	423	596	747	751	564	515	556	608	596	698
1977	768	662	823	757	970	911	659	619	628	617	579	610
1978	773	825	764	696	682	656	412	327	397	400	348	423
1979	509	609	704	681	427	360	393	321	379	273	343	538
1980	688	562	476	430	362	410	378	372	385	393	333	436
1981	553	561	701	737	706	686	488	420	435	389	467	595
1982	713	576	371	658	326	338	229	217	349	369	308	273
1983	220	271	384	361	333	275	296	268	245	231	216	231
1984	258	225	307	342	274	370	380	366	427	290	296	458
1985	578	474	372	416	620	751	535	460	444	375	463	594
1986	707	660	717	591	479	326	250	240	383	392	329	391
1987	444	516	696	772	779	781	567	491	442	384	482	595
1988	691	665	772	780	728	862	610	570	458	370	473	619
1989	736	769	817	689	997	765	579	511	350	379	463	667
1990	748	711	772	668	792	705	576	596	485	558	611	603
1991	750	796	825	941	1,164	821	641	544	467	551	592	606
Avg	589	573	620	632	649	610	472	427	427	411	431	521
W/AN/BN	552	533	532	537	412	391	334	302	367	336	311	393
D/C	617	604	689	706	834	781	580	525	474	470	525	621

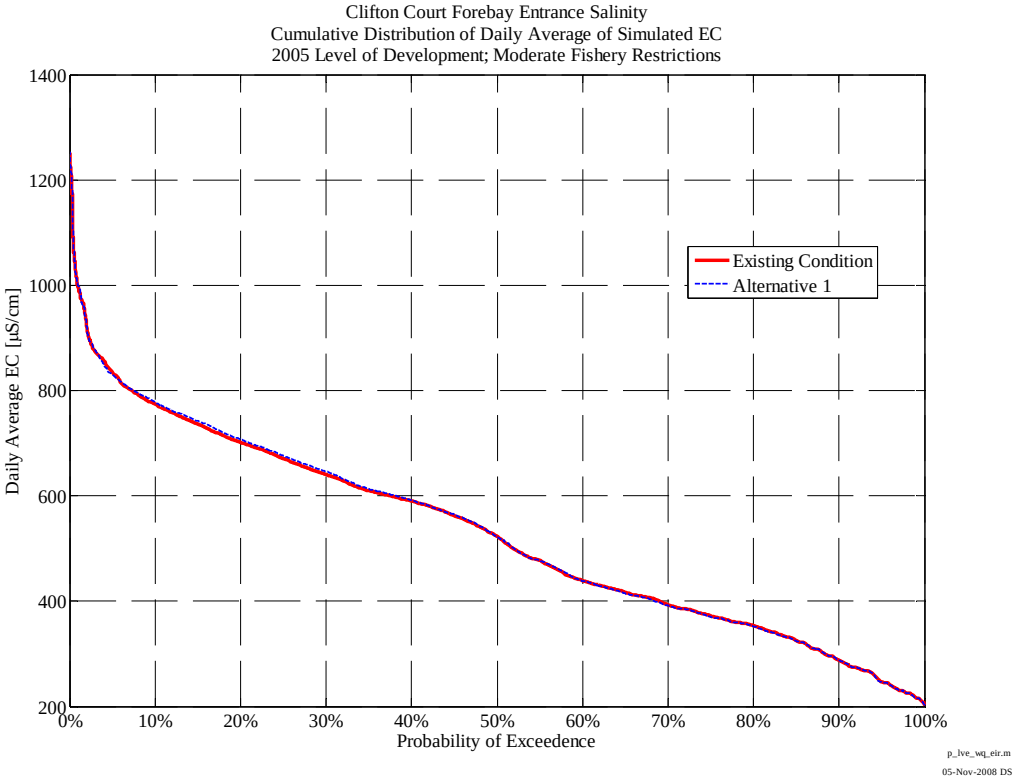
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.1%	0.5%	1.5%	1.3%	0.6%	0.5%	-2.2%	0.3%	-0.7%	-0.4%	0.5%	-0.9%
1977	-0.3%	0.8%	0.4%	-0.8%	0.4%	1.5%	0.2%	1.0%	1.1%	-0.2%	-0.8%	-4.1%
1978	-1.9%	-5.6%	4.3%	1.4%	0.5%	0.3%	-0.1%	-0.5%	-0.4%	-1.3%	-0.8%	5.8%
1979	13.1%	6.3%	1.5%	-2.5%	-1.0%	-0.6%	-0.3%	-0.7%	0.6%	1.1%	-0.6%	-0.8%
1980	0.7%	0.2%	1.3%	-0.3%	0.0%	0.0%	-0.4%	-0.5%	0.1%	0.1%	0.4%	-0.7%
1981	0.1%	-0.3%	0.9%	1.4%	2.1%	0.5%	-0.7%	-1.7%	-0.5%	-0.7%	-0.8%	0.2%
1982	0.8%	0.2%	-0.3%	1.3%	0.0%	-0.9%	-0.1%	-0.2%	0.5%	0.1%	0.2%	0.1%
1983	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.1%
1984	0.1%	-0.5%	0.0%	0.0%	-0.9%	0.7%	-0.3%	0.3%	0.7%	0.8%	0.5%	-1.1%
1985	0.2%	1.0%	0.7%	1.5%	2.2%	1.8%	0.2%	-1.1%	-1.1%	-1.0%	-1.3%	-0.4%
1986	0.9%	0.8%	1.0%	1.5%	0.0%	0.0%	-0.7%	-0.6%	0.8%	-9.7%	-0.9%	-2.1%
1987	-0.7%	-0.2%	2.6%	5.8%	0.5%	1.4%	0.7%	-1.1%	-0.9%	-0.7%	-0.7%	0.6%
1988	0.8%	0.8%	0.4%	0.3%	0.6%	-0.4%	-1.5%	1.1%	-0.9%	0.1%	0.1%	0.9%
1989	0.7%	0.7%	0.6%	-0.1%	0.0%	0.7%	-0.2%	-0.1%	-2.6%	0.0%	-1.7%	2.5%
1990	2.0%	0.5%	-0.2%	2.2%	1.8%	-0.5%	1.3%	2.3%	1.2%	-0.6%	-0.5%	-0.9%
1991	-1.1%	-0.3%	-0.5%	-0.8%	0.0%	2.0%	0.7%	1.4%	0.3%	-0.8%	-0.2%	0.3%
Avg	1.0%	0.3%	0.9%	0.7%	0.4%	0.4%	-0.2%	0.0%	-0.1%	-0.8%	-0.4%	0.0%
W/AN/BN	2.0%	0.2%	1.1%	0.2%	-0.2%	-0.1%	-0.3%	-0.3%	0.3%	-1.3%	-0.2%	0.2%
D/C	0.2%	0.4%	0.7%	1.2%	0.9%	0.8%	-0.2%	0.2%	-0.5%	-0.5%	-0.6%	-0.2%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.75%
0.43%
0.44%
-0.22%
-0.01%
-0.12%
-0.83%
-0.43%
-0.04%
0.96%
0.31%
0.88%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

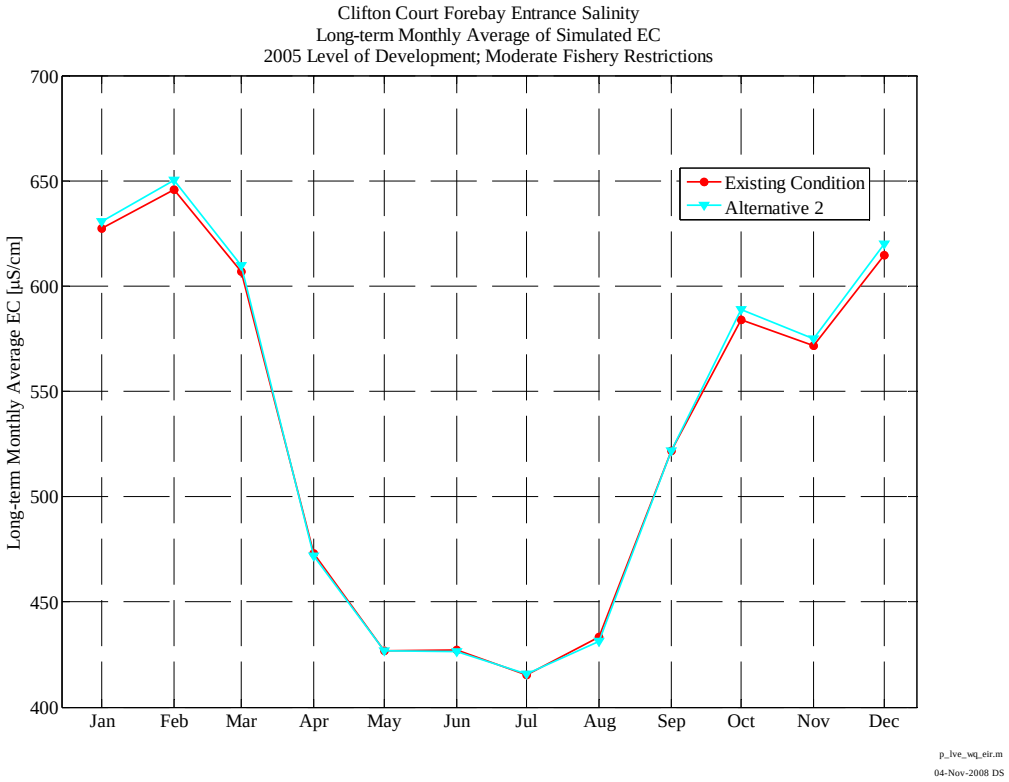
Alternative 2

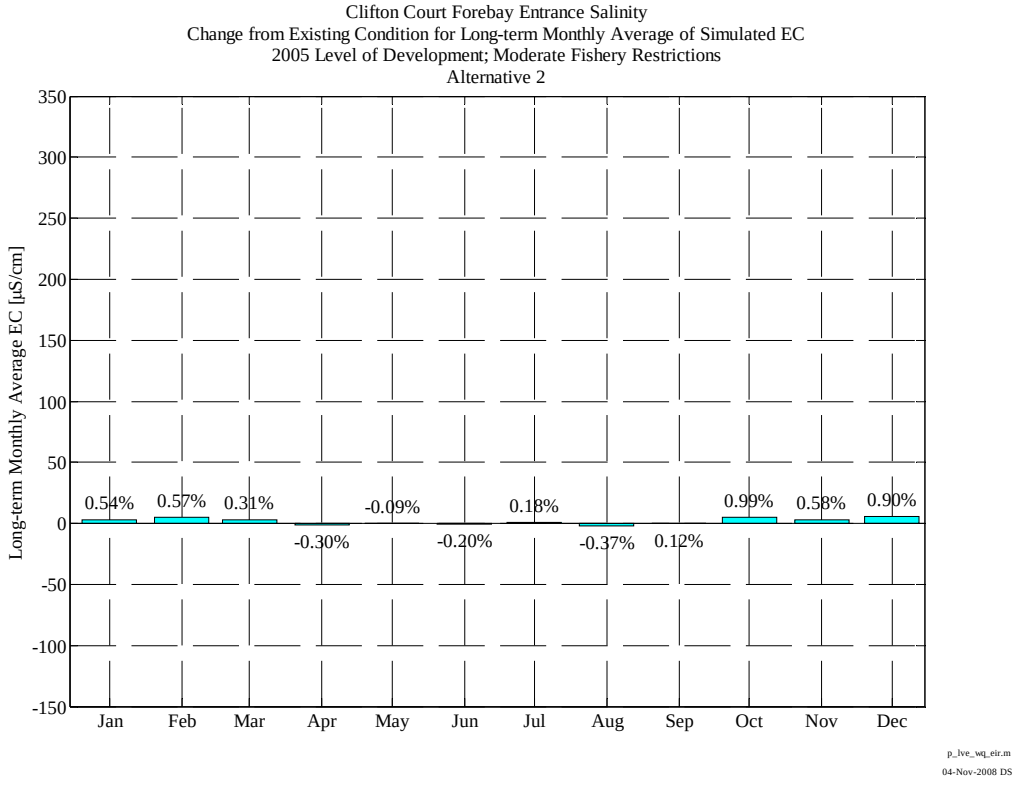
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

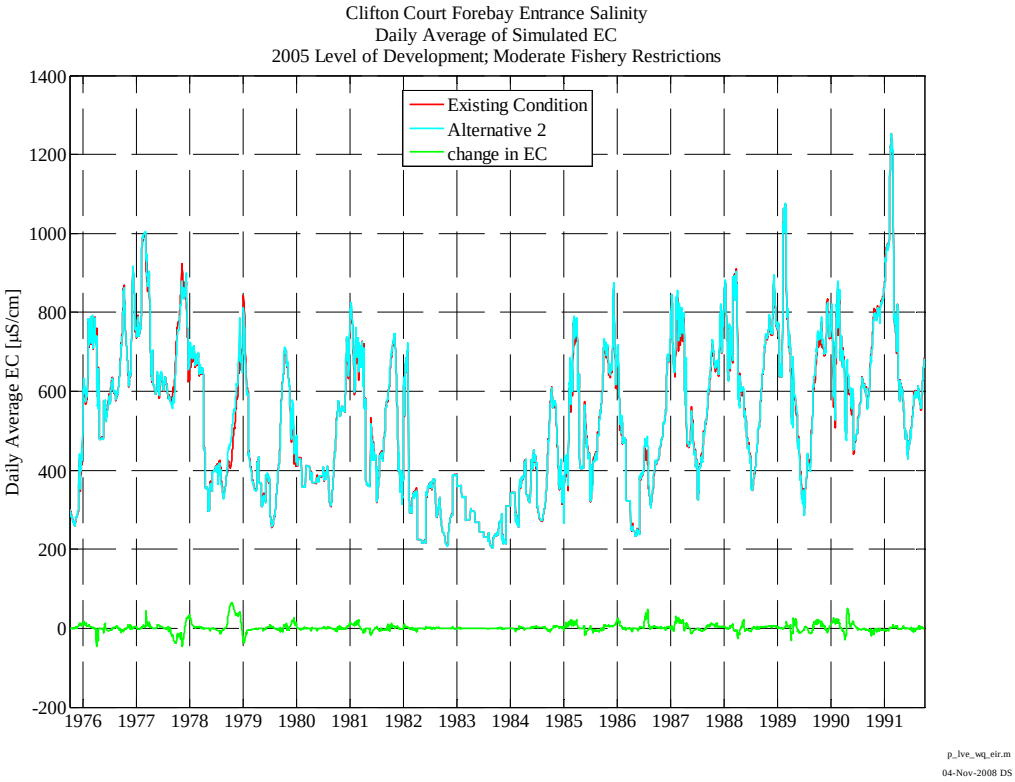
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	282	280	427	598	747	747	561	514	556	608	595	700
1977	769	659	822	761	970	912	660	616	625	618	578	605
1978	768	854	759	698	682	656	413	327	397	399	347	422
1979	508	609	704	678	427	359	393	321	379	273	344	538
1980	688	566	484	431	362	410	378	372	385	393	333	436
1981	553	561	701	737	706	681	487	419	435	389	467	595
1982	713	577	371	655	325	338	229	217	349	369	308	273
1983	219	270	384	361	333	276	296	268	245	231	216	231
1984	258	225	307	342	274	370	380	366	427	290	296	458
1985	578	474	372	416	620	751	535	460	444	375	463	594
1986	707	660	720	596	479	326	250	240	383	463	335	404
1987	449	518	681	731	798	786	567	492	442	384	481	598
1988	695	666	773	780	727	862	610	570	457	369	472	617
1989	735	770	817	691	998	765	578	513	351	380	462	666
1990	749	712	772	670	795	706	576	596	485	558	611	604
1991	750	796	825	943	1,166	808	634	538	464	551	593	606
Avg	589	575	620	630	650	610	472	427	427	416	431	522
W/AN/BN	552	537	533	537	412	391	334	302	366	346	311	394
D/C	618	604	688	703	836	780	579	524	473	470	525	621

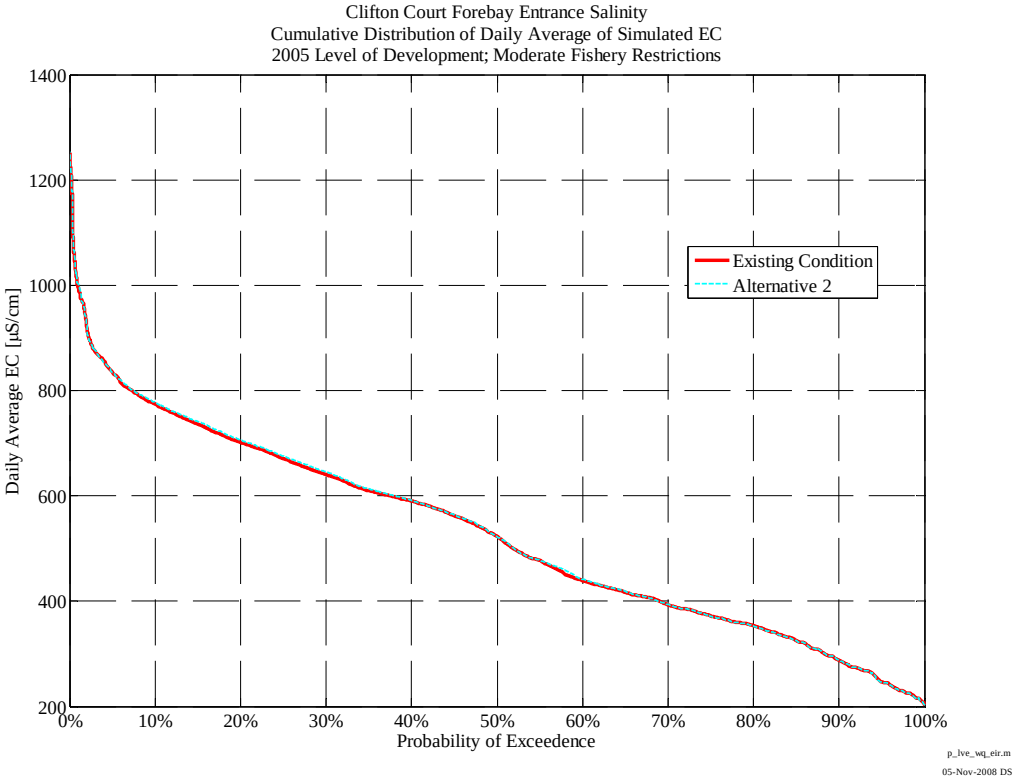
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.3%	0.5%	2.6%	1.7%	0.7%	-0.1%	-2.7%	0.1%	-0.7%	-0.4%	0.4%	-0.6%
1977	-0.3%	0.5%	0.3%	-0.3%	0.5%	1.7%	0.3%	0.5%	0.7%	0.0%	-1.0%	-4.8%
1978	-2.6%	-2.2%	3.6%	1.8%	0.4%	0.3%	-0.1%	-0.4%	-0.4%	-1.7%	-1.1%	5.7%
1979	12.9%	6.2%	1.5%	-2.9%	-1.1%	-0.7%	-0.3%	-0.7%	0.6%	1.0%	-0.6%	-0.9%
1980	0.7%	1.0%	3.1%	-0.2%	0.0%	0.0%	-0.4%	-0.5%	0.1%	0.1%	0.4%	-0.7%
1981	0.1%	-0.3%	0.9%	1.4%	2.1%	-0.2%	-0.9%	-1.7%	-0.6%	-0.7%	-0.8%	0.3%
1982	0.8%	0.4%	-0.4%	0.7%	-0.2%	-0.9%	-0.1%	-0.2%	0.5%	0.1%	0.2%	0.1%
1983	-0.3%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.1%
1984	0.1%	-0.5%	0.0%	0.0%	-1.1%	0.6%	-0.4%	0.3%	0.7%	0.8%	0.5%	-1.1%
1985	0.2%	1.1%	0.6%	1.6%	2.2%	1.8%	0.2%	-1.1%	-1.1%	-1.0%	-1.3%	-0.4%
1986	0.9%	0.9%	1.3%	2.3%	-0.1%	0.0%	-0.7%	-0.6%	0.7%	6.7%	0.9%	0.9%
1987	0.4%	0.0%	0.4%	0.2%	2.9%	2.1%	0.8%	-1.1%	-1.0%	-0.7%	-0.8%	1.0%
1988	1.4%	0.9%	0.5%	0.2%	0.5%	-0.4%	-1.5%	1.1%	-1.1%	-0.2%	-0.1%	0.6%
1989	0.6%	0.7%	0.6%	0.1%	0.1%	0.7%	-0.2%	0.2%	-2.5%	0.2%	-2.0%	2.3%
1990	2.1%	0.6%	-0.1%	2.5%	2.2%	-0.3%	1.4%	2.3%	1.2%	-0.5%	-0.4%	-0.9%
1991	-1.1%	-0.4%	-0.4%	-0.6%	0.1%	0.5%	-0.3%	0.2%	-0.2%	-0.8%	-0.1%	0.2%
Avg	1.0%	0.6%	0.9%	0.5%	0.6%	0.3%	-0.3%	-0.1%	-0.2%	0.2%	-0.4%	0.1%
W/AN/BN	1.8%	0.8%	1.3%	0.3%	-0.3%	-0.1%	-0.3%	-0.3%	0.3%	1.0%	0.0%	0.6%
D/C	0.3%	0.4%	0.6%	0.8%	1.2%	0.6%	-0.3%	0.1%	-0.6%	-0.5%	-0.7%	-0.3%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Existing Condition
Alternative 2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.54%
0.57%
0.31%
-0.30%
-0.09%
-0.20%
0.18%
-0.37%
0.12%
0.99%
0.58%
0.90%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

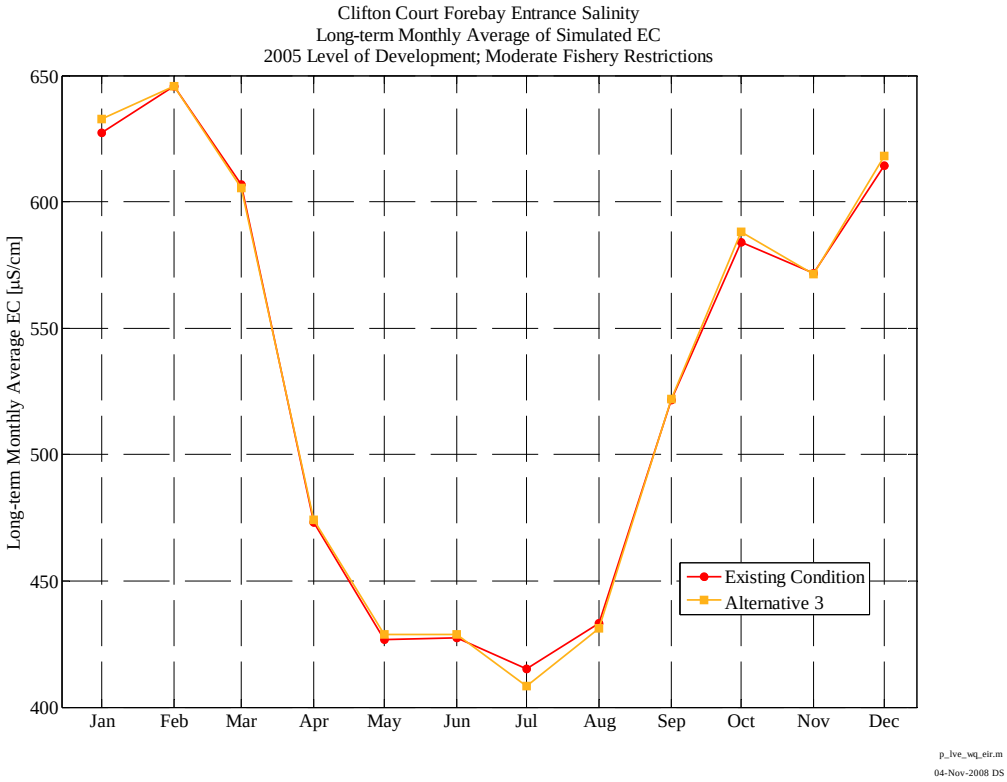
Alternative 3

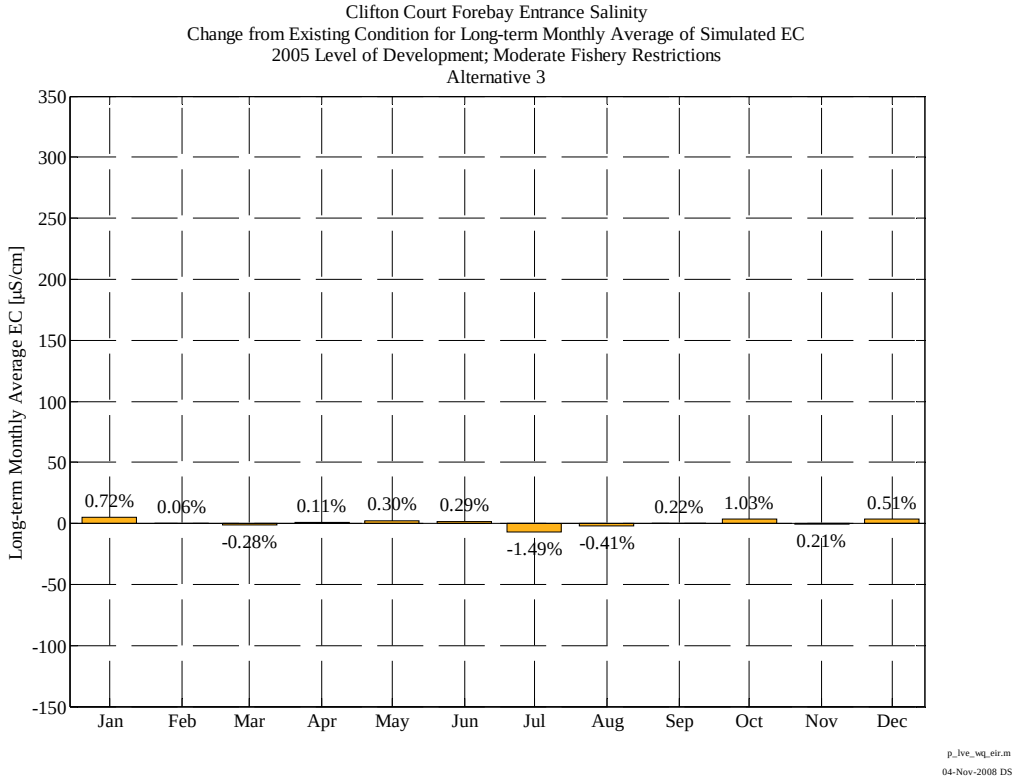
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

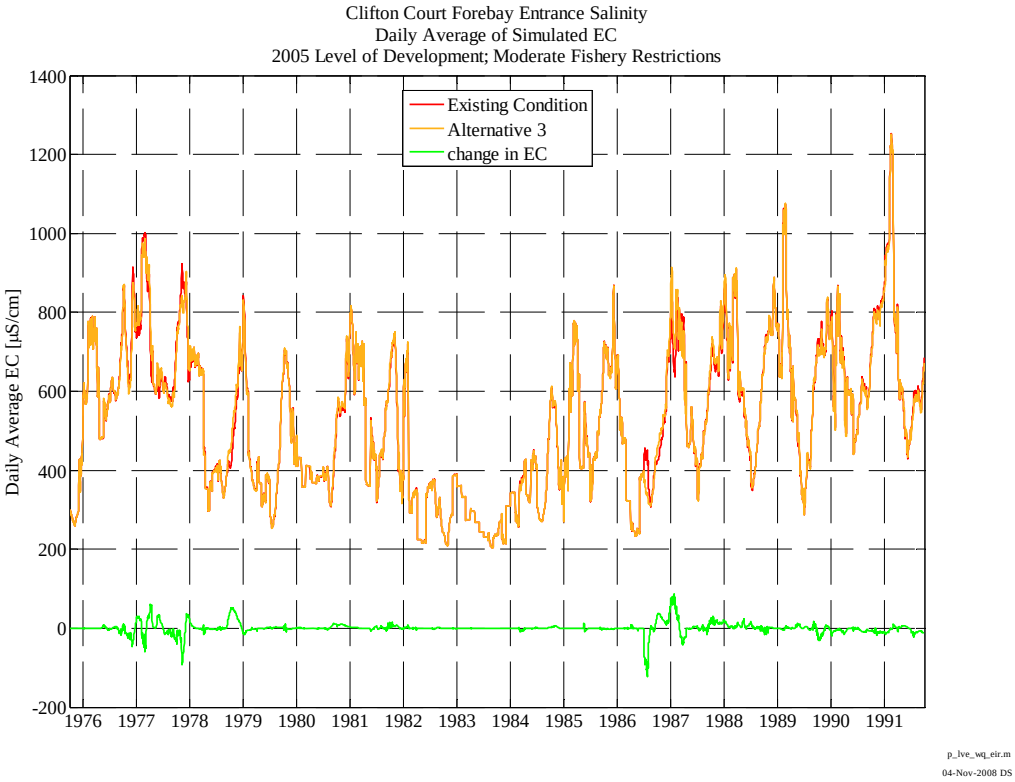
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	283	278	416	588	741	747	576	516	559	610	594	698
1977	764	634	808	788	943	907	690	626	637	608	572	616
1978	772	823	760	694	680	653	407	327	396	405	350	416
1979	498	606	698	688	427	360	393	322	378	271	348	544
1980	684	558	470	432	362	410	379	373	384	391	334	449
1981	561	571	699	729	692	682	491	424	438	392	472	596
1982	715	581	372	652	326	341	229	218	348	368	307	274
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	226	307	342	277	362	380	365	425	288	295	463
1985	581	473	370	409	606	738	534	464	447	379	469	596
1986	698	653	709	582	479	326	254	241	380	349	322	406
1987	481	536	706	798	808	745	550	496	450	386	485	596
1988	702	674	784	790	728	869	627	573	469	375	473	611
1989	726	766	813	689	995	761	580	519	361	381	469	654
1990	712	704	774	643	775	701	562	583	478	558	605	604
1991	751	788	820	937	1,162	809	637	543	467	542	584	596
Avg	588	571	618	633	646	605	474	429	429	408	431	522
W/AN/BN	549	531	528	536	412	389	334	302	365	329	310	398
D/C	618	603	688	708	828	773	583	527	478	470	525	618

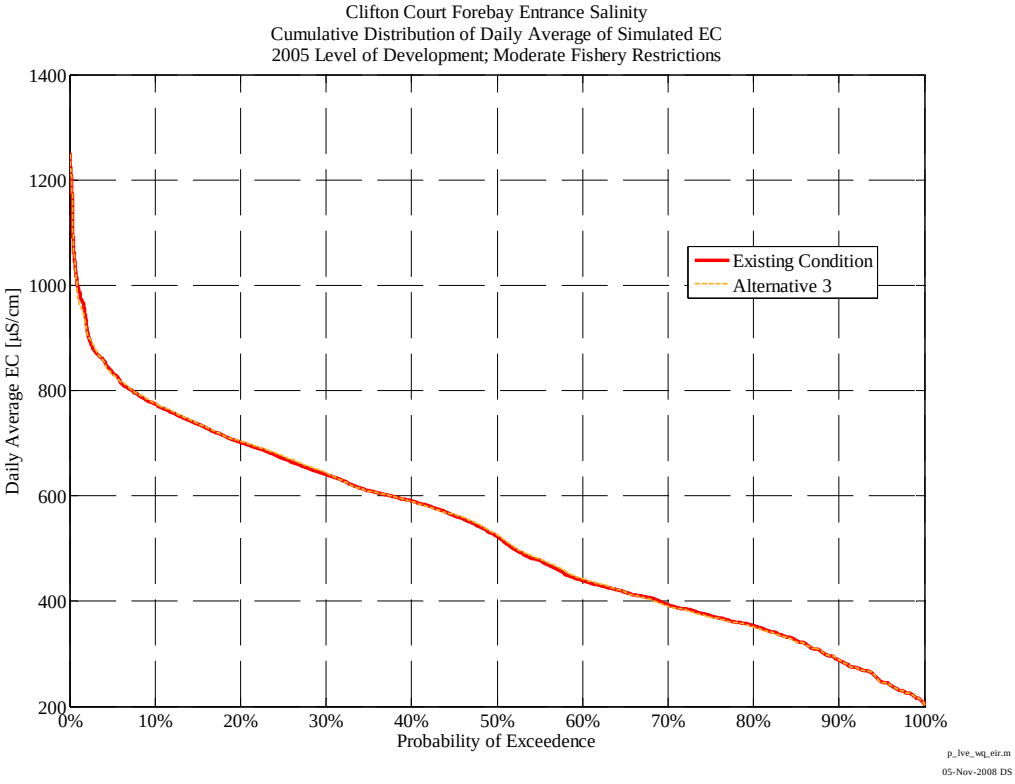
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	-0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.6%	-0.2%	-0.1%	0.3%	-0.9%
1977	-0.8%	-3.3%	-1.4%	3.3%	-2.4%	1.1%	4.8%	2.1%	2.6%	-1.6%	-2.0%	-3.1%
1978	-2.0%	-5.7%	3.7%	1.1%	0.1%	-0.3%	-1.5%	-0.5%	-0.7%	-0.3%	0.0%	4.1%
1979	10.6%	5.7%	0.7%	-1.4%	-1.0%	-0.6%	-0.2%	-0.2%	0.3%	0.1%	0.8%	0.4%
1980	0.2%	-0.5%	-0.1%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.3%	0.5%	2.3%
1981	1.6%	1.6%	0.7%	0.3%	0.2%	0.0%	0.0%	-0.5%	0.2%	0.1%	0.3%	0.4%
1982	1.1%	1.1%	-0.1%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.3%	0.2%	0.2%
1983	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-1.6%	-0.2%	0.0%	0.1%	0.0%	0.0%	0.2%
1985	0.7%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.4%	-0.2%	0.0%	-0.1%
1986	-0.3%	-0.3%	-0.2%	-0.1%	0.0%	0.0%	0.9%	-0.3%	0.0%	-19.7%	-3.2%	1.4%
1987	7.6%	3.5%	4.1%	9.4%	4.1%	-3.2%	-2.2%	-0.1%	0.9%	-0.4%	-0.1%	0.8%
1988	2.5%	2.3%	2.0%	1.5%	0.7%	0.4%	1.1%	1.7%	1.5%	1.3%	0.1%	-0.4%
1989	-0.6%	0.2%	0.0%	-0.2%	-0.2%	0.2%	0.0%	1.4%	0.5%	0.5%	-0.3%	0.4%
1990	-3.0%	-0.6%	0.1%	-1.6%	-0.5%	-1.1%	-1.2%	0.0%	-0.2%	-0.6%	-1.4%	-0.9%
1991	-0.9%	-1.3%	-1.1%	-1.2%	-0.2%	0.5%	0.1%	1.1%	0.2%	-2.4%	-1.5%	-1.5%
Avg	1.0%	0.2%	0.5%	0.7%	0.1%	-0.3%	0.1%	0.3%	0.3%	-1.5%	-0.4%	0.2%
W/AN/BN	1.4%	0.0%	0.6%	0.0%	-0.1%	-0.4%	-0.1%	-0.2%	0.0%	-2.9%	-0.3%	1.3%
D/C	0.8%	0.3%	0.5%	1.3%	0.2%	-0.2%	0.3%	0.7%	0.6%	-0.4%	-0.5%	-0.6%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.72%
0.06%
-0.28%
0.11%
0.30%
0.29%
-1.49%
-0.41%
0.22%
1.03%
0.21%
0.51%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

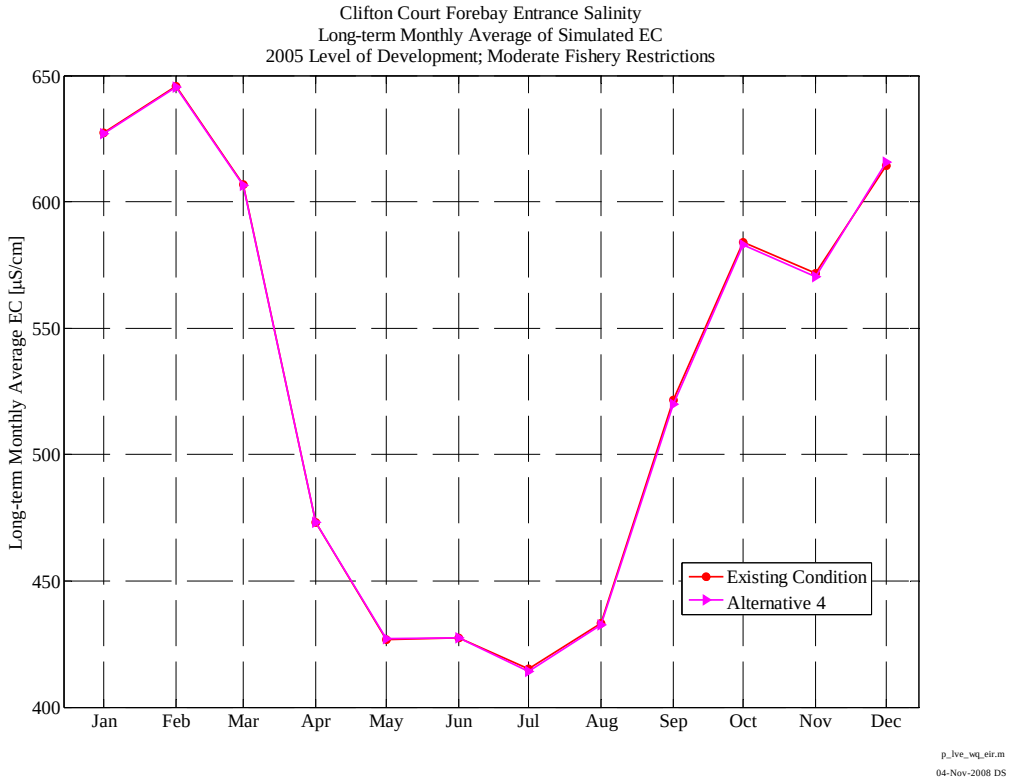
Alternative 4

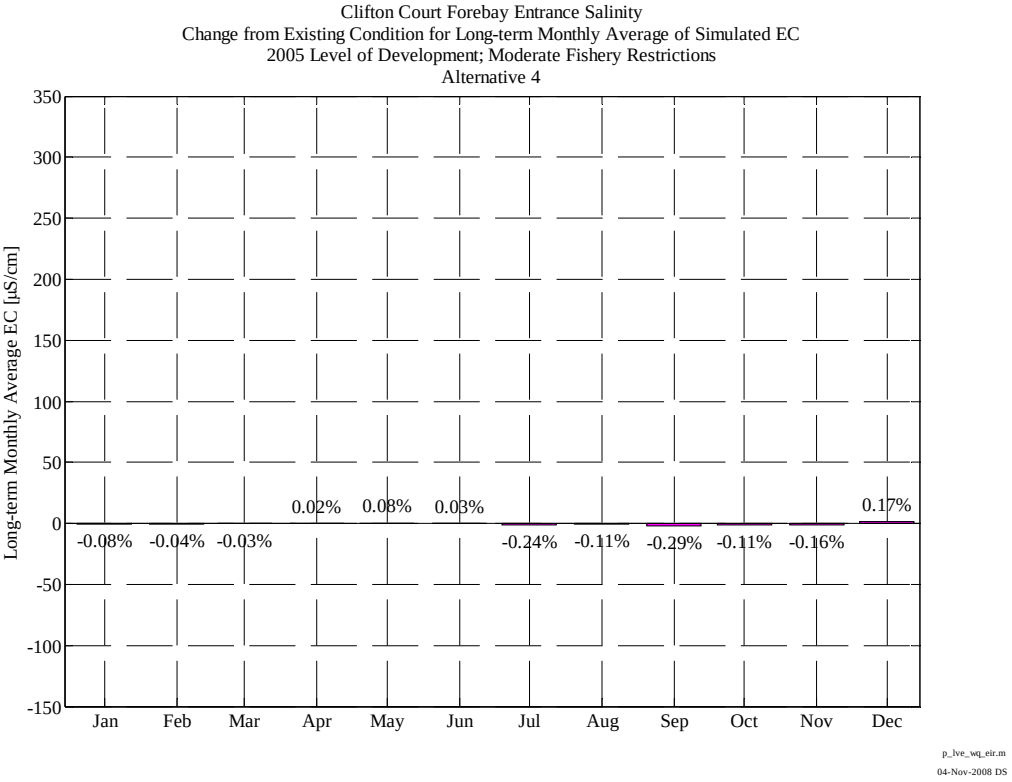
Clifton Court Forebay Entrance Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

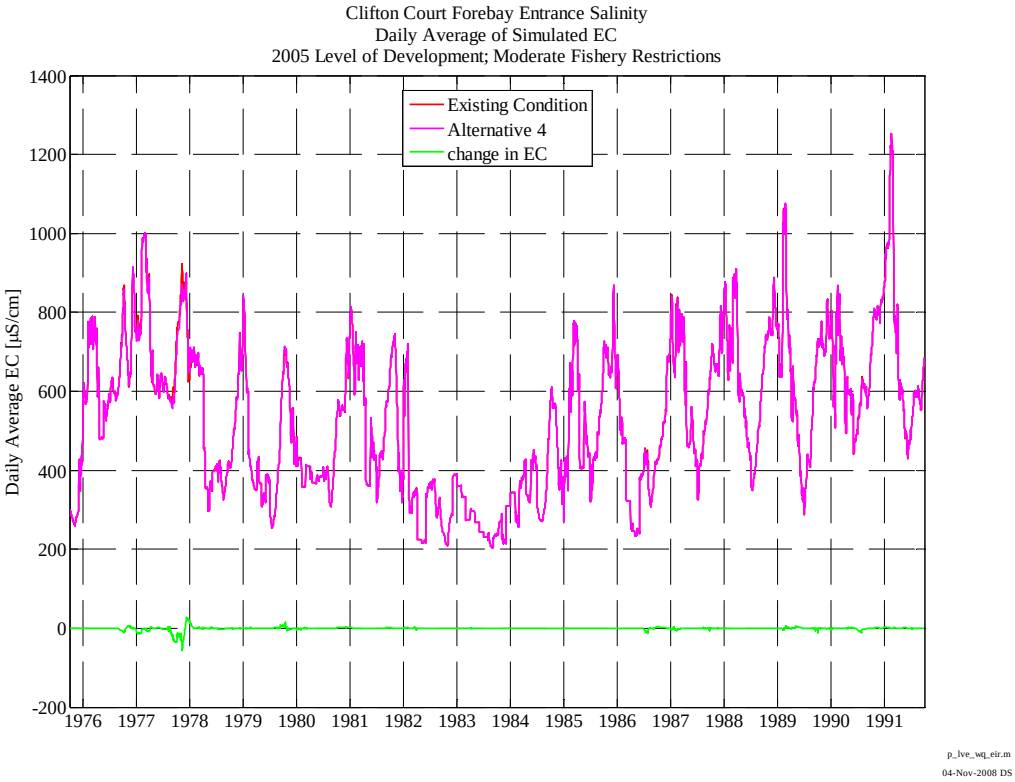
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	283	279	417	588	742	747	576	513	560	611	593	699
1977	766	660	819	751	963	892	660	614	621	616	579	606
1978	768	846	754	691	680	655	413	329	399	405	348	399
1979	450	572	693	698	432	361	394	323	376	270	347	545
1980	687	558	469	430	362	410	379	373	384	393	332	439
1981	553	563	696	728	691	682	491	427	437	392	470	595
1982	708	575	372	651	326	341	229	217	348	369	307	273
1983	220	270	384	361	333	276	296	268	245	231	216	231
1984	258	226	307	342	277	368	381	365	424	288	295	463
1985	577	468	370	409	606	738	534	465	449	380	470	596
1986	701	654	710	582	479	326	252	242	380	427	332	400
1987	451	519	678	728	772	769	563	497	446	387	486	592
1988	685	659	769	778	723	866	620	564	462	370	472	613
1989	731	764	812	690	996	761	580	515	361	379	471	651
1990	733	708	772	653	778	708	569	584	479	554	611	608
1991	758	800	830	950	1,165	805	636	538	465	554	593	605
Avg	583	570	616	627	645	607	473	427	427	414	433	520
W/AN/BN	542	529	527	536	412	391	335	302	365	340	311	393
D/C	615	602	685	697	826	774	581	524	476	471	527	618

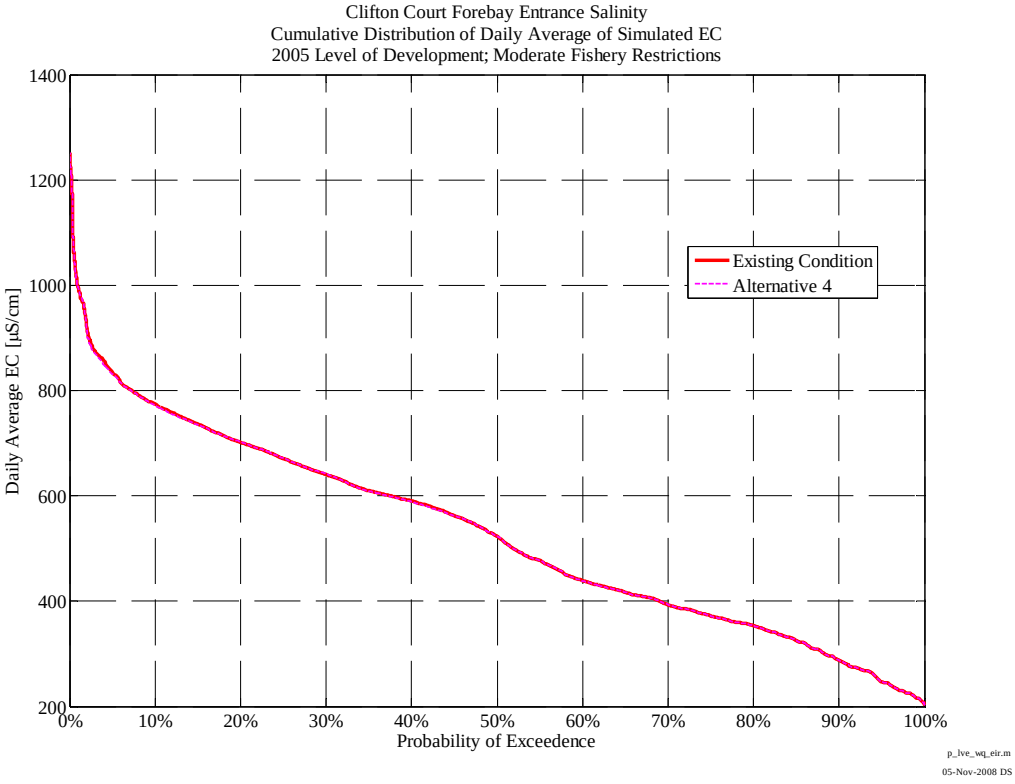
Percent (%) Change from Existing Condition for Clifton Court Forebay Entrance Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%
1977	-0.6%	0.6%	-0.1%	-1.6%	-0.3%	-0.6%	0.3%	0.1%	0.0%	-0.3%	-0.9%	-4.7%
1978	-2.5%	-3.1%	2.9%	0.8%	0.1%	0.1%	-0.1%	0.1%	0.1%	-0.3%	-0.7%	-0.1%
1979	-0.1%	-0.1%	0.0%	-0.1%	0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	0.3%	0.6%
1980	0.6%	-0.5%	-0.1%	-0.5%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1981	0.2%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1982	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.7%	-0.1%	0.1%
1987	0.7%	0.3%	0.0%	-0.2%	-0.5%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1988	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.0%	0.7%	0.4%	0.0%	0.0%	0.0%
1990	-0.1%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.2%	0.0%	-1.3%	-0.4%	-0.1%
1991	0.0%	0.1%	0.1%	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	-0.2%	-0.1%	0.0%
Avg	-0.1%	-0.2%	0.2%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.2%	-0.1%	-0.3%
W/AN/BN	-0.3%	-0.5%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.1%	0.1%
D/C	0.0%	0.1%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.1%	0.0%	-0.2%	-0.1%	-0.6%


Clifton Court Forebay Entrance Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.08%
-0.04%
-0.03%
0.02%
0.08%
0.03%
-0.24%
-0.11%
-0.29%
-0.11%
-0.16%
0.17%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Clifton Court Forebay Entrance Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Jones Pumping Plant

Existing Condition

Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	322	332	495	629	764	774	646	538	567	619	602	699
1977	768	671	820	777	981	969	693	629	625	620	593	651
1978	785	861	752	711	712	684	408	334	413	448	382	424
1979	472	574	710	706	426	362	406	330	383	325	384	554
1980	663	569	542	445	397	414	385	383	395	433	367	461
1981	549	561	705	737	715	715	542	438	447	419	491	611
1982	703	594	467	686	328	349	235	226	364	403	327	275
1983	218	283	389	422	362	308	310	275	260	241	210	246
1984	290	225	326	346	270	379	409	388	435	335	341	478
1985	553	486	452	483	642	768	573	478	460	411	493	608
1986	695	654	724	624	517	350	261	248	391	462	371	424
1987	453	511	682	741	801	801	602	508	458	418	514	610
1988	693	673	780	794	751	966	660	581	472	373	483	628
1989	732	763	815	727	1,065	789	615	535	372	391	491	656
1990	737	720	781	692	872	751	621	628	495	562	621	623
1991	755	793	830	964	1,203	829	695	569	489	557	604	618
Avg	587	579	642	655	675	638	504	443	439	438	455	535
W/AN/BN	547	537	559	563	430	407	345	312	377	378	340	409
D/C	618	612	707	727	866	818	627	545	487	485	544	634

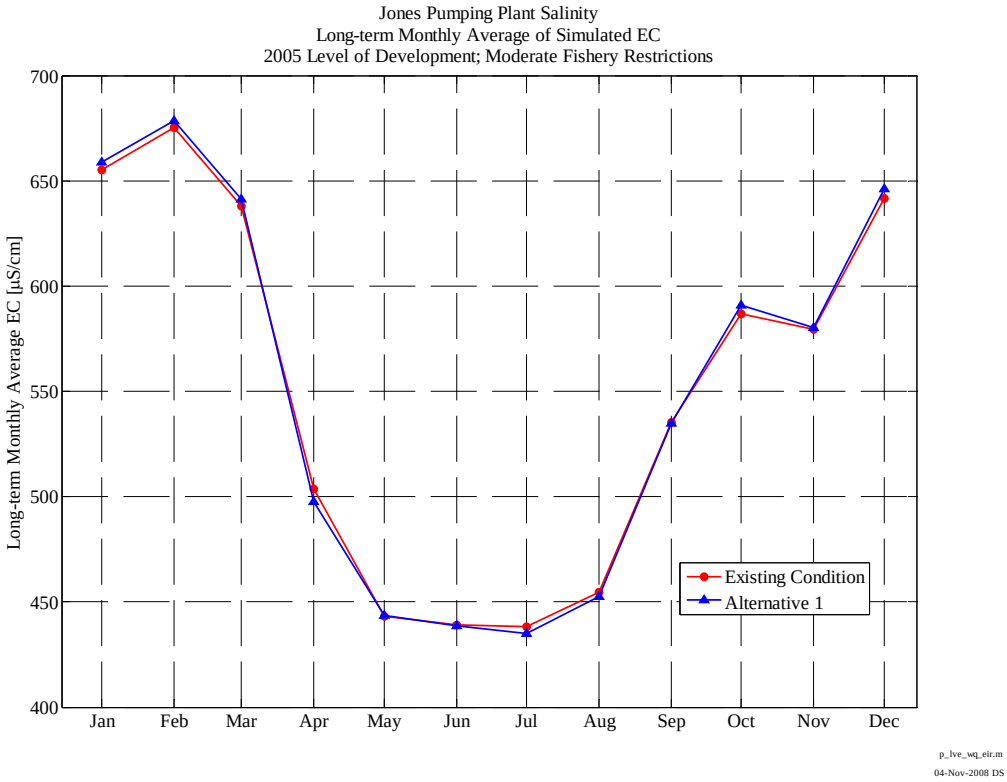
Alternative 1

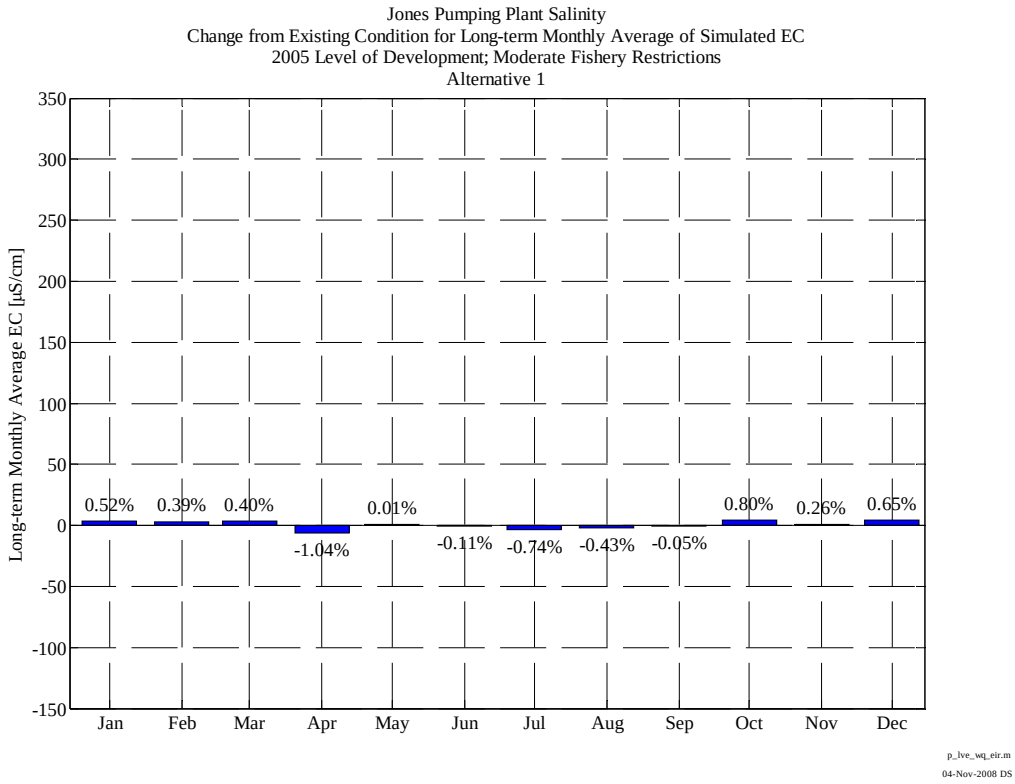
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

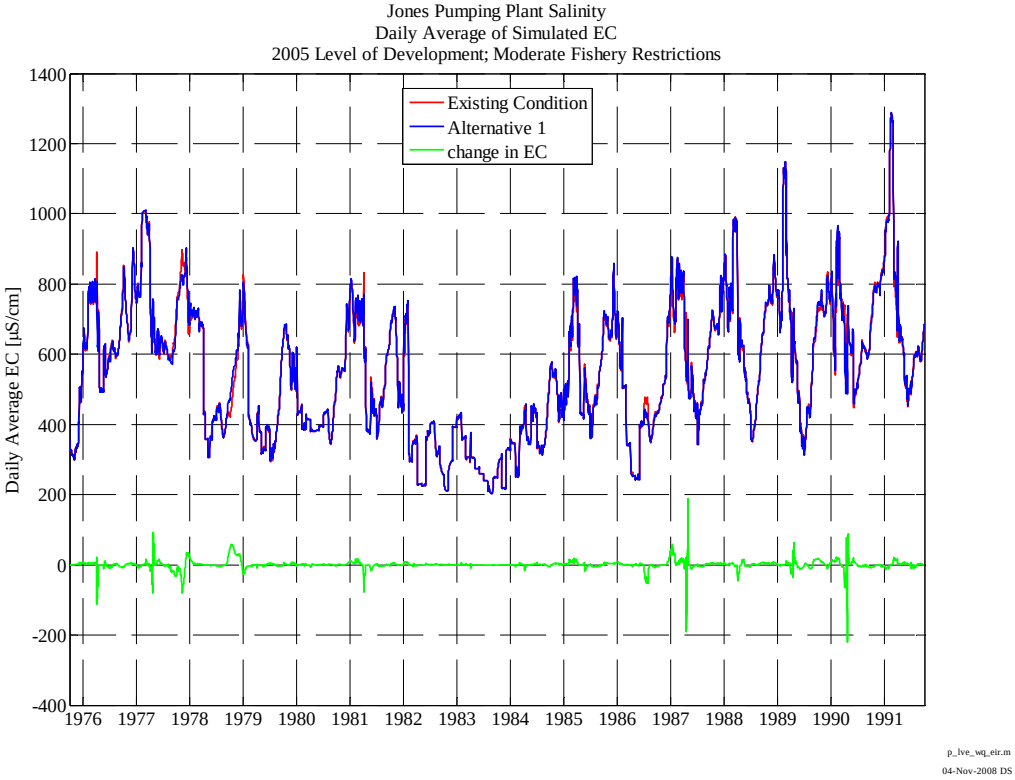
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	322	333	498	633	768	778	612	540	564	616	604	694
1977	767	676	823	772	981	972	700	635	631	618	584	626
1978	769	817	780	720	714	685	408	333	412	443	380	442
1979	524	604	718	692	423	360	404	328	385	327	382	551
1980	667	571	545	444	397	414	384	383	395	432	368	459
1981	549	560	709	745	728	718	524	432	445	416	488	611
1982	708	595	466	693	328	348	235	226	364	403	328	276
1983	218	283	389	422	362	307	309	275	260	240	210	246
1984	290	225	325	346	268	381	404	389	438	336	341	475
1985	553	490	453	486	653	782	574	473	455	407	489	607
1986	701	659	729	630	517	350	260	248	393	426	367	418
1987	450	510	697	778	805	814	599	507	454	415	510	612
1988	697	677	783	796	755	965	645	587	468	374	484	633
1989	737	768	820	726	1,065	793	618	534	363	391	484	670
1990	750	724	779	703	888	749	590	635	502	558	619	617
1991	749	792	827	956	1,202	844	697	574	490	552	603	619
Avg	591	580	646	659	679	641	498	444	439	435	453	535
W/AN/BN	554	536	565	564	430	407	343	312	378	373	339	409
D/C	620	615	710	733	872	824	618	546	486	483	541	632

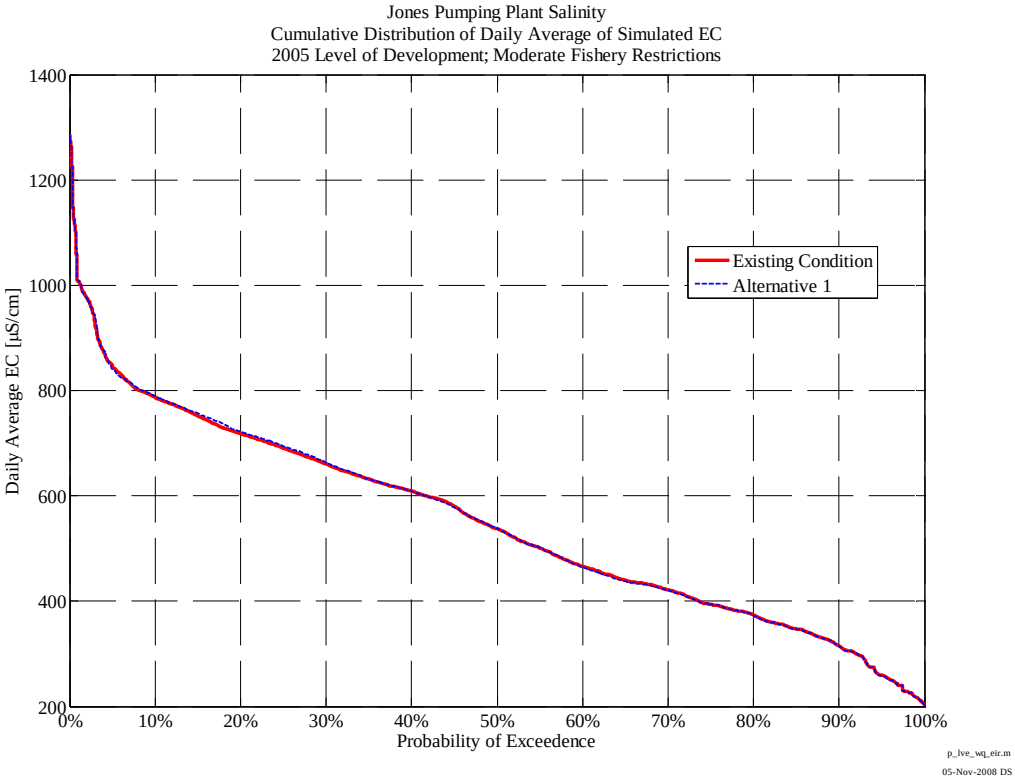
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.1%	0.3%	0.8%	0.6%	0.6%	0.6%	-5.3%	0.2%	-0.5%	-0.5%	0.3%	-0.8%
1977	-0.2%	0.7%	0.4%	-0.6%	0.0%	0.3%	1.1%	1.0%	1.0%	-0.2%	-1.5%	-3.8%
1978	-2.1%	-5.1%	3.6%	1.2%	0.3%	0.2%	-0.1%	-0.3%	-0.3%	-1.0%	-0.6%	4.2%
1979	11.0%	5.2%	1.0%	-2.0%	-0.7%	-0.4%	-0.4%	-0.4%	0.5%	0.8%	-0.5%	-0.6%
1980	0.6%	0.2%	0.5%	-0.1%	0.0%	0.0%	-0.2%	-0.2%	0.1%	0.0%	0.2%	-0.4%
1981	0.1%	-0.2%	0.7%	1.1%	1.9%	0.4%	-3.3%	-1.4%	-0.4%	-0.5%	-0.6%	0.0%
1982	0.6%	0.2%	-0.2%	1.0%	0.0%	-0.4%	0.0%	-0.1%	0.3%	0.0%	0.2%	0.1%
1983	0.0%	0.1%	0.0%	0.1%	0.3%	-0.2%	-0.5%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	-0.2%	0.0%	-0.2%	-0.7%	0.6%	-1.2%	0.2%	0.7%	0.4%	0.1%	-0.7%
1985	0.2%	0.8%	0.3%	0.5%	1.7%	1.8%	0.2%	-1.0%	-1.0%	-0.9%	-0.9%	-0.2%
1986	0.8%	0.7%	0.7%	0.9%	0.0%	0.0%	-0.3%	-0.2%	0.5%	-7.9%	-1.0%	-1.5%
1987	-0.5%	-0.1%	2.3%	5.0%	0.5%	1.6%	-0.5%	-0.3%	-0.8%	-0.7%	-0.7%	0.4%
1988	0.7%	0.6%	0.3%	0.2%	0.5%	-0.2%	-2.3%	1.0%	-0.8%	0.1%	0.1%	0.8%
1989	0.7%	0.6%	0.7%	-0.2%	0.0%	0.6%	0.4%	-0.2%	-2.5%	0.0%	-1.4%	2.1%
1990	1.8%	0.5%	-0.2%	1.6%	1.9%	-0.3%	-4.9%	1.2%	1.4%	-0.6%	-0.4%	-0.8%
1991	-0.8%	-0.2%	-0.5%	-0.8%	-0.1%	1.8%	0.4%	0.9%	0.2%	-0.8%	-0.1%	0.2%
Avg	0.8%	0.3%	0.6%	0.5%	0.4%	0.4%	-1.0%	0.0%	-0.1%	-0.7%	-0.4%	-0.1%
W/AN/BN	1.6%	0.1%	0.8%	0.1%	-0.1%	0.0%	-0.4%	-0.2%	0.2%	-1.1%	-0.2%	0.2%
D/C	0.2%	0.3%	0.5%	0.8%	0.8%	0.7%	-1.6%	0.1%	-0.4%	-0.5%	-0.6%	-0.2%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.52%
0.39%
0.40%
-1.04%
0.01%
-0.11%
-0.74%
-0.43%
-0.05%
0.80%
0.26%
0.65%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
-400
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

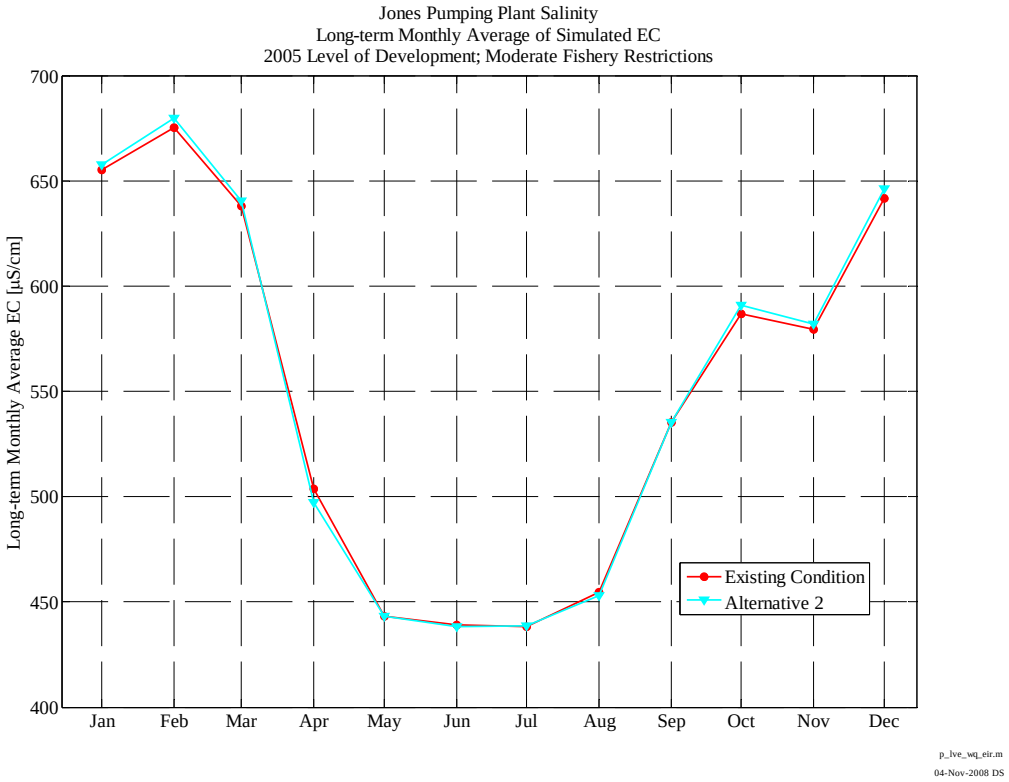
Alternative 2

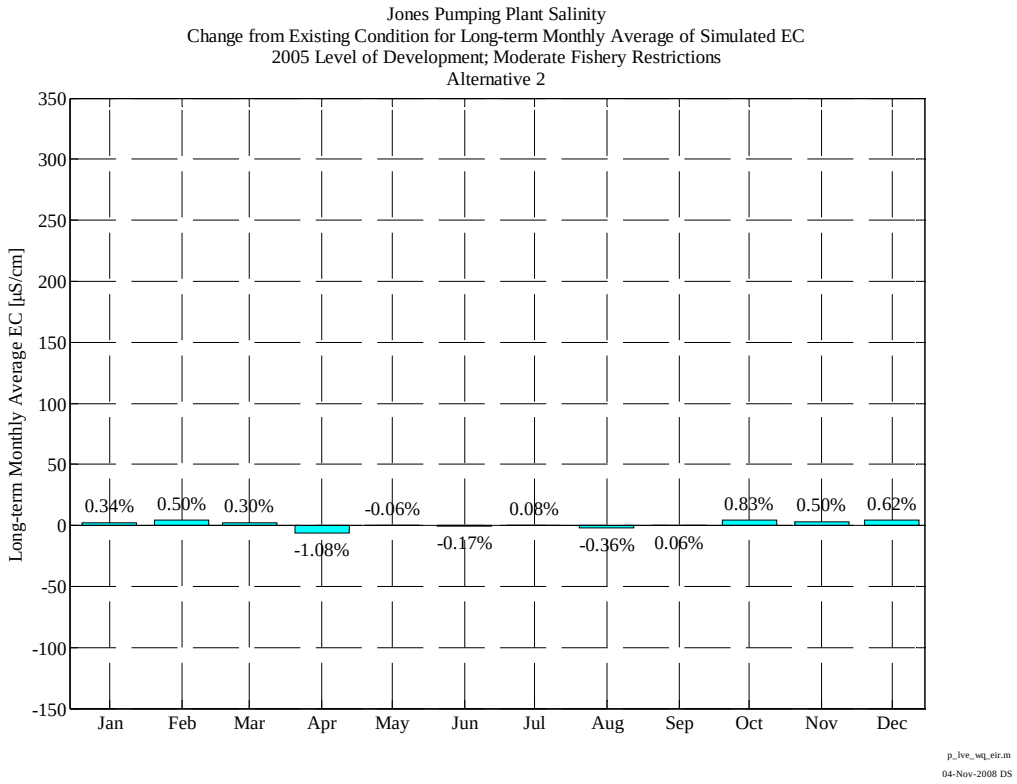
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

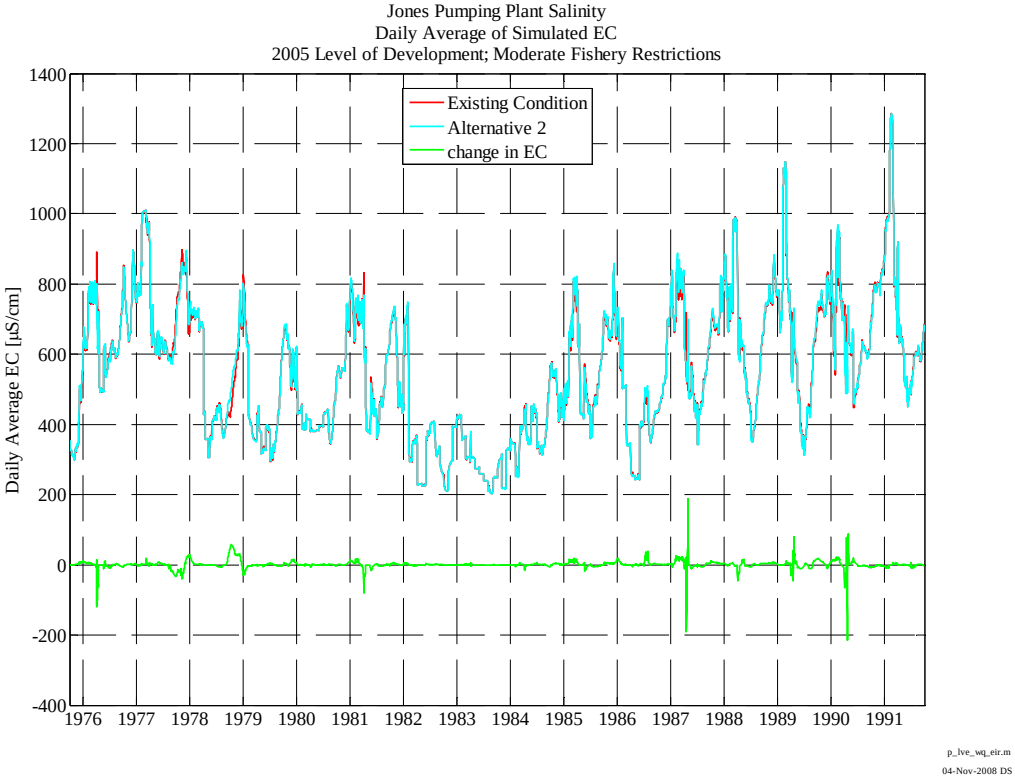
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	322	333	502	635	769	775	609	539	564	616	604	695
1977	767	673	823	776	982	973	695	631	629	619	584	623
1978	765	842	775	723	714	685	408	333	412	443	379	442
1979	523	603	718	691	423	360	405	328	385	327	382	551
1980	667	574	552	444	397	414	384	383	395	432	368	459
1981	549	560	709	745	728	714	523	431	444	416	488	612
1982	708	596	466	690	328	348	235	226	364	403	328	276
1983	218	283	389	422	362	308	311	275	260	241	210	246
1984	290	225	325	346	268	381	404	389	438	336	341	475
1985	553	491	453	486	653	782	574	473	455	407	489	607
1986	701	659	732	634	517	350	260	248	393	486	373	427
1987	454	511	683	742	822	818	600	507	454	415	510	615
1988	701	678	783	795	754	965	645	587	467	373	483	631
1989	737	768	820	727	1,065	793	620	535	363	392	483	668
1990	751	725	780	705	890	750	590	635	502	559	619	618
1991	749	791	827	958	1,202	832	694	570	488	552	604	619
Avg	591	582	646	657	680	640	497	443	438	439	453	535
W/AN/BN	553	540	565	564	430	407	344	312	378	381	340	411
D/C	620	615	709	730	874	822	617	545	485	483	540	632

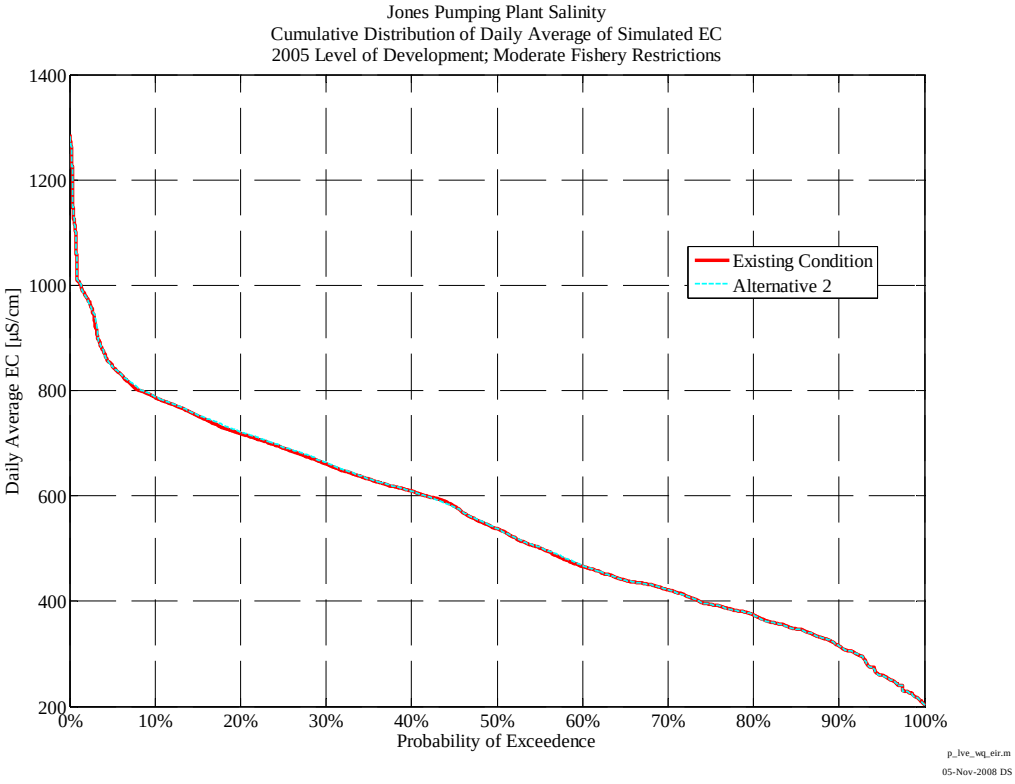
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.2%	0.3%	1.5%	1.0%	0.6%	0.1%	-5.6%	0.2%	-0.6%	-0.5%	0.3%	-0.5%
1977	-0.2%	0.4%	0.3%	-0.2%	0.1%	0.4%	0.3%	0.3%	0.7%	0.0%	-1.5%	-4.3%
1978	-2.5%	-2.1%	2.9%	1.6%	0.3%	0.2%	0.0%	-0.2%	-0.2%	-1.1%	-0.8%	4.2%
1979	10.9%	5.1%	1.0%	-2.2%	-0.7%	-0.4%	-0.3%	-0.4%	0.5%	0.8%	-0.4%	-0.6%
1980	0.6%	0.8%	1.8%	-0.1%	0.0%	0.0%	-0.2%	-0.2%	0.1%	0.0%	0.2%	-0.4%
1981	0.1%	-0.2%	0.7%	1.1%	1.9%	-0.2%	-3.5%	-1.5%	-0.5%	-0.6%	-0.6%	0.1%
1982	0.6%	0.4%	-0.1%	0.6%	-0.1%	-0.4%	0.0%	-0.1%	0.3%	0.0%	0.2%	0.1%
1983	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	-0.1%	0.0%	0.0%	-0.7%	0.4%	-1.2%	0.2%	0.7%	0.4%	0.1%	-0.7%
1985	0.2%	0.9%	0.2%	0.6%	1.7%	1.8%	0.2%	-1.0%	-1.0%	-0.9%	-0.9%	-0.2%
1986	0.8%	0.7%	1.0%	1.6%	0.0%	0.0%	-0.3%	-0.2%	0.5%	5.1%	0.8%	0.7%
1987	0.3%	0.1%	0.2%	0.2%	2.6%	2.2%	-0.3%	-0.3%	-0.9%	-0.7%	-0.8%	0.8%
1988	1.2%	0.7%	0.4%	0.1%	0.4%	-0.2%	-2.3%	1.0%	-1.0%	-0.2%	-0.1%	0.6%
1989	0.6%	0.7%	0.7%	0.0%	0.0%	0.6%	0.7%	0.0%	-2.4%	0.2%	-1.7%	1.9%
1990	2.0%	0.6%	-0.2%	1.8%	2.0%	-0.2%	-4.9%	1.2%	1.5%	-0.5%	-0.3%	-0.8%
1991	-0.9%	-0.3%	-0.4%	-0.6%	0.0%	0.4%	-0.1%	0.1%	-0.3%	-0.8%	0.0%	0.1%
Avg	0.8%	0.5%	0.6%	0.3%	0.5%	0.3%	-1.1%	-0.1%	-0.2%	0.1%	-0.4%	0.1%
W/AN/BN	1.5%	0.7%	1.0%	0.2%	-0.2%	0.0%	-0.3%	-0.1%	0.3%	0.8%	0.0%	0.5%
D/C	0.3%	0.4%	0.4%	0.4%	1.0%	0.6%	-1.7%	0.0%	-0.5%	-0.4%	-0.6%	-0.3%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.34%
0.50%
0.30%
-1.08%
-0.06%
-0.17%
0.08%
-0.36%
0.06%
0.83%
0.50%
0.62%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
-400
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

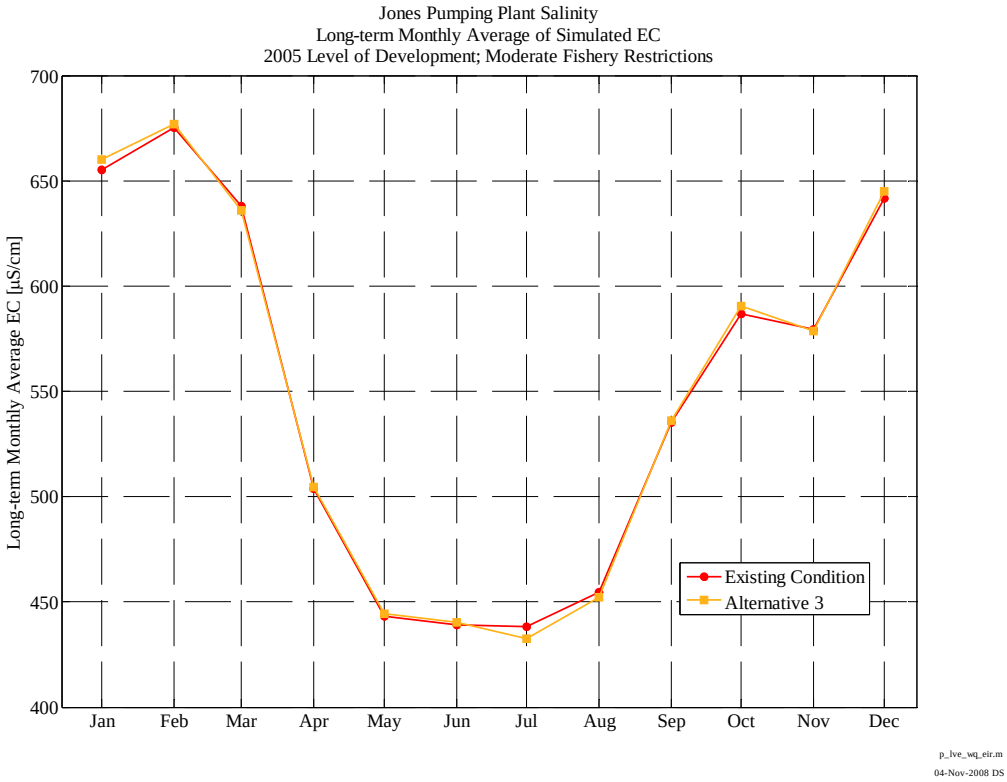
Alternative 3

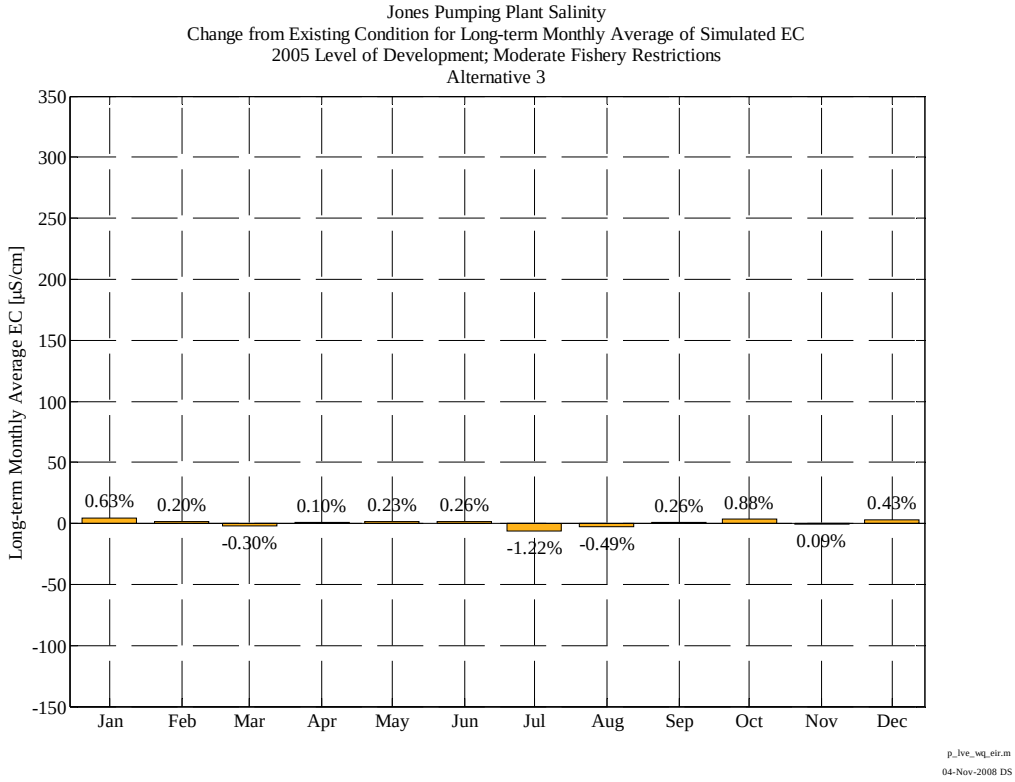
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

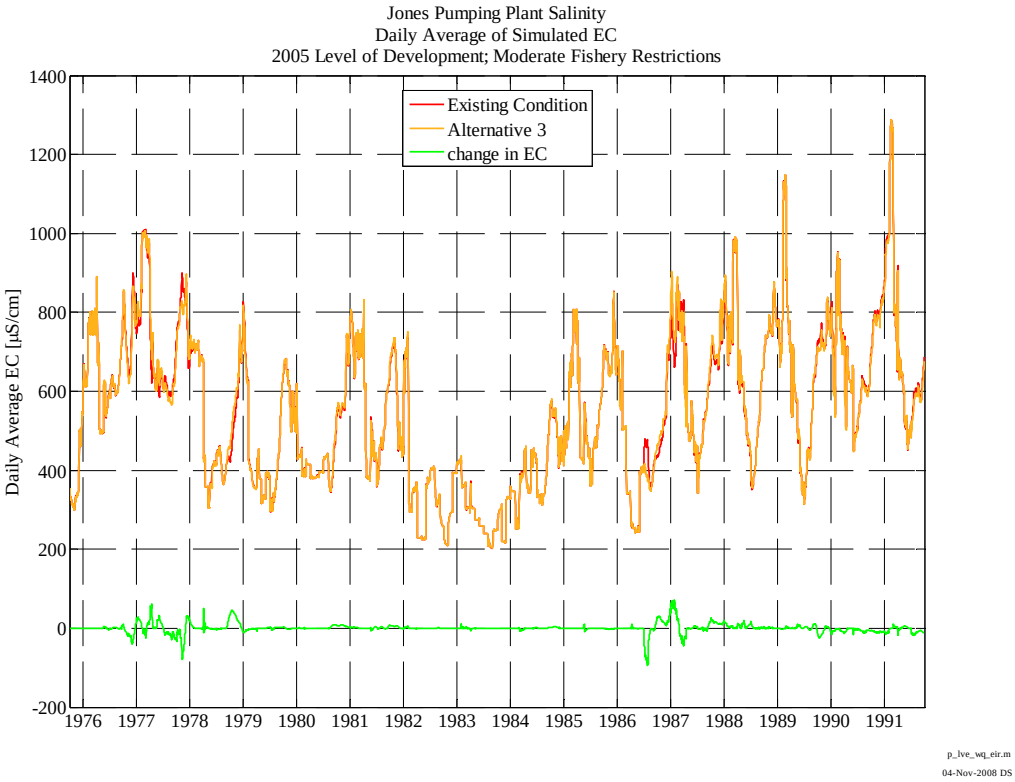
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	322	332	494	628	763	774	646	540	566	619	604	701
1977	763	649	809	800	978	972	722	637	641	609	577	631
1978	773	815	776	718	713	683	411	334	411	445	382	437
1979	514	600	714	699	423	360	405	329	384	323	386	556
1980	664	567	542	445	397	414	385	383	395	432	368	469
1981	556	568	708	739	716	715	542	436	447	419	492	614
1982	709	599	467	688	328	349	235	226	364	402	328	276
1983	219	283	389	422	363	307	309	276	260	241	210	246
1984	290	225	326	346	270	374	409	388	435	335	341	479
1985	555	489	452	483	642	768	573	476	458	410	494	608
1986	694	653	723	624	517	350	262	248	391	393	360	429
1987	480	525	707	800	830	775	589	508	462	417	512	616
1988	711	686	793	805	755	967	665	590	478	378	484	629
1989	732	765	815	726	1,064	790	615	540	374	393	490	662
1990	717	717	781	683	870	745	615	628	491	558	612	617
1991	748	783	822	954	1,201	833	692	573	491	543	594	610
Avg	590	579	645	660	677	636	505	445	441	432	452	536
W/AN/BN	552	535	562	563	430	406	345	312	377	367	339	413
D/C	620	613	709	735	869	815	629	548	490	483	540	632

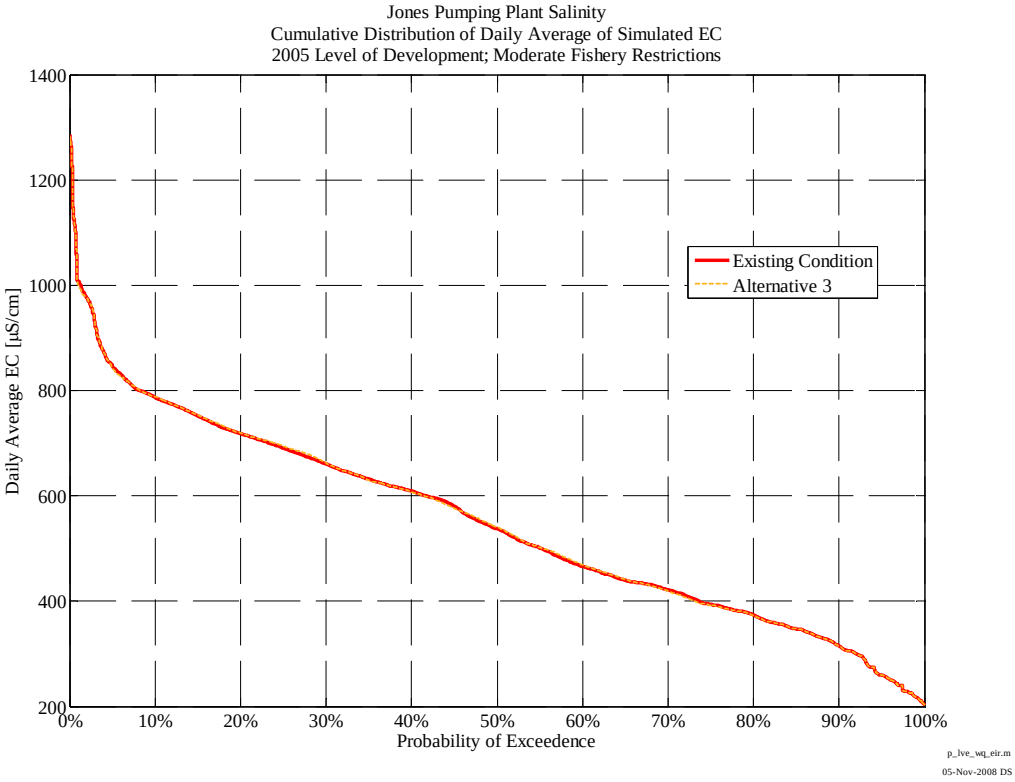
Change from Existing Condition for Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3 - Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0	0	0	-1	-1	0	0	2	-1	-1	1	2
1977	-6	-21	-11	23	-3	3	29	9	16	-10	-17	-20
1978	-13	-45	24	7	0	-1	2	-1	-2	-3	0	13
1979	42	26	4	-8	-3	-1	-1	0	1	-1	2	2
1980	1	-2	0	0	-1	0	0	0	0	-1	1	8
1981	7	7	4	2	1	0	0	-2	1	0	1	3
1982	6	5	0	2	0	0	0	0	0	0	0	0
1983	0	0	0	0	1	0	-2	0	0	0	0	0
1984	0	0	0	0	0	-5	0	0	0	0	0	1
1985	3	3	0	0	0	0	0	-2	-2	-1	0	0
1986	-1	-1	-1	0	0	0	1	0	0	-69	-10	5
1987	27	14	25	60	28	-26	-13	0	4	-1	-2	6
1988	19	13	13	11	4	0	5	9	6	4	1	1
1989	0	1	0	-1	-1	1	0	5	2	2	-2	6
1990	-20	-3	0	-9	-3	-6	-6	0	-4	-4	-9	-5
1991	-7	-10	-9	-10	-1	4	-3	4	1	-14	-10	-8
Avg	4	-1	3	5	2	-2	1	1	1	-6	-3	1
W/AN/BN	5	-2	4	0	0	-1	0	0	0	-10	-1	4
D/C	3	1	2	8	3	-3	1	3	3	-3	-4	-2


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.63%
0.20%
-0.30%
0.10%
0.23%
0.26%
-1.22%
-0.49%
0.26%
0.88%
0.09%
0.43%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

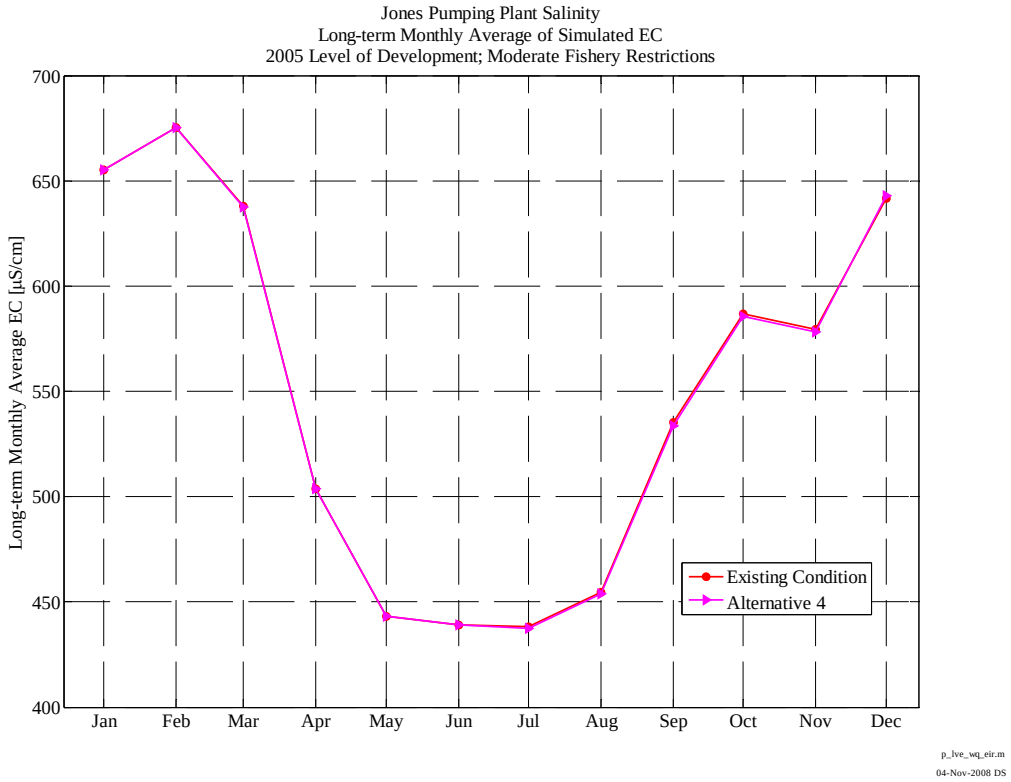
Alternative 4

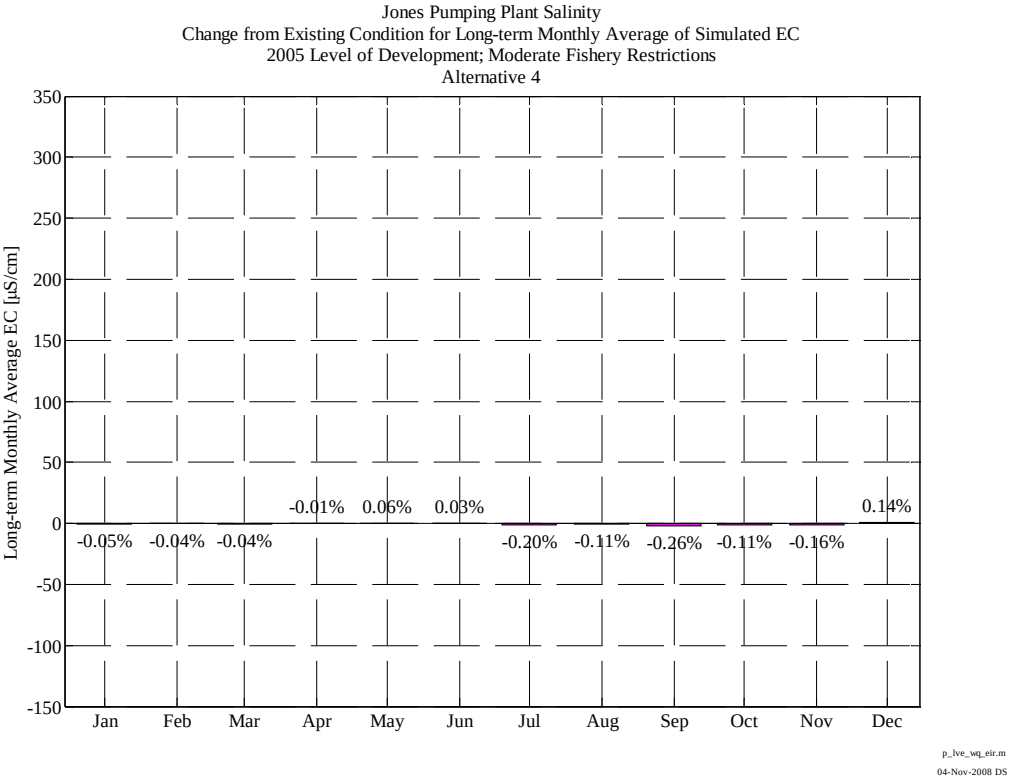
Jones Pumping Plant Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

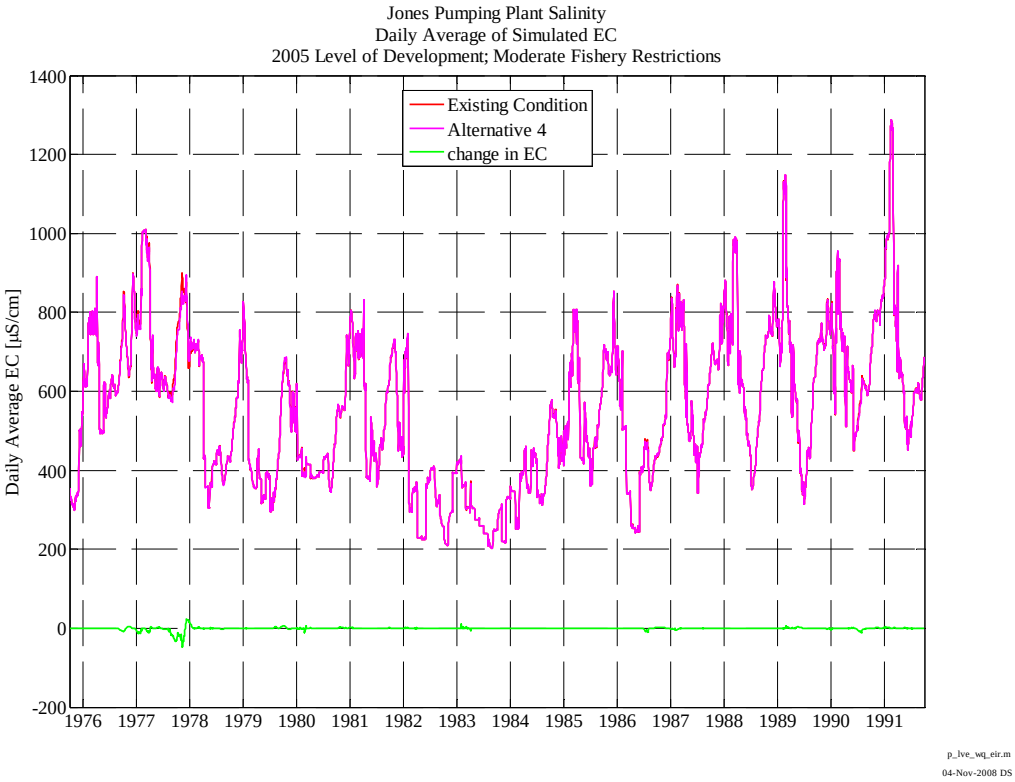
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	322	332	495	629	764	774	646	538	567	619	602	694
1977	765	674	819	767	980	962	694	629	625	618	585	624
1978	765	835	771	716	712	684	408	334	413	447	381	424
1979	472	573	710	706	426	361	406	330	383	324	386	557
1980	667	567	542	444	395	414	385	383	395	433	367	461
1981	550	562	705	738	715	715	542	438	447	419	491	612
1982	704	594	467	687	328	349	235	226	364	403	327	275
1983	218	283	389	422	363	307	310	275	260	241	210	246
1984	290	225	326	346	270	379	409	388	435	335	341	478
1985	552	486	452	483	642	768	573	478	460	411	494	608
1986	695	654	724	624	517	350	260	248	391	456	370	425
1987	455	512	682	739	798	800	602	508	458	418	514	610
1988	692	673	780	794	751	966	659	581	472	373	483	628
1989	732	763	815	727	1,065	790	615	537	374	391	491	656
1990	736	720	780	691	873	751	621	628	495	554	619	622
1991	755	794	831	967	1,203	829	695	570	489	556	603	618
Avg	586	578	643	655	675	638	504	443	439	437	454	534
W/AN/BN	545	533	561	564	430	407	345	312	377	377	340	409
D/C	618	613	706	726	866	817	627	545	487	484	542	630

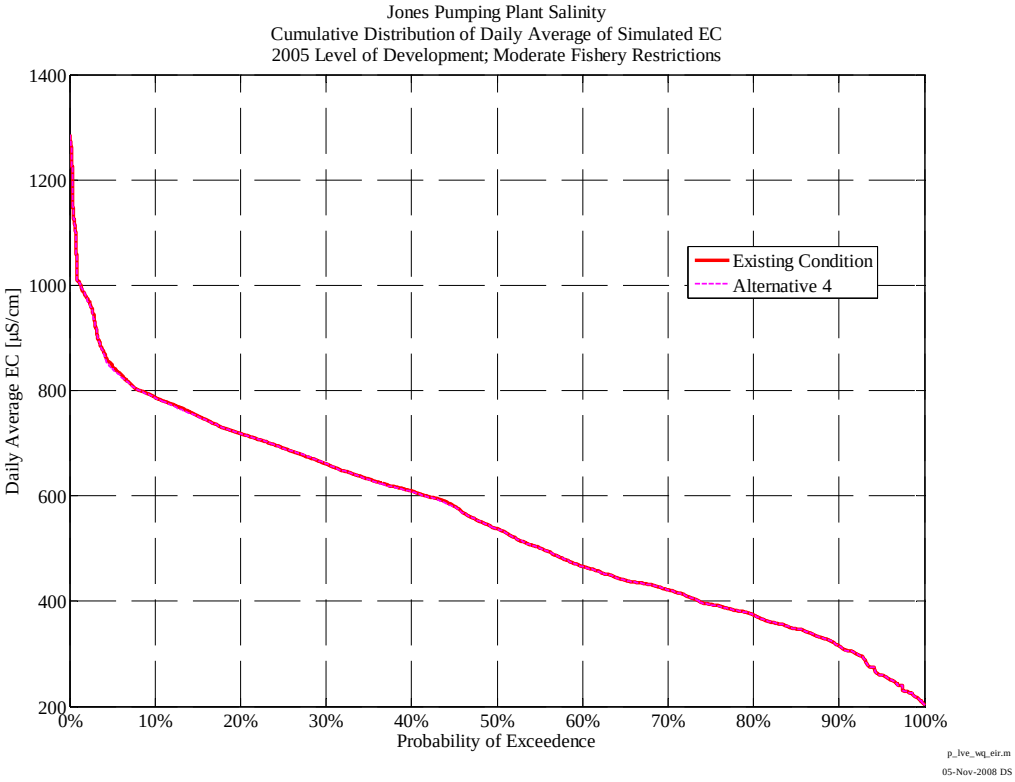
Percent (%) Change from Existing Condition for Jones Pumping Plant Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%
1977	-0.4%	0.5%	-0.1%	-1.3%	-0.1%	-0.7%	0.2%	0.1%	0.0%	-0.3%	-1.4%	-4.1%
1978	-2.5%	-2.9%	2.4%	0.7%	0.0%	0.0%	-0.1%	0.0%	0.1%	-0.1%	-0.5%	-0.1%
1979	-0.1%	-0.1%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.5%	0.5%
1980	0.6%	-0.4%	-0.1%	-0.2%	-0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
1981	0.2%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1982	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.1%	0.3%	-0.2%	-0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-1.3%	-0.1%	0.1%
1987	0.6%	0.2%	0.0%	-0.2%	-0.4%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.5%	0.4%	0.0%	0.0%	0.0%
1990	-0.1%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	-1.3%	-0.4%	-0.1%
1991	0.0%	0.1%	0.1%	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%	-0.2%	-0.1%	0.0%
Avg	-0.1%	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.2%	-0.1%	-0.3%
W/AN/BN	-0.3%	-0.5%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.1%
D/C	0.0%	0.1%	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.1%	0.0%	-0.2%	-0.2%	-0.5%


Jones Pumping Plant Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
700
650
600
550
500
450
400
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.05%
-0.04%
-0.04%
-0.01%
0.06%
0.03%
-0.20%
-0.11%
-0.26%
-0.11%
-0.16%
0.14%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Jones Pumping Plant Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

City of Stockton Intake

Existing Condition

City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	265	263	277	383	451	418	432	430	372	414	377	443
1977	463	436	523	474	583	567	469	494	425	402	368	402
1978	493	535	427	469	593	577	407	322	373	369	292	296
1979	321	389	462	505	423	338	359	317	266	220	256	356
1980	424	370	297	369	351	380	361	352	360	386	271	302
1981	374	391	464	506	412	458	479	366	265	291	331	394
1982	447	388	230	419	298	321	233	217	316	361	265	246
1983	214	269	343	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	328	369	329	277	224	237	323
1985	377	353	237	262	404	512	510	408	270	285	328	393
1986	444	441	457	353	389	308	255	242	345	333	263	294
1987	338	368	456	472	459	504	481	425	274	290	339	392
1988	439	439	519	522	405	456	446	415	298	276	329	403
1989	462	488	514	443	545	436	357	333	233	290	343	423
1990	458	463	501	387	378	391	328	369	334	393	392	392
1991	474	514	534	598	615	522	417	352	319	387	383	391
Avg	391	396	408	428	431	424	386	352	311	322	311	355
W/AN/BN	373	374	358	399	378	361	323	293	313	304	256	292
D/C	406	413	447	450	472	474	435	399	310	336	354	404

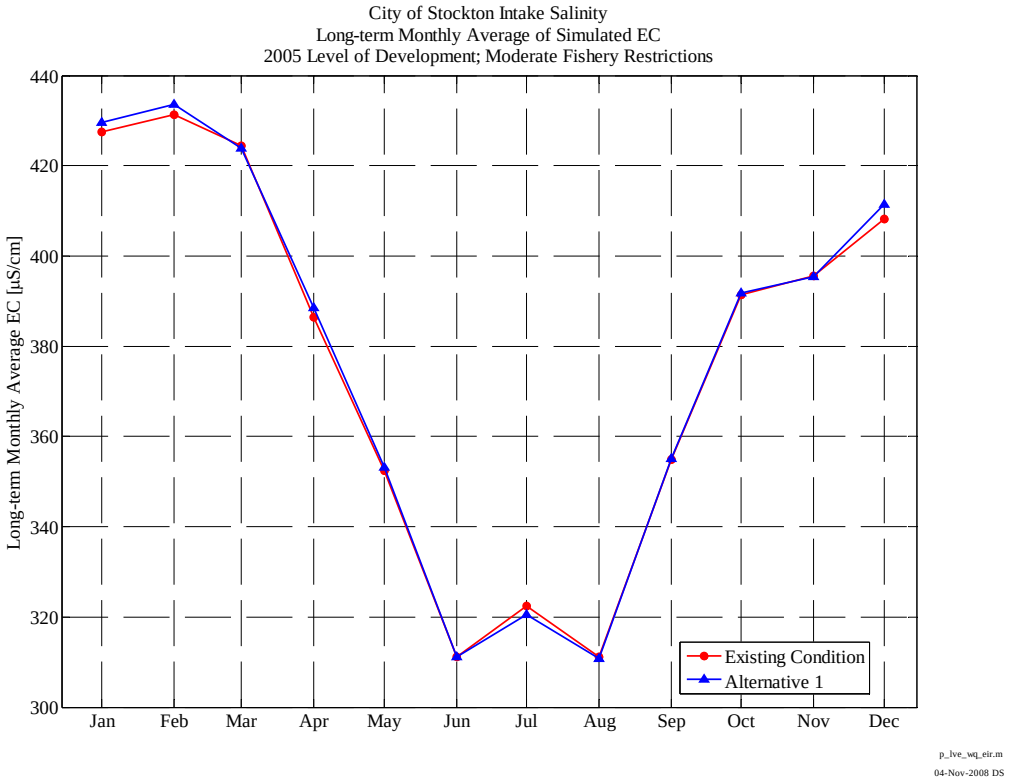
Alternative 1

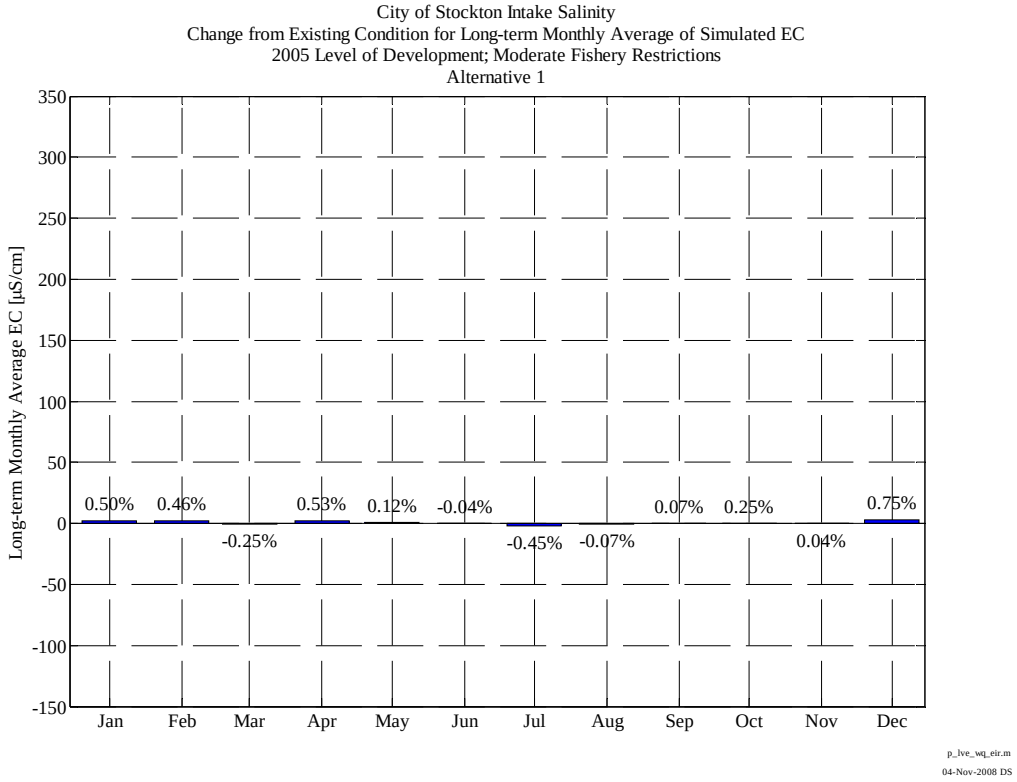
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

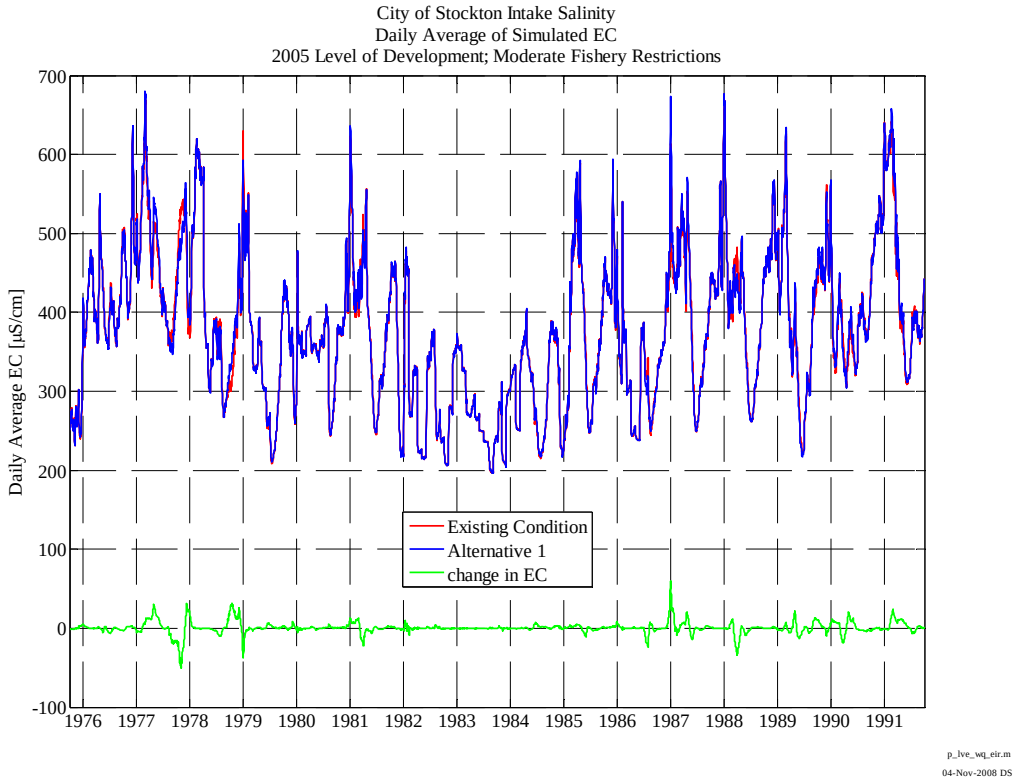
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	264	262	280	386	451	418	433	429	369	411	377	441
1977	462	439	524	470	586	579	486	512	430	402	361	384
1978	463	512	450	474	593	576	407	321	371	361	290	305
1979	347	404	461	495	423	336	359	316	270	222	257	357
1980	425	370	300	368	350	380	362	351	360	387	273	303
1981	375	391	468	514	423	448	473	361	265	290	330	396
1982	449	388	229	422	297	321	233	217	317	361	266	245
1983	214	269	343	356	328	275	280	268	252	237	207	229
1984	270	221	289	322	265	328	369	328	281	227	239	323
1985	377	356	237	263	406	515	514	402	269	283	326	394
1986	445	442	461	356	389	308	255	242	345	319	265	291
1987	338	368	474	494	455	509	493	421	270	288	339	394
1988	440	439	519	521	412	440	432	412	294	277	330	403
1989	462	489	515	440	547	433	364	329	227	290	341	434
1990	464	462	500	396	385	380	329	382	337	391	388	389
1991	473	514	533	597	627	535	428	359	320	382	383	391
Avg	392	395	411	430	434	424	389	353	311	321	311	355
W/AN/BN	373	372	362	399	378	361	324	292	314	302	257	293
D/C	406	413	450	453	477	473	439	401	309	335	353	403

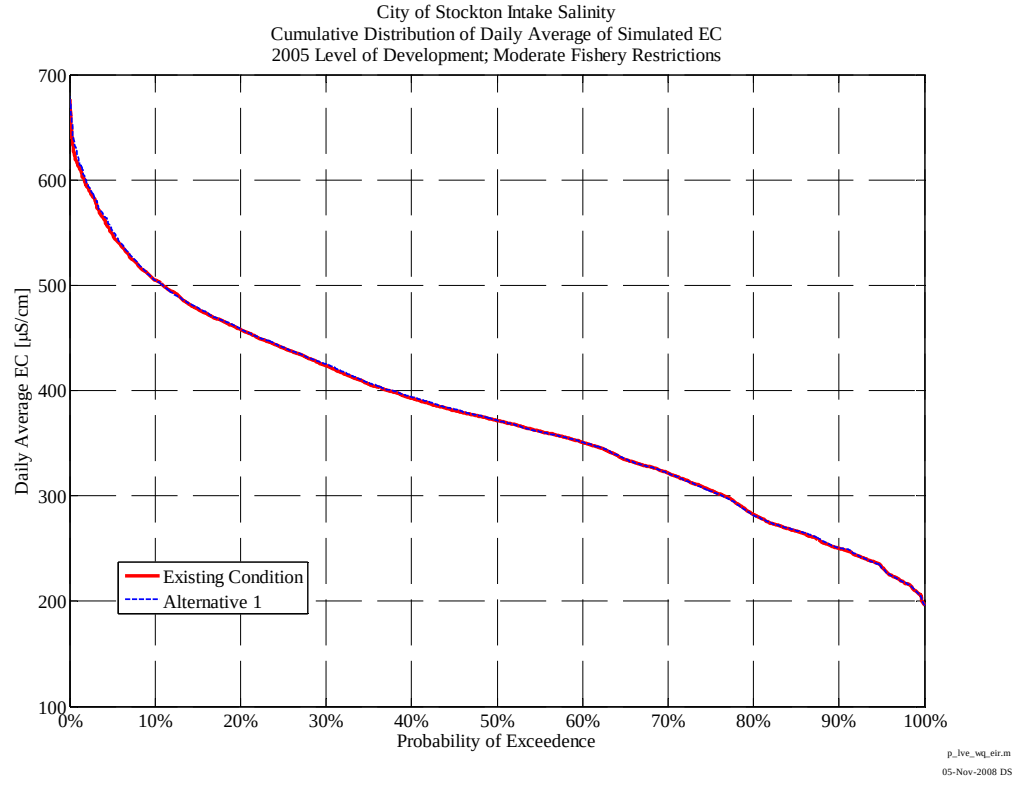
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.5%	-0.1%	1.2%	0.6%	0.0%	-0.1%	0.1%	-0.3%	-0.7%	-0.7%	0.1%	-0.5%
1977	-0.2%	0.5%	0.0%	-0.9%	0.5%	2.1%	3.7%	3.8%	1.1%	-0.1%	-2.0%	-4.4%
1978	-6.0%	-4.3%	5.4%	1.1%	0.0%	-0.1%	0.0%	-0.2%	-0.6%	-2.2%	-0.7%	3.0%
1979	8.3%	3.8%	-0.1%	-1.9%	-0.1%	-0.4%	0.2%	-0.2%	1.5%	1.1%	0.2%	0.3%
1980	0.2%	0.0%	1.0%	-0.2%	-0.2%	0.0%	0.4%	-0.4%	0.0%	0.2%	0.8%	0.2%
1981	0.2%	0.2%	1.0%	1.6%	2.5%	-2.2%	-1.3%	-1.1%	0.0%	-0.3%	-0.2%	0.5%
1982	0.4%	-0.1%	-0.6%	0.6%	-0.5%	-0.2%	0.0%	-0.1%	0.3%	0.0%	0.6%	-0.1%
1983	-0.1%	-0.2%	0.0%	-0.1%	-0.2%	-0.1%	0.0%	-0.2%	0.0%	-0.1%	0.1%	-0.1%
1984	0.4%	-0.2%	-0.1%	0.0%	-0.2%	0.0%	0.1%	-0.5%	1.6%	1.3%	0.8%	0.1%
1985	0.1%	0.7%	0.1%	0.3%	0.6%	0.6%	0.7%	-1.3%	-0.2%	-0.6%	-0.5%	0.1%
1986	0.2%	0.2%	0.9%	0.8%	-0.1%	0.0%	0.1%	-0.1%	0.1%	-4.3%	0.6%	-0.9%
1987	-0.2%	-0.1%	3.9%	4.7%	-0.8%	0.9%	2.5%	-1.0%	-1.1%	-0.4%	-0.1%	0.6%
1988	0.1%	0.0%	0.0%	-0.1%	1.6%	-3.6%	-3.1%	-0.9%	-1.4%	0.2%	0.4%	0.2%
1989	0.0%	0.1%	0.1%	-0.5%	0.3%	-0.7%	2.0%	-1.2%	-2.6%	0.1%	-0.6%	2.6%
1990	1.4%	-0.1%	-0.1%	2.3%	1.9%	-2.9%	0.4%	3.4%	1.1%	-0.5%	-0.8%	-0.7%
1991	-0.4%	0.0%	-0.3%	-0.2%	1.9%	2.6%	2.5%	2.2%	0.3%	-1.3%	0.2%	0.2%
Avg	0.2%	0.0%	0.8%	0.5%	0.5%	-0.2%	0.5%	0.1%	0.0%	-0.5%	-0.1%	0.1%
W/AN/BN	0.5%	-0.1%	0.9%	0.0%	-0.2%	-0.1%	0.1%	-0.2%	0.4%	-0.6%	0.3%	0.4%
D/C	0.1%	0.1%	0.6%	0.9%	1.0%	-0.4%	0.8%	0.4%	-0.4%	-0.4%	-0.4%	-0.2%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
440
420
400
380
360
340
320
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.50%
0.46%
-0.25%
0.53%
0.12%
-0.04%
-0.45%
-0.07%
0.07%
0.25%
0.04%
0.75%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
Existing Condition
Alternative 1
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
Existing Condition
Alternative 1
p_lve_wq_eir.m
05-Nov-2008 DS

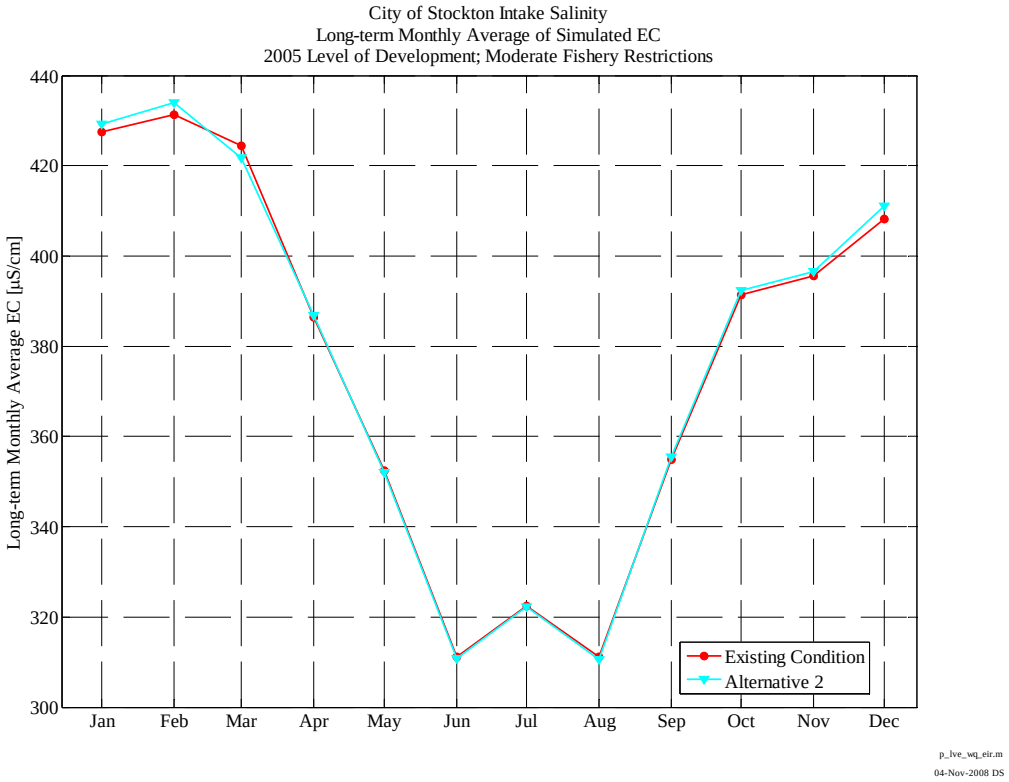
Alternative 2

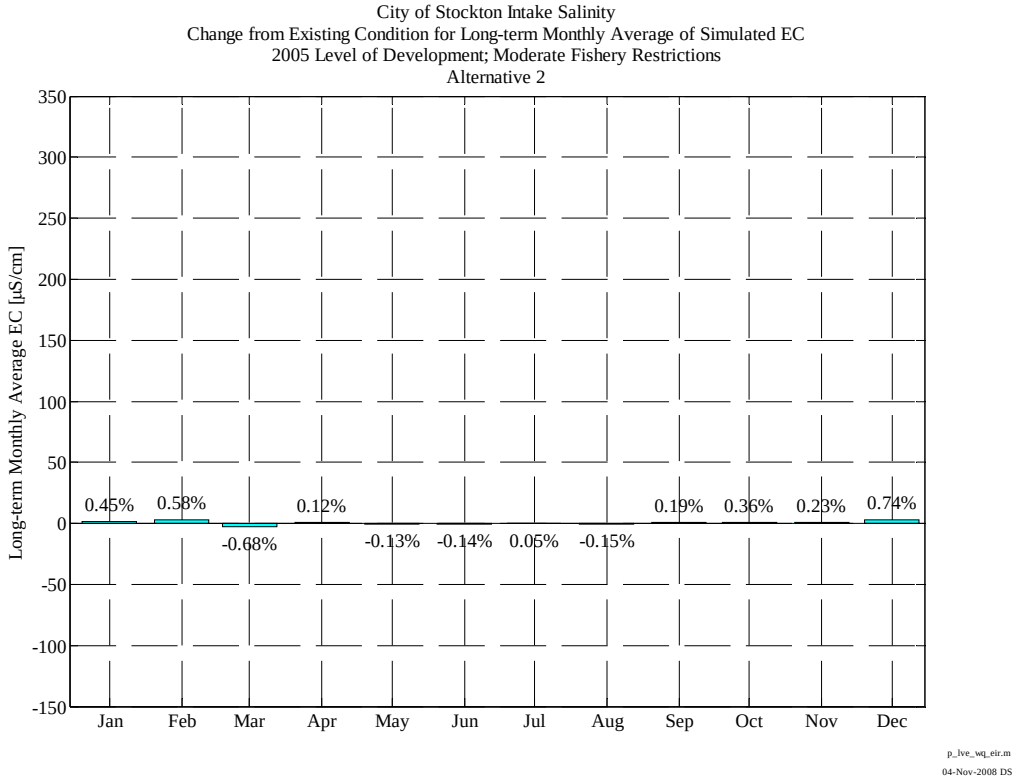
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

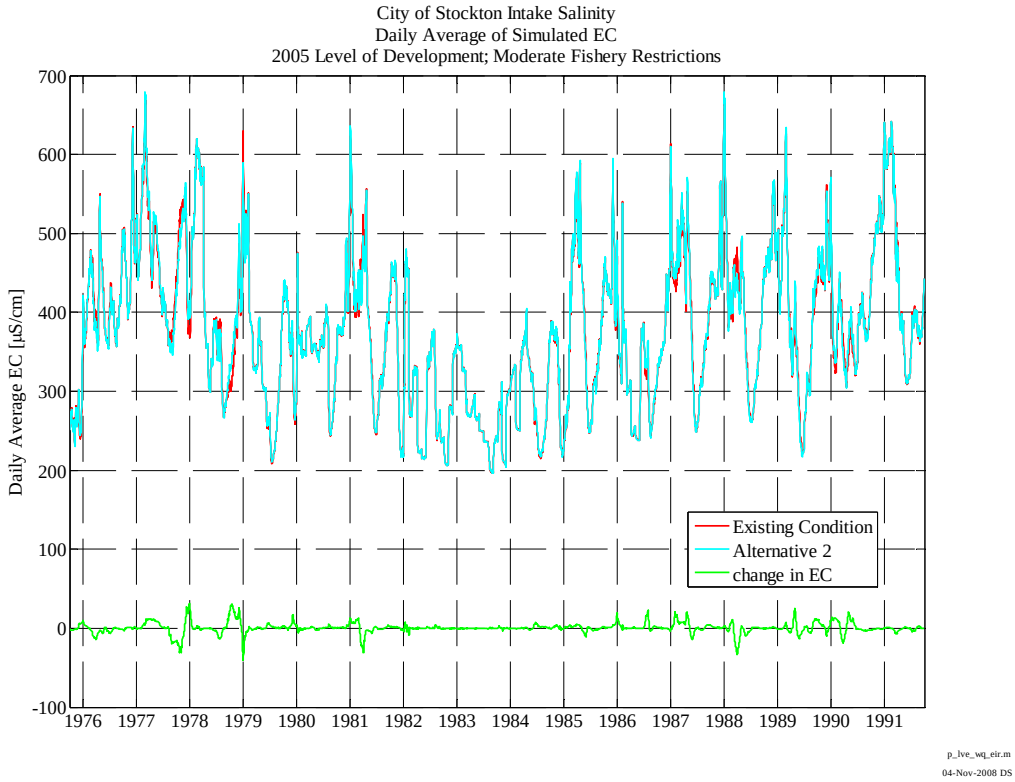
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	263	262	283	388	450	408	426	427	369	411	377	442
1977	462	437	523	474	586	578	480	503	428	403	360	385
1978	470	525	450	474	594	576	407	322	371	358	289	305
1979	347	404	461	493	423	336	359	316	270	222	257	357
1980	425	372	305	368	350	380	362	350	360	387	273	303
1981	375	391	468	514	423	443	470	361	265	290	330	396
1982	449	389	229	420	297	321	233	217	317	361	266	245
1983	214	269	343	356	328	275	280	268	252	237	207	229
1984	270	221	289	322	265	328	369	328	281	227	239	323
1985	377	356	237	263	406	515	514	402	269	283	326	394
1986	445	443	465	359	389	308	255	242	345	346	264	296
1987	339	368	455	478	471	511	493	421	270	289	338	396
1988	441	440	520	522	410	440	432	412	293	277	330	402
1989	462	489	515	441	547	433	365	331	227	291	340	434
1990	465	464	501	399	388	381	329	382	337	392	389	389
1991	473	514	533	599	615	517	414	352	320	384	384	391
Avg	392	396	411	429	434	422	387	352	311	322	311	355
W/AN/BN	374	375	363	399	378	361	324	292	314	306	256	294
D/C	406	413	448	453	477	469	436	399	309	335	353	403

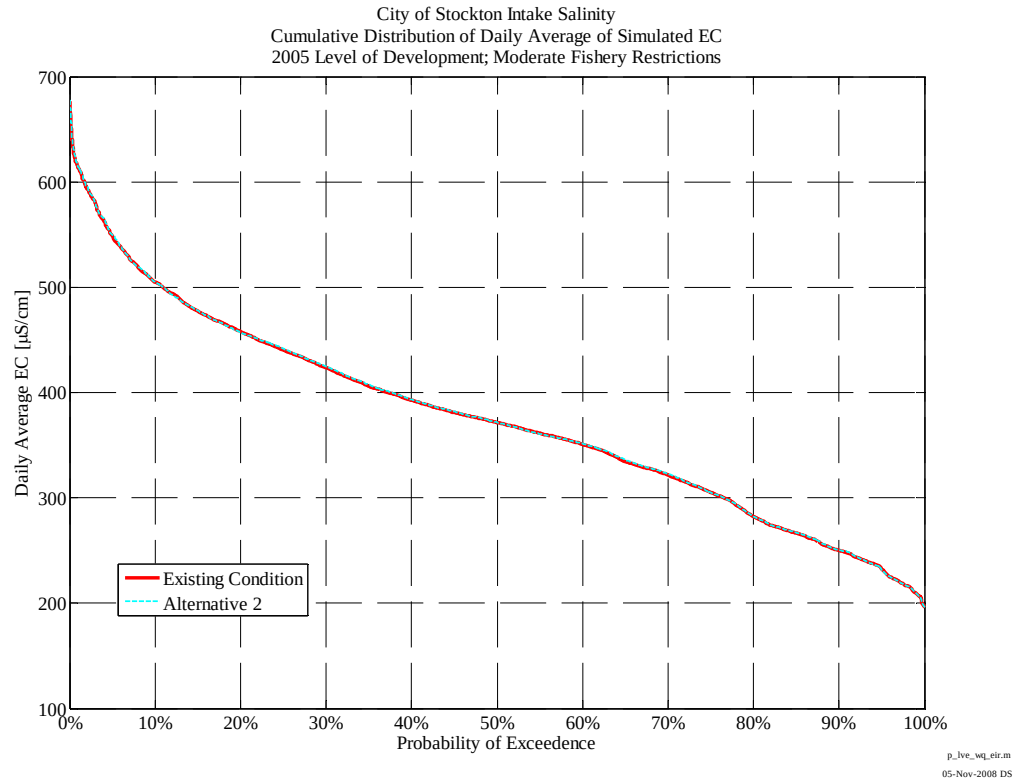
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.8%	-0.4%	2.3%	1.1%	-0.1%	-2.6%	-1.5%	-0.7%	-0.7%	-0.7%	0.1%	-0.3%
1977	-0.2%	0.2%	0.0%	0.0%	0.7%	1.9%	2.4%	1.9%	0.8%	0.1%	-2.2%	-4.3%
1978	-4.7%	-1.9%	5.4%	1.1%	0.1%	-0.2%	0.0%	-0.1%	-0.6%	-2.8%	-1.1%	3.0%
1979	8.1%	3.8%	-0.1%	-2.3%	-0.1%	-0.4%	0.2%	-0.2%	1.5%	1.1%	0.2%	0.3%
1980	0.2%	0.6%	2.8%	-0.2%	-0.3%	0.0%	0.3%	-0.5%	0.0%	0.2%	0.8%	0.2%
1981	0.2%	0.2%	1.0%	1.6%	2.5%	-3.5%	-1.9%	-1.2%	0.0%	-0.3%	-0.2%	0.6%
1982	0.4%	0.3%	-0.6%	0.1%	-0.5%	-0.1%	0.0%	-0.1%	0.3%	0.0%	0.6%	-0.1%
1983	-0.2%	-0.2%	-0.1%	-0.1%	-0.2%	-0.1%	0.0%	-0.2%	0.0%	-0.1%	0.1%	-0.1%
1984	0.4%	-0.2%	-0.1%	0.0%	-0.2%	0.0%	0.1%	-0.5%	1.6%	1.3%	0.8%	0.1%
1985	0.1%	0.8%	-0.2%	0.4%	0.6%	0.6%	0.7%	-1.3%	-0.2%	-0.6%	-0.5%	0.1%
1986	0.2%	0.3%	1.6%	1.6%	-0.1%	-0.1%	0.1%	-0.1%	-0.1%	3.7%	0.2%	0.7%
1987	0.2%	0.0%	-0.2%	1.1%	2.6%	1.4%	2.5%	-1.0%	-1.5%	-0.3%	-0.2%	1.0%
1988	0.4%	0.1%	0.1%	0.0%	1.3%	-3.6%	-3.1%	-0.9%	-1.9%	0.1%	0.2%	-0.1%
1989	-0.1%	0.1%	0.1%	-0.3%	0.4%	-0.6%	2.3%	-0.7%	-2.5%	0.2%	-0.8%	2.4%
1990	1.6%	0.1%	0.0%	3.1%	2.6%	-2.7%	0.5%	3.5%	1.0%	-0.3%	-0.7%	-0.7%
1991	-0.4%	-0.1%	-0.2%	0.1%	0.0%	-0.9%	-0.7%	0.1%	0.1%	-0.8%	0.3%	0.0%
Avg	0.4%	0.2%	0.7%	0.5%	0.6%	-0.7%	0.1%	-0.1%	-0.1%	0.1%	-0.1%	0.2%
W/AN/BN	0.6%	0.4%	1.3%	0.0%	-0.2%	-0.1%	0.1%	-0.2%	0.4%	0.5%	0.2%	0.6%
D/C	0.1%	0.1%	0.3%	0.8%	1.2%	-1.1%	0.1%	-0.1%	-0.5%	-0.3%	-0.4%	-0.1%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
440
420
400
380
360
340
320
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.45%
0.58%
-0.68%
0.12%
-0.13%
-0.14%
0.05%
-0.15%
0.19%
0.36%
0.23%
0.74%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 2
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 2
p_lve_wq_eir.m
05-Nov-2008 DS

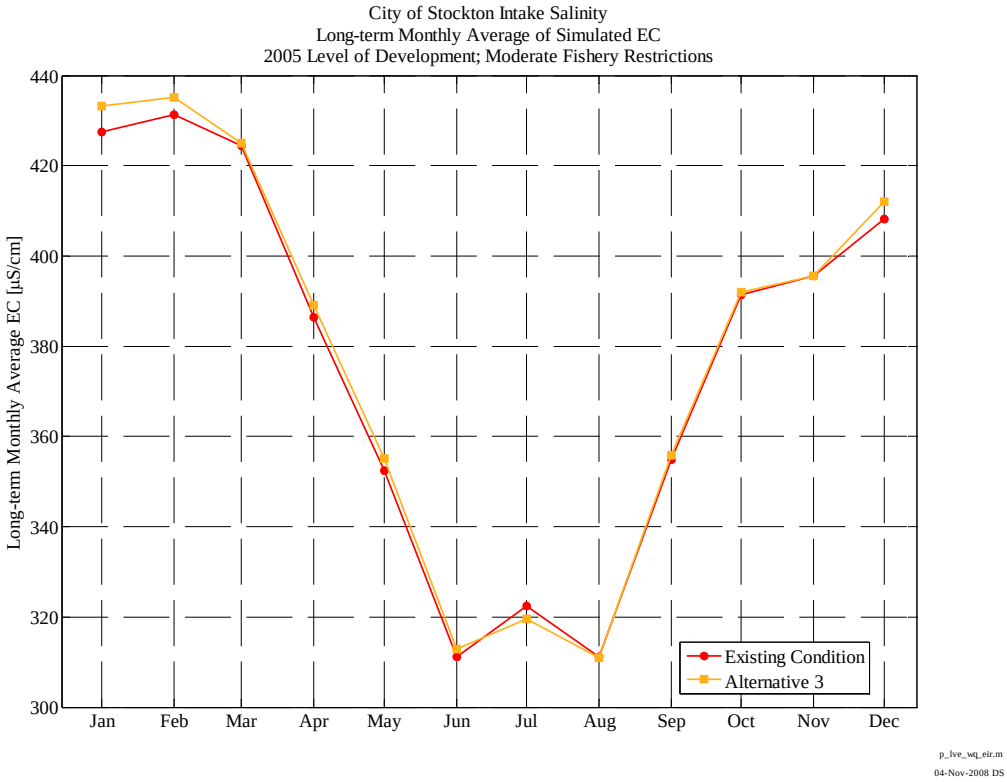
Alternative 3

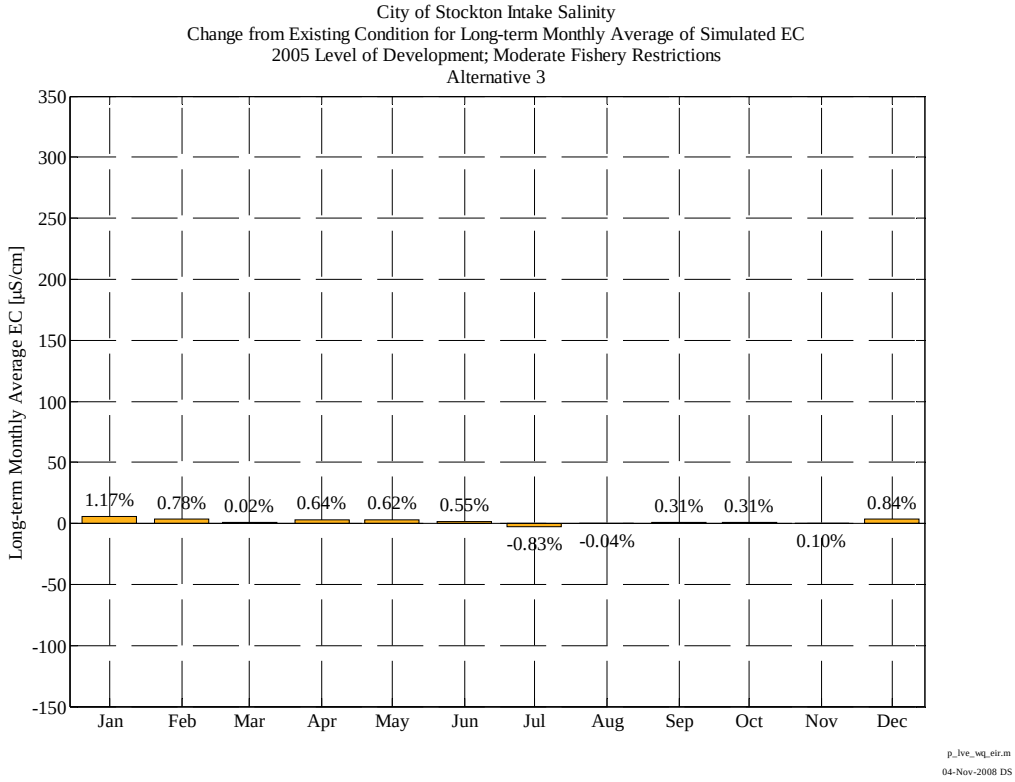
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

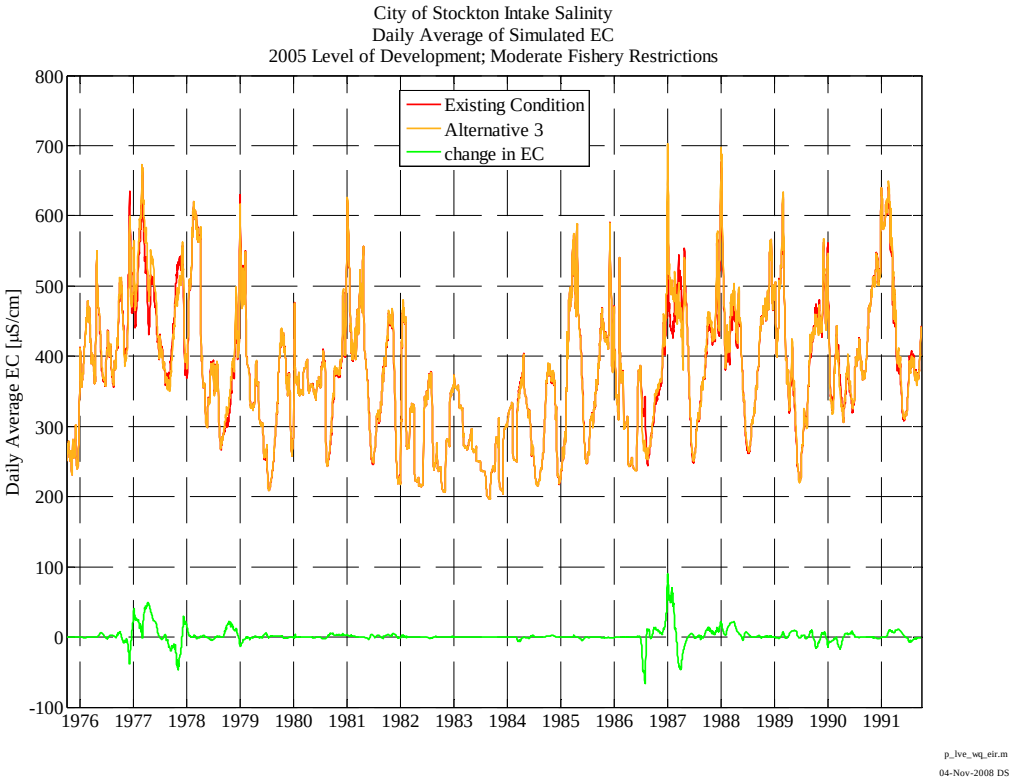
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	265	262	276	383	451	418	432	434	373	415	379	447
1977	460	427	521	502	597	598	513	520	433	401	364	387
1978	468	512	448	473	594	575	408	321	370	368	292	302
1979	340	402	463	498	422	336	359	316	270	220	258	357
1980	424	369	297	370	351	380	361	351	360	384	271	307
1981	377	394	467	508	413	459	479	364	267	291	332	395
1982	450	392	230	421	298	321	233	217	316	360	265	246
1983	214	269	344	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	324	368	328	278	224	237	323
1985	378	355	237	262	404	512	510	405	269	285	328	393
1986	444	441	456	353	389	308	255	242	345	294	263	297
1987	349	374	486	533	488	472	457	424	277	289	339	398
1988	449	445	532	531	417	477	457	416	303	278	330	403
1989	462	489	514	442	547	436	362	342	234	291	343	427
1990	446	464	501	379	375	379	326	374	339	393	391	392
1991	474	514	532	598	620	530	427	359	320	381	380	389
Avg	392	396	412	433	435	425	389	355	313	319	311	356
W/AN/BN	373	372	361	399	378	360	323	292	313	298	256	295
D/C	407	414	452	460	479	476	440	404	313	336	354	404

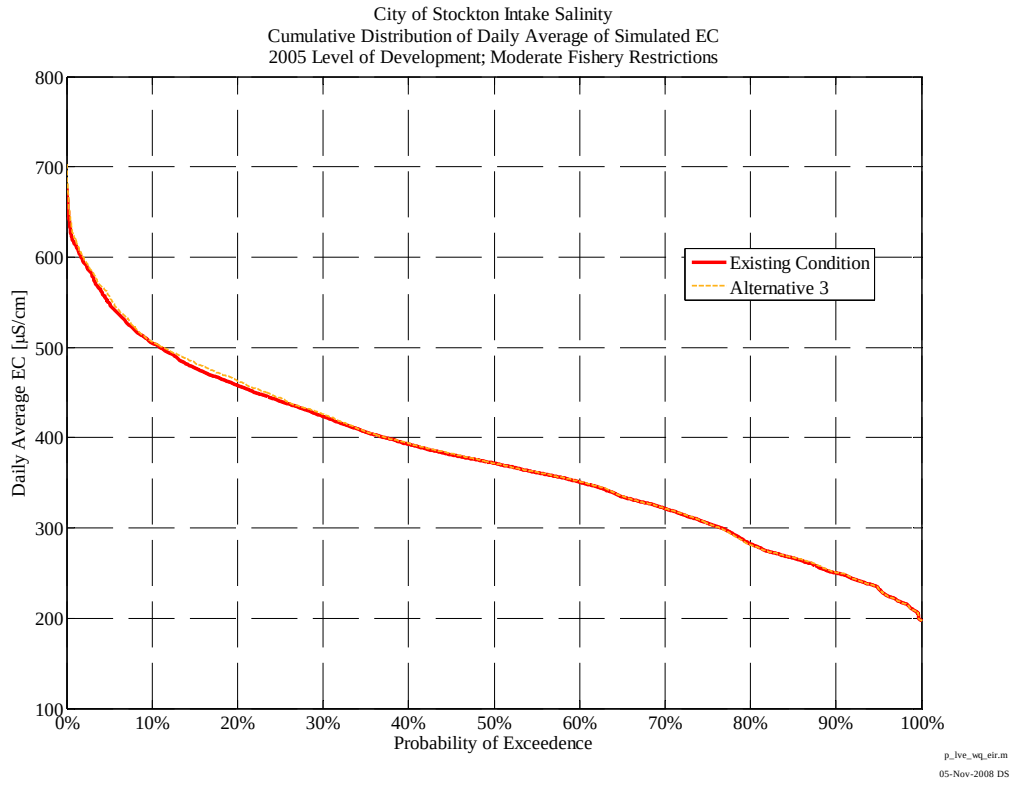
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	1.0%	0.4%	0.1%	0.4%	0.9%
1977	-0.5%	-2.3%	-0.6%	5.8%	2.4%	5.6%	9.3%	5.3%	1.9%	-0.4%	-1.1%	-3.9%
1978	-4.9%	-4.3%	4.9%	0.9%	0.1%	-0.2%	0.2%	-0.1%	-0.9%	-0.3%	0.2%	2.1%
1979	5.9%	3.3%	0.2%	-1.4%	-0.2%	-0.5%	0.1%	-0.1%	1.4%	0.2%	0.5%	0.3%
1980	0.0%	-0.4%	-0.1%	0.1%	0.0%	0.0%	0.0%	-0.2%	0.1%	-0.4%	0.0%	1.4%
1981	0.8%	0.8%	0.7%	0.4%	0.3%	0.0%	0.0%	-0.4%	0.8%	0.2%	0.2%	0.3%
1982	0.7%	1.0%	-0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.4%	-0.1%	0.0%
1983	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-1.3%	-0.4%	-0.3%	0.4%	0.0%	0.0%	0.2%
1985	0.4%	0.5%	0.1%	0.0%	0.0%	0.1%	0.1%	-0.7%	-0.3%	-0.1%	0.0%	0.0%
1986	-0.1%	-0.2%	-0.2%	-0.1%	0.0%	-0.1%	0.0%	-0.1%	0.2%	-11.9%	0.0%	1.1%
1987	3.1%	1.6%	6.6%	12.8%	6.5%	-6.5%	-4.9%	-0.4%	1.4%	-0.1%	-0.1%	1.6%
1988	2.3%	1.4%	2.5%	1.8%	3.0%	4.5%	2.5%	0.2%	1.5%	0.7%	0.1%	0.2%
1989	0.0%	0.1%	0.1%	-0.2%	0.3%	0.2%	1.4%	2.6%	0.2%	0.5%	0.1%	0.9%
1990	-2.4%	0.2%	0.0%	-1.9%	-0.7%	-3.0%	-0.5%	1.2%	1.6%	0.0%	-0.1%	0.0%
1991	0.0%	-0.2%	-0.4%	0.0%	0.9%	1.5%	2.3%	2.1%	0.0%	-1.5%	-0.8%	-0.3%
Avg	0.3%	0.1%	0.8%	1.2%	0.8%	0.0%	0.6%	0.6%	0.5%	-0.8%	0.0%	0.3%
W/AN/BN	0.2%	-0.1%	0.7%	0.0%	0.0%	-0.3%	0.0%	-0.1%	0.2%	-1.8%	0.1%	0.7%
D/C	0.4%	0.2%	1.0%	2.1%	1.4%	0.3%	1.1%	1.2%	0.8%	-0.1%	-0.1%	0.0%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
440
420
400
380
360
340
320
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.17%
0.78%
0.02%
0.64%
0.62%
0.55%
-0.83%
-0.04%
0.31%
0.31%
0.10%
0.84%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
800
700
600
500
400
300
200
100
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

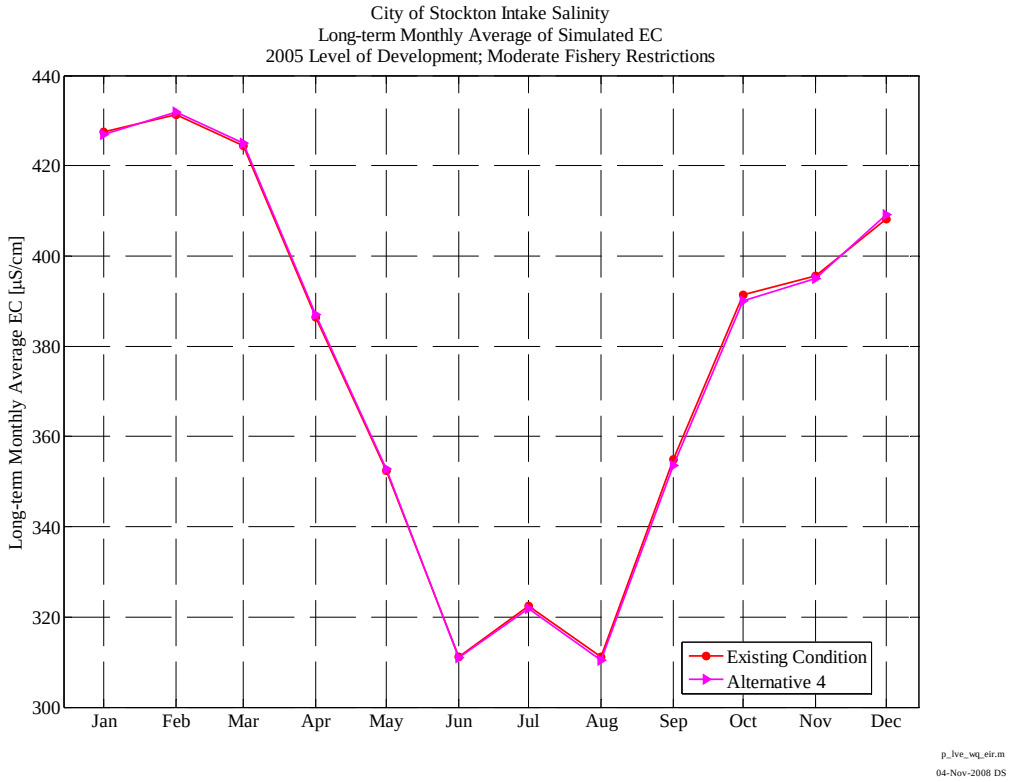
Alternative 4

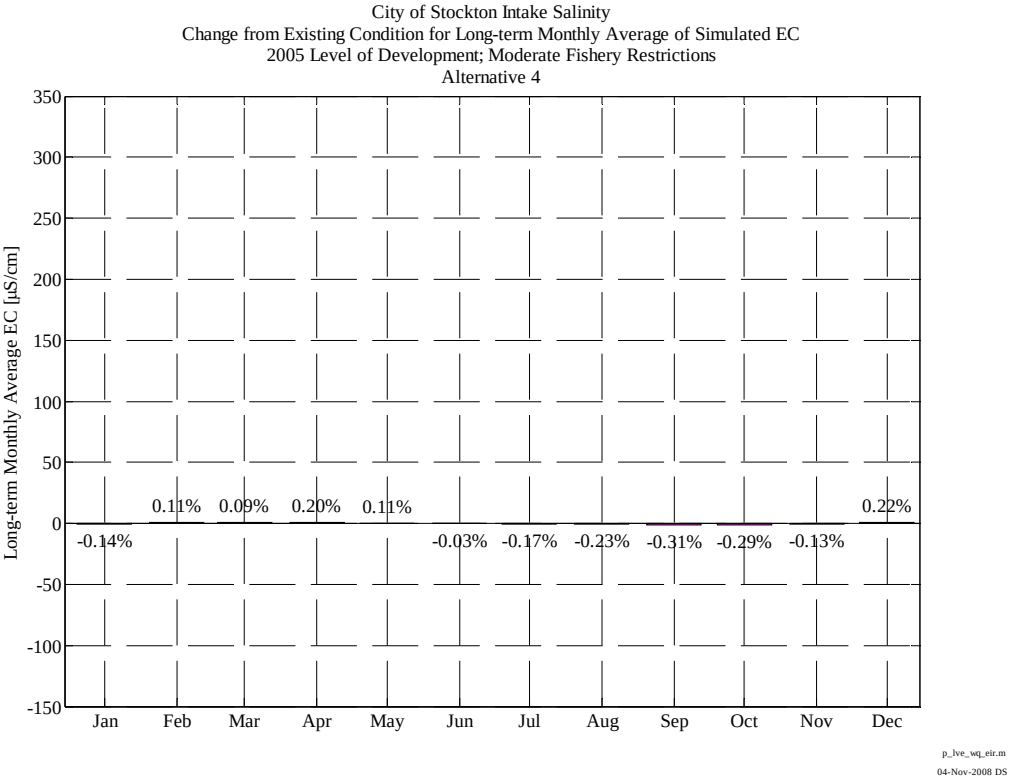
City of Stockton Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

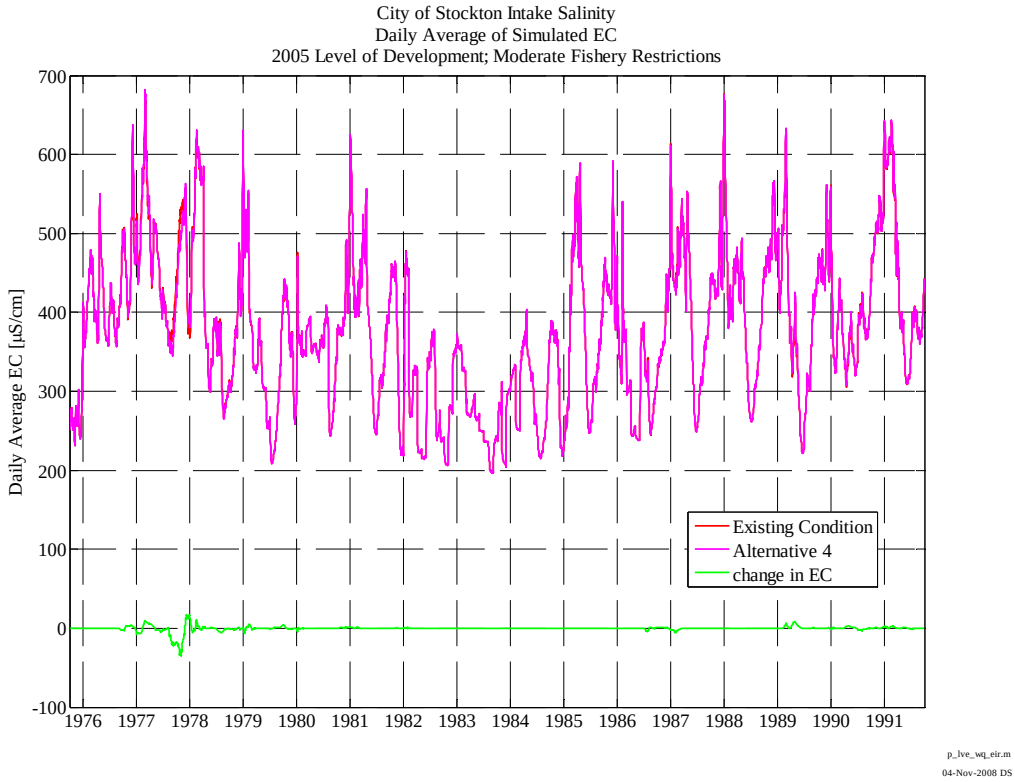
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	265	263	277	383	451	418	432	430	372	414	377	441
1977	464	440	524	468	585	574	473	492	422	401	359	383
1978	467	521	442	469	597	576	407	322	373	365	288	295
1979	319	388	462	503	426	337	358	317	266	220	257	358
1980	426	369	297	368	350	380	361	352	360	386	271	302
1981	375	391	464	507	413	459	479	366	265	291	331	394
1982	447	388	230	420	298	321	233	217	316	361	265	246
1983	214	269	343	357	329	275	280	269	252	237	207	229
1984	269	222	290	322	266	328	369	329	276	224	237	323
1985	377	353	237	262	404	512	510	408	270	285	328	393
1986	444	441	457	353	389	308	255	242	345	331	263	294
1987	339	369	456	469	456	504	481	425	274	290	339	392
1988	439	439	519	522	405	456	446	415	299	276	329	403
1989	462	488	514	443	548	437	363	337	234	290	343	424
1990	457	463	501	386	378	391	330	372	334	391	390	391
1991	474	515	535	600	617	523	417	353	319	387	382	391
Avg	390	395	409	427	432	425	387	353	311	322	310	354
W/AN/BN	370	371	360	399	379	361	323	292	313	303	255	292
D/C	406	413	447	449	473	475	437	400	310	336	353	401

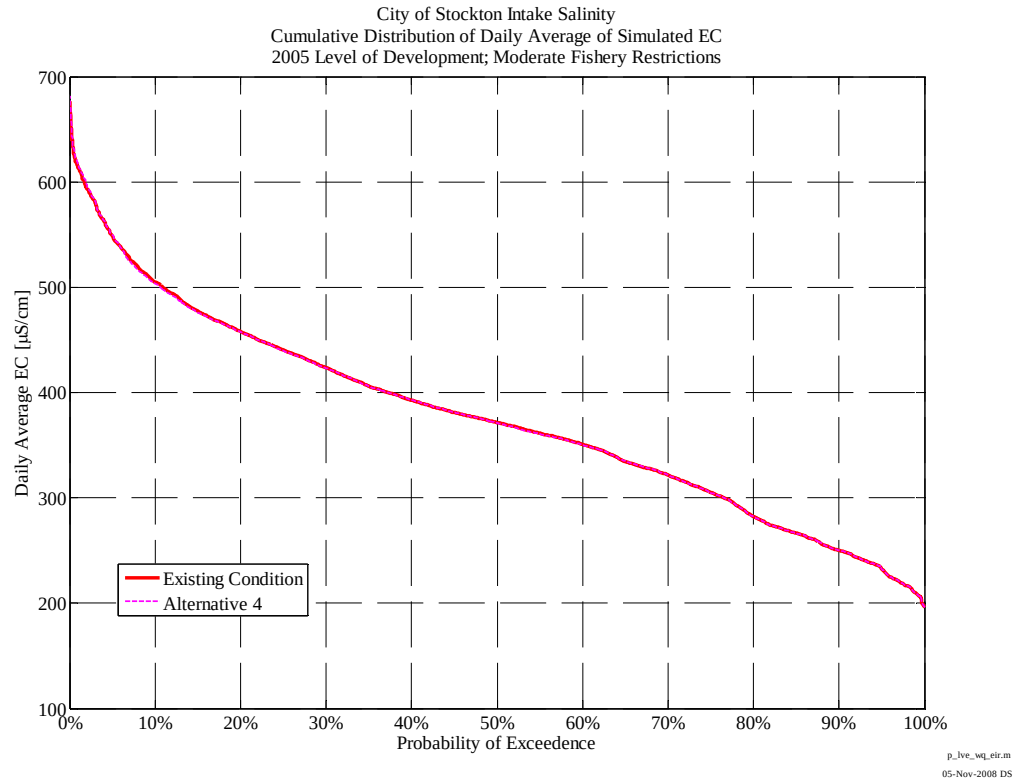
Percent (%) Change from Existing Condition for City of Stockton Intake Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%
1977	0.1%	0.8%	0.0%	-1.3%	0.3%	1.3%	0.9%	-0.3%	-0.8%	-0.4%	-2.4%	-4.9%
1978	-5.1%	-2.6%	3.4%	0.0%	0.7%	0.0%	0.1%	0.1%	0.0%	-0.9%	-1.2%	-0.3%
1979	-0.4%	-0.2%	-0.1%	-0.3%	0.7%	-0.2%	0.0%	0.0%	-0.1%	-0.1%	0.3%	0.5%
1980	0.5%	-0.4%	-0.1%	-0.3%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1981	0.1%	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1982	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	0.1%	0.0%
1987	0.3%	0.1%	0.0%	-0.6%	-0.7%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.5%	0.4%	1.5%	1.3%	0.3%	0.0%	0.0%	0.1%
1990	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.6%	0.6%	0.2%	-0.5%	-0.4%	-0.1%
1991	0.0%	0.1%	0.1%	0.2%	0.3%	0.2%	0.0%	0.3%	-0.1%	-0.1%	-0.1%	0.0%
Avg	-0.3%	-0.1%	0.2%	-0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	-0.2%	-0.2%	-0.3%
W/AN/BN	-0.7%	-0.4%	0.5%	-0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.1%	0.0%
D/C	0.0%	0.1%	0.0%	-0.2%	0.1%	0.2%	0.3%	0.2%	0.0%	-0.1%	-0.3%	-0.6%


City of Stockton Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
440
420
400
380
360
340
320
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.14%
0.11%
0.09%
0.20%
0.11%
-0.03%
-0.17%
-0.23%
-0.31%
-0.29%
-0.13%
0.22%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 4
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


City of Stockton Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 4
p_lve_wq_eir.m
05-Nov-2008 DS

San Joaquin River at Antioch

Existing Condition

San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	769	1,189	2,281	2,603	1,485	434	548	1,846	3,790	4,333	4,415	5,856
1977	5,389	5,461	4,413	3,697	1,384	1,001	1,750	2,409	3,903	3,701	4,082	5,091
1978	5,281	4,800	2,853	420	255	266	268	253	257	563	1,946	3,121
1979	3,862	4,982	4,461	1,149	278	239	238	270	360	1,252	2,836	4,853
1980	5,245	3,545	1,482	287	289	286	263	259	272	518	2,033	3,998
1981	4,452	4,583	4,384	1,125	247	205	244	517	1,511	2,468	3,114	4,571
1982	5,581	1,515	214	242	232	244	220	202	205	415	1,811	587
1983	201	202	242	315	301	263	245	231	226	220	215	195
1984	243	198	231	252	231	205	231	318	629	986	2,025	4,292
1985	4,560	1,238	309	594	369	234	311	485	1,470	2,462	3,132	4,866
1986	5,114	4,901	3,193	779	259	272	252	245	318	643	2,092	3,232
1987	3,647	4,376	4,801	2,806	723	238	344	901	1,700	2,495	3,279	4,537
1988	5,127	5,004	4,297	1,084	390	681	892	1,400	1,715	2,834	3,761	4,784
1989	5,271	5,321	4,307	3,209	1,704	307	202	238	1,138	2,265	3,185	4,811
1990	5,527	5,134	4,308	1,629	624	697	808	1,601	3,135	4,209	4,037	4,738
1991	5,499	4,965	5,200	4,170	1,293	297	332	1,397	3,061	4,026	3,908	4,837
Avg	4,110	3,588	2,936	1,523	629	367	447	786	1,481	2,087	2,867	4,023
W/AN/BN	3,647	2,878	1,811	492	264	254	245	254	324	657	1,851	2,897
D/C	4,471	4,141	3,811	2,324	913	455	604	1,199	2,380	3,199	3,657	4,899

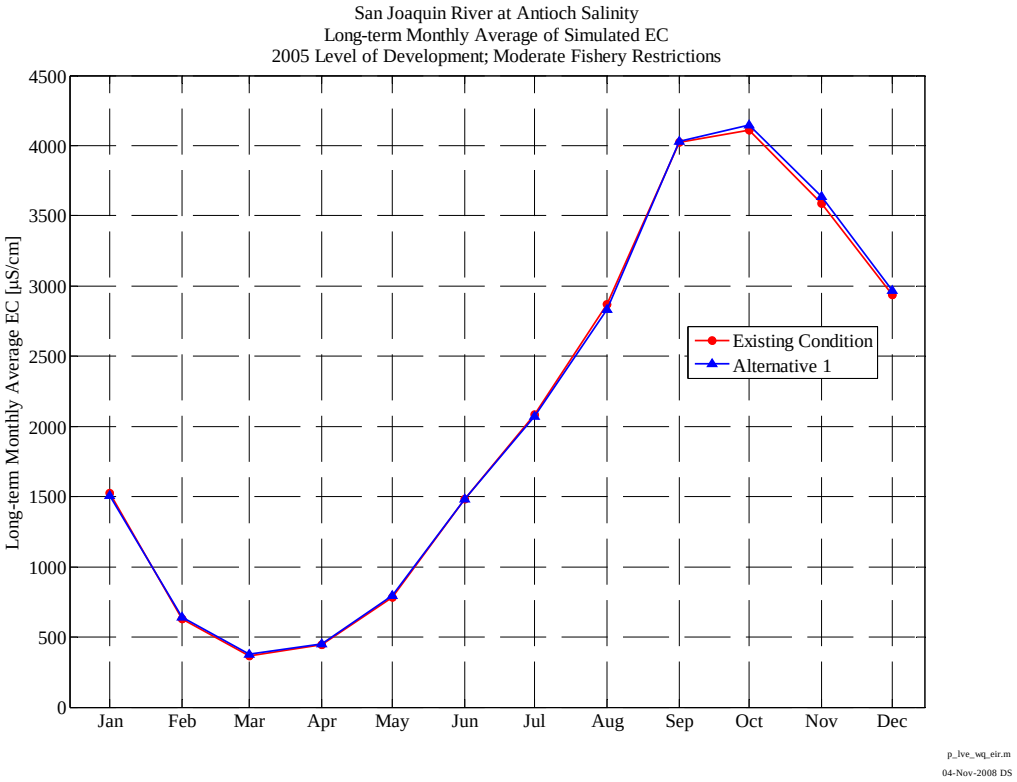
Alternative 1

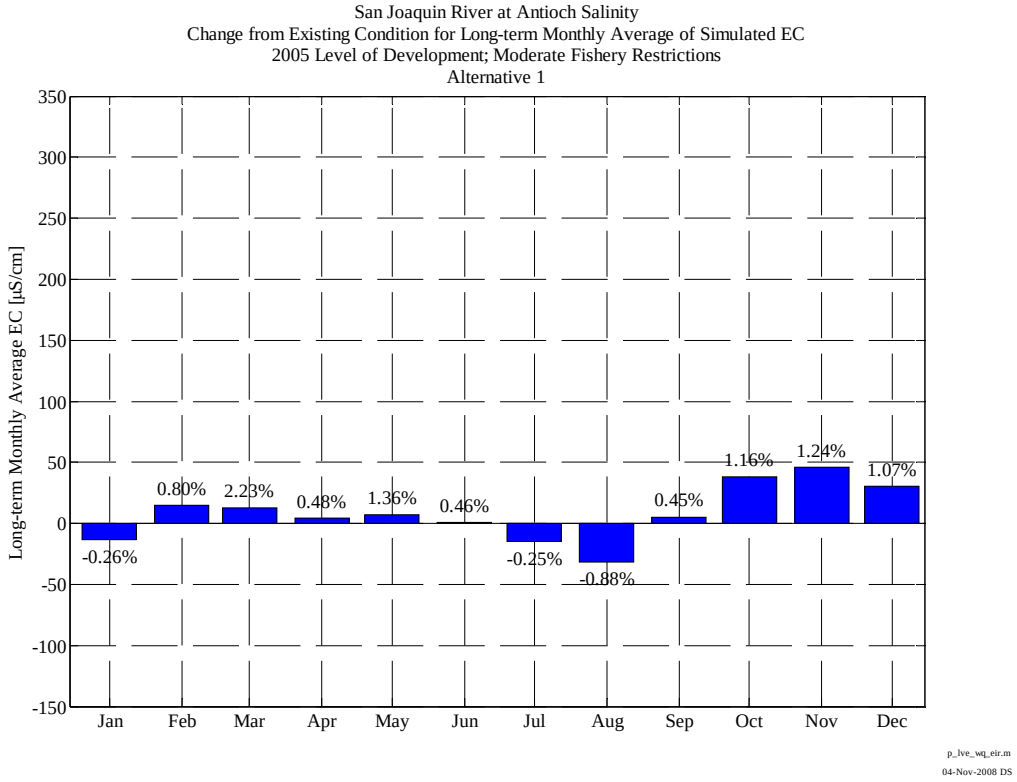
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

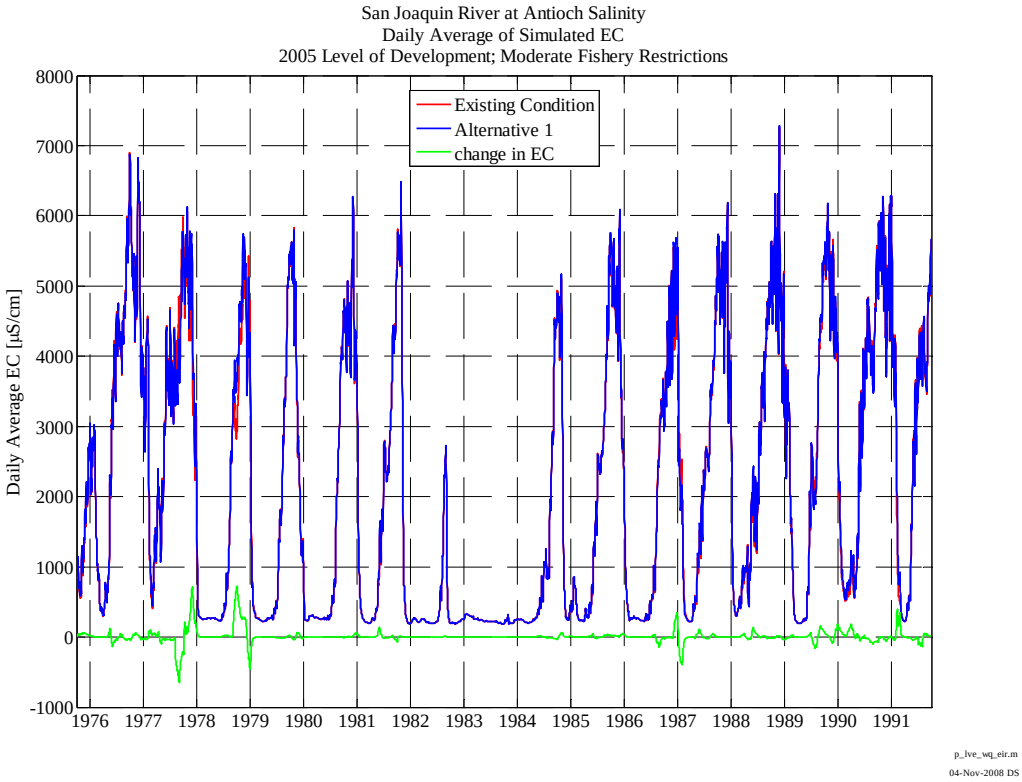
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	803	1,241	2,317	2,615	1,490	437	549	1,863	3,720	4,338	4,415	5,822
1977	5,390	5,499	4,396	3,670	1,445	1,042	1,751	2,370	3,870	3,663	3,678	4,748
1978	5,363	5,185	3,158	435	256	265	268	252	261	586	1,956	3,552
1979	4,326	5,250	4,280	1,054	275	237	237	271	357	1,239	2,823	4,864
1980	5,225	3,580	1,476	284	288	285	265	260	271	516	2,034	3,997
1981	4,453	4,584	4,429	1,143	248	205	243	556	1,548	2,454	3,116	4,542
1982	5,580	1,514	214	243	232	244	220	201	205	415	1,817	590
1983	201	202	242	314	301	263	245	230	225	220	214	195
1984	243	198	231	252	231	205	231	325	639	983	2,014	4,268
1985	4,587	1,260	315	600	370	235	311	502	1,470	2,459	3,148	4,894
1986	5,133	4,911	3,227	792	259	271	253	248	317	660	2,014	3,201
1987	3,634	4,371	5,026	2,595	618	234	342	956	1,729	2,479	3,294	4,556
1988	5,127	5,004	4,296	1,085	388	707	886	1,425	1,779	2,834	3,773	4,774
1989	5,264	5,331	4,288	3,187	1,717	310	203	241	1,164	2,183	3,176	4,925
1990	5,562	5,083	4,382	1,729	650	795	882	1,606	3,117	4,193	3,966	4,669
1991	5,484	4,938	5,188	4,145	1,532	343	329	1,373	3,034	3,936	3,926	4,858
Avg	4,148	3,634	2,967	1,509	644	380	451	793	1,482	2,072	2,835	4,028
W/AN/BN	3,725	2,977	1,833	482	263	253	246	255	325	660	1,839	2,953
D/C	4,478	4,146	3,848	2,308	940	479	611	1,210	2,381	3,171	3,610	4,865

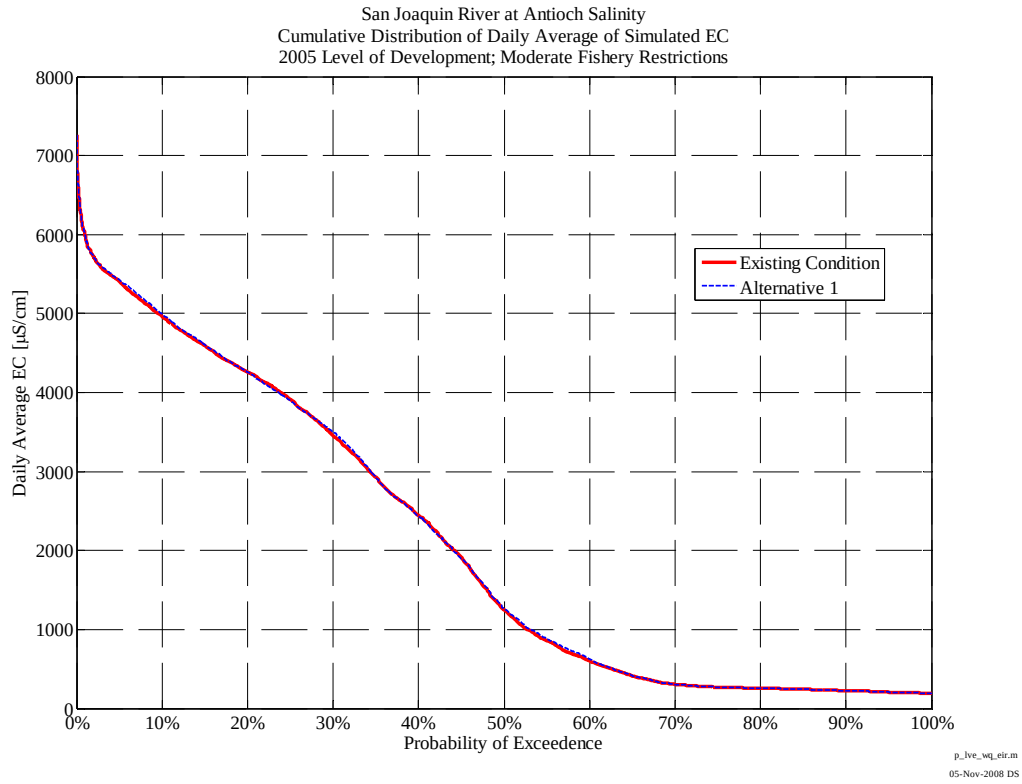
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	4.4%	4.3%	1.6%	0.5%	0.3%	0.7%	0.1%	1.0%	-1.9%	0.1%	0.0%	-0.6%
1977	0.0%	0.7%	-0.4%	-0.7%	4.4%	4.1%	0.1%	-1.6%	-0.8%	-1.0%	-9.9%	-6.7%
1978	1.6%	8.0%	10.7%	3.5%	0.1%	-0.3%	-0.1%	-0.7%	1.6%	4.0%	0.5%	13.8%
1979	12.0%	5.4%	-4.1%	-8.3%	-1.1%	-0.7%	-0.2%	0.7%	-0.8%	-1.0%	-0.5%	0.2%
1980	-0.4%	1.0%	-0.4%	-1.1%	-0.2%	-0.1%	0.6%	0.4%	-0.5%	-0.3%	0.0%	0.0%
1981	0.0%	0.0%	1.0%	1.5%	0.4%	-0.1%	-0.6%	7.5%	2.4%	-0.6%	0.0%	-0.6%
1982	0.0%	-0.1%	0.1%	0.4%	0.1%	-0.1%	0.0%	-0.4%	0.0%	0.0%	0.3%	0.5%
1983	0.2%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.2%	-0.3%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	-0.1%	-0.1%	0.0%	-0.1%	0.0%	0.0%	2.4%	1.5%	-0.4%	-0.5%	-0.6%
1985	0.6%	1.8%	1.8%	1.0%	0.2%	0.0%	0.1%	3.5%	-0.1%	-0.1%	0.5%	0.6%
1986	0.4%	0.2%	1.1%	1.7%	0.0%	-0.5%	0.5%	1.3%	-0.2%	2.5%	-3.7%	-1.0%
1987	-0.4%	-0.1%	4.7%	-7.5%	-14.6%	-1.7%	-0.7%	6.1%	1.7%	-0.7%	0.5%	0.4%
1988	0.0%	0.0%	0.0%	0.1%	-0.4%	3.8%	-0.7%	1.8%	3.7%	0.0%	0.3%	-0.2%
1989	-0.1%	0.2%	-0.4%	-0.7%	0.8%	0.8%	0.1%	1.5%	2.3%	-3.6%	-0.3%	2.4%
1990	0.6%	-1.0%	1.7%	6.2%	4.3%	14.0%	9.2%	0.3%	-0.6%	-0.4%	-1.8%	-1.5%
1991	-0.3%	-0.5%	-0.2%	-0.6%	18.5%	15.7%	-0.9%	-1.7%	-0.9%	-2.3%	0.5%	0.4%
Avg	1.2%	1.2%	1.1%	-0.3%	0.8%	2.2%	0.5%	1.4%	0.5%	-0.2%	-0.9%	0.4%
W/AN/BN	2.0%	2.1%	1.0%	-0.6%	-0.2%	-0.2%	0.1%	0.5%	0.2%	0.7%	-0.6%	1.9%
D/C	0.5%	0.6%	1.1%	0.0%	1.6%	4.1%	0.7%	2.0%	0.7%	-1.0%	-1.1%	-0.6%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.26%
0.80%
2.23%
0.48%
1.36%
0.46%
-0.25%
-0.88%
0.45%
1.16%
1.24%
1.07%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

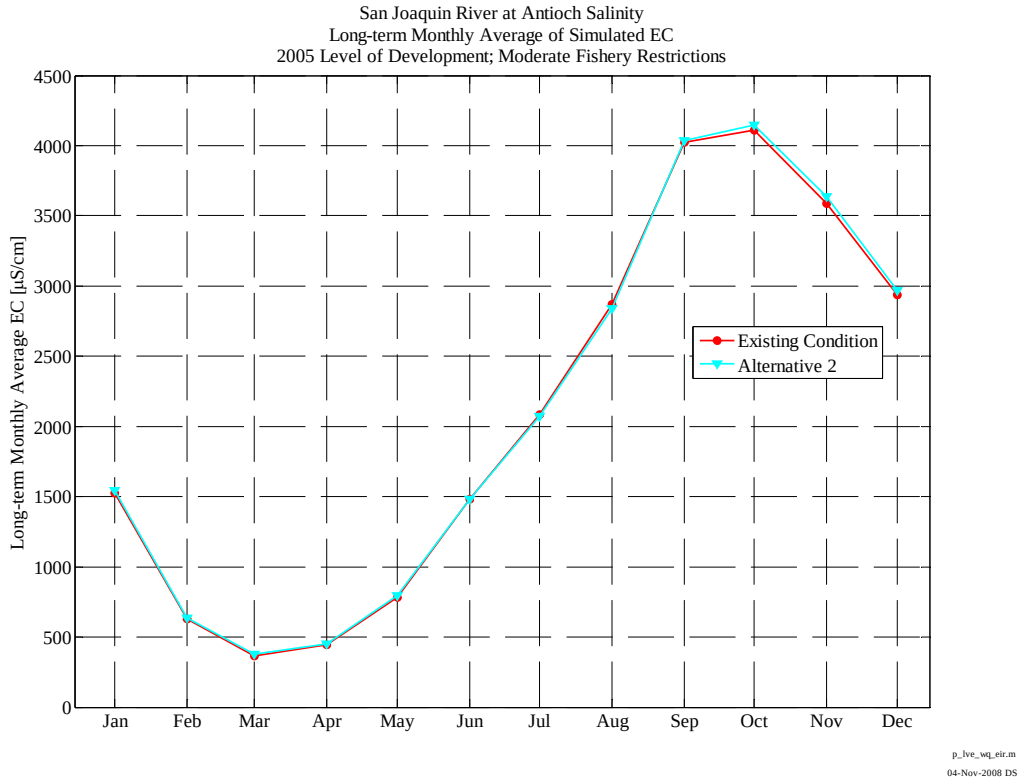
Alternative 2

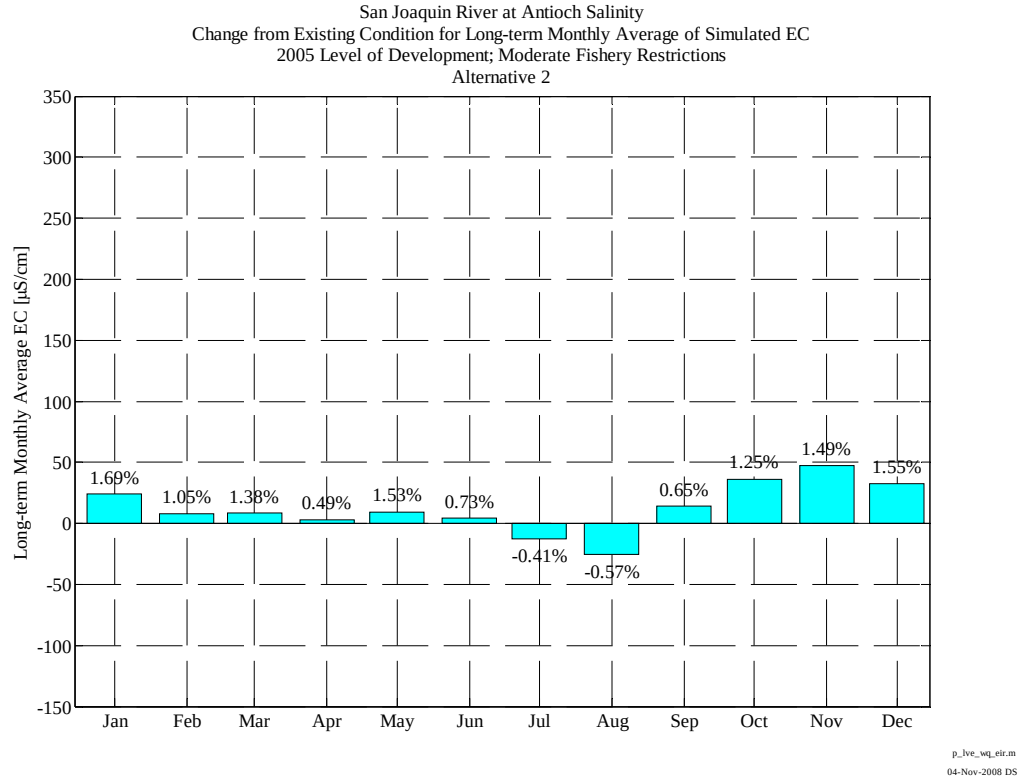
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

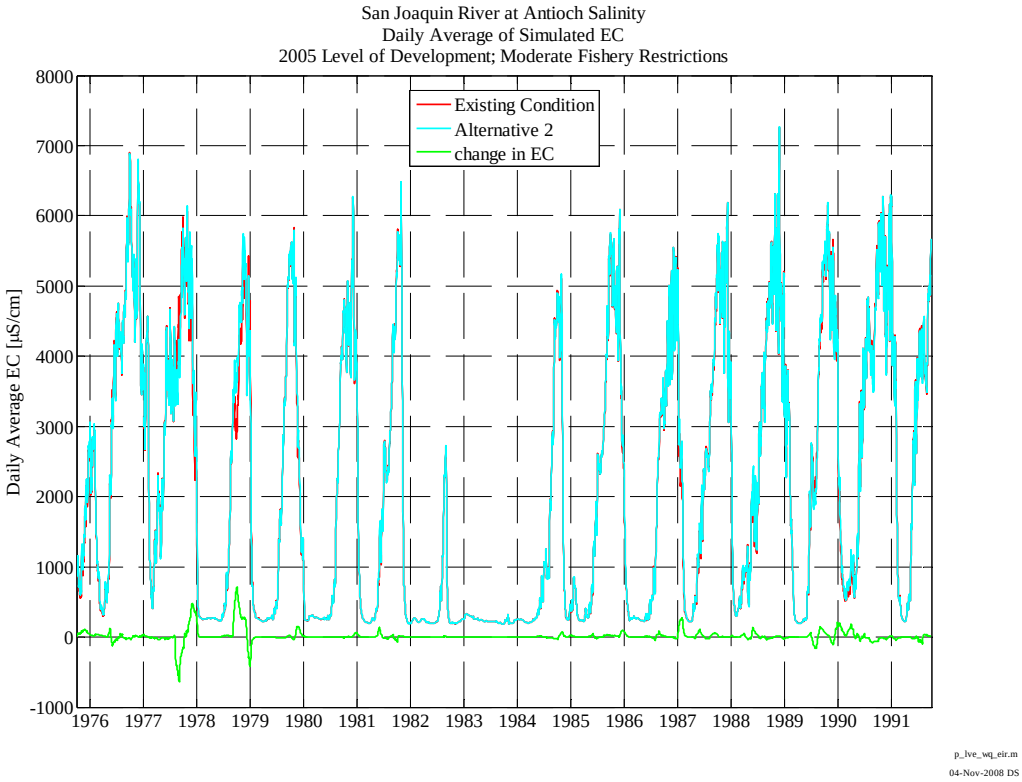
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	815	1,279	2,348	2,625	1,518	458	559	1,869	3,724	4,333	4,420	5,836
1977	5,380	5,474	4,425	3,713	1,380	992	1,719	2,392	3,879	3,703	3,683	4,801
1978	5,306	5,096	3,233	458	255	265	267	252	261	588	1,958	3,547
1979	4,320	5,249	4,292	1,065	275	237	237	271	357	1,240	2,824	4,864
1980	5,228	3,654	1,533	287	287	285	265	259	271	516	2,034	3,997
1981	4,453	4,584	4,429	1,143	248	205	242	556	1,547	2,451	3,116	4,546
1982	5,581	1,522	215	242	231	244	220	201	205	415	1,817	590
1983	202	202	242	314	301	263	245	230	225	220	214	195
1984	243	198	231	252	231	205	230	325	639	983	2,014	4,270
1985	4,586	1,265	320	606	371	235	311	502	1,470	2,459	3,148	4,894
1986	5,134	4,912	3,266	809	259	271	253	250	325	630	2,123	3,254
1987	3,654	4,374	4,784	3,002	803	242	341	955	1,742	2,475	3,293	4,587
1988	5,135	5,007	4,300	1,095	390	707	886	1,426	1,781	2,830	3,755	4,761
1989	5,266	5,331	4,297	3,198	1,704	308	203	242	1,164	2,177	3,167	4,926
1990	5,570	5,077	4,388	1,779	668	799	883	1,607	3,126	4,202	3,975	4,674
1991	5,477	4,945	5,198	4,158	1,266	294	331	1,387	3,049	3,972	3,928	4,850
Avg	4,147	3,636	2,969	1,547	637	376	450	795	1,485	2,075	2,842	4,037
W/AN/BN	3,716	2,976	1,859	490	263	253	245	256	326	656	1,855	2,960
D/C	4,482	4,149	3,832	2,369	927	471	608	1,215	2,387	3,178	3,609	4,875

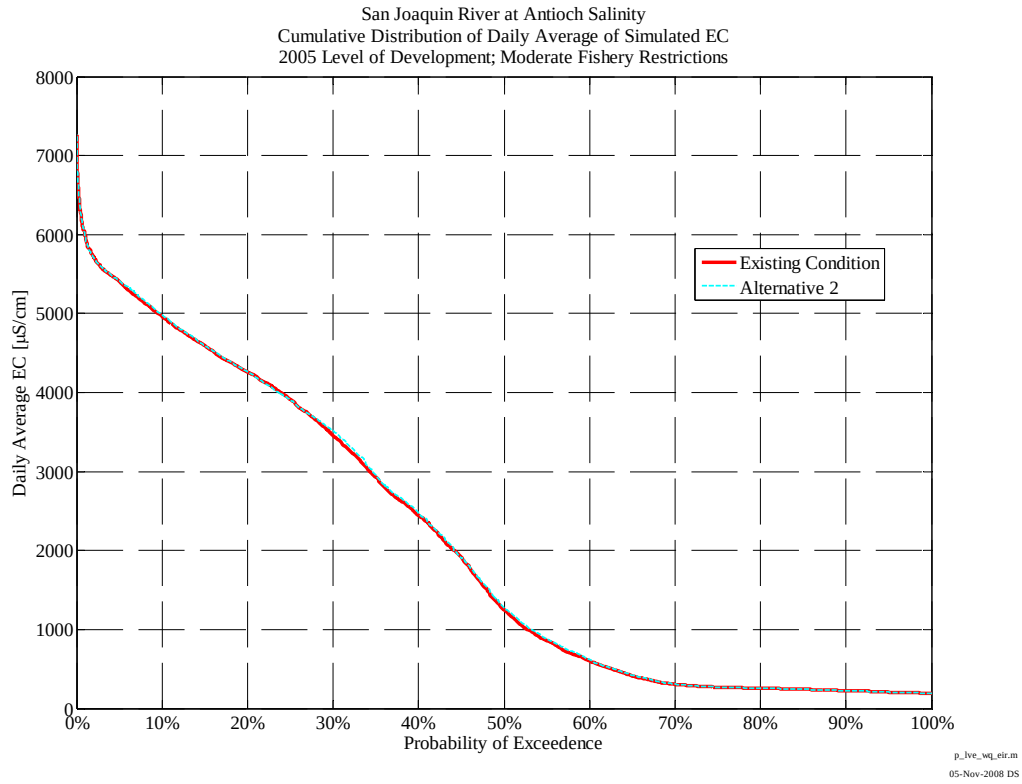
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	6.0%	7.6%	3.0%	0.8%	2.2%	5.6%	2.0%	1.2%	-1.7%	0.0%	0.1%	-0.3%
1977	-0.2%	0.3%	0.3%	0.4%	-0.3%	-1.0%	-1.8%	-0.7%	-0.6%	0.1%	-9.8%	-5.7%
1978	0.5%	6.2%	13.3%	8.9%	0.0%	-0.2%	-0.2%	-0.7%	1.7%	4.5%	0.6%	13.7%
1979	11.9%	5.4%	-3.8%	-7.3%	-1.1%	-0.9%	-0.3%	0.7%	-0.8%	-1.0%	-0.4%	0.2%
1980	-0.3%	3.1%	3.4%	0.0%	-0.4%	-0.1%	0.6%	0.3%	-0.6%	-0.3%	0.0%	0.0%
1981	0.0%	0.0%	1.0%	1.5%	0.4%	-0.2%	-0.8%	7.4%	2.4%	-0.7%	0.1%	-0.6%
1982	0.0%	0.4%	0.4%	0.1%	-0.2%	-0.1%	0.0%	-0.4%	0.0%	0.0%	0.3%	0.5%
1983	0.5%	-0.1%	0.0%	-0.1%	-0.1%	0.0%	0.2%	-0.3%	-0.1%	-0.1%	-0.1%	0.0%
1984	0.0%	-0.1%	-0.1%	-0.1%	-0.2%	-0.2%	-0.1%	2.4%	1.5%	-0.4%	-0.5%	-0.5%
1985	0.6%	2.2%	3.6%	2.1%	0.5%	0.1%	0.1%	3.5%	-0.1%	-0.1%	0.5%	0.6%
1986	0.4%	0.2%	2.3%	3.9%	0.0%	-0.5%	0.5%	1.9%	2.2%	-2.1%	1.5%	0.7%
1987	0.2%	0.0%	-0.3%	7.0%	11.0%	1.7%	-0.9%	5.9%	2.4%	-0.8%	0.4%	1.1%
1988	0.2%	0.1%	0.1%	1.1%	0.0%	3.8%	-0.7%	1.9%	3.8%	-0.2%	-0.1%	-0.5%
1989	-0.1%	0.2%	-0.2%	-0.4%	0.0%	0.3%	0.2%	1.6%	2.3%	-3.9%	-0.6%	2.4%
1990	0.8%	-1.1%	1.9%	9.2%	7.1%	14.6%	9.3%	0.4%	-0.3%	-0.2%	-1.6%	-1.3%
1991	-0.4%	-0.4%	0.0%	-0.3%	-2.1%	-1.0%	-0.1%	-0.7%	-0.4%	-1.3%	0.5%	0.3%
Avg	1.2%	1.5%	1.5%	1.7%	1.0%	1.4%	0.5%	1.5%	0.7%	-0.4%	-0.6%	0.7%
W/AN/BN	1.8%	2.2%	2.2%	0.8%	-0.3%	-0.3%	0.1%	0.5%	0.5%	0.1%	0.2%	2.1%
D/C	0.8%	1.0%	1.0%	2.4%	2.1%	2.7%	0.8%	2.3%	0.9%	-0.8%	-1.2%	-0.5%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.69%
1.05%
1.38%
0.49%
1.53%
0.73%
-0.41%
-0.57%
0.65%
1.25%
1.49%
1.55%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

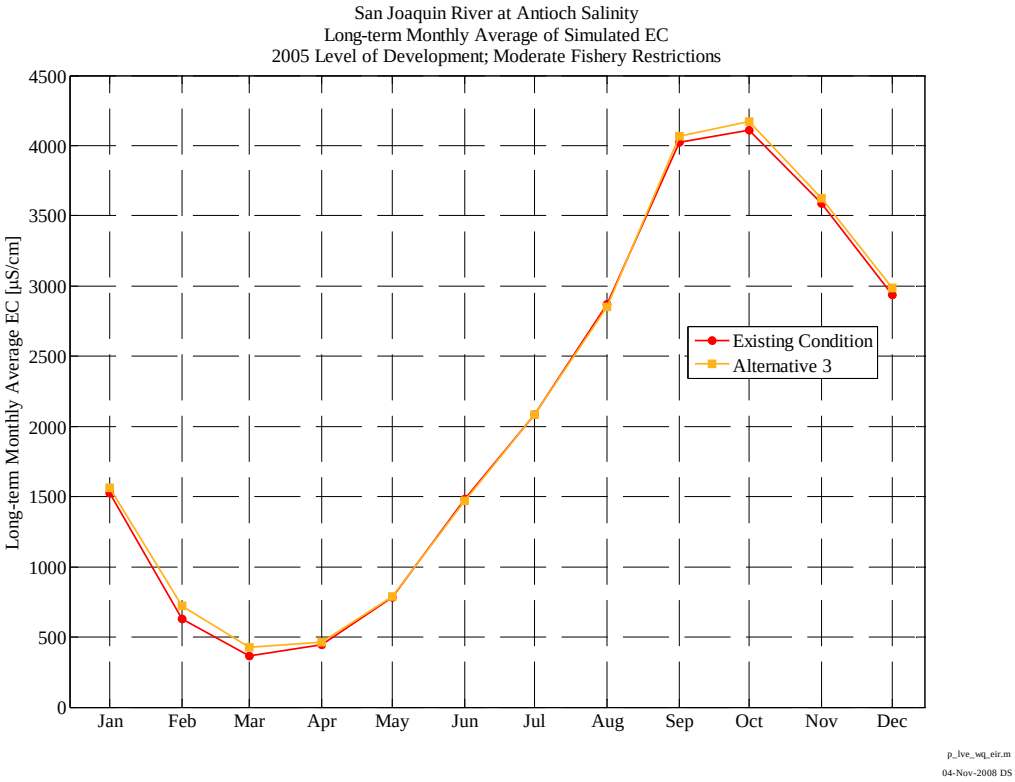
Alternative 3

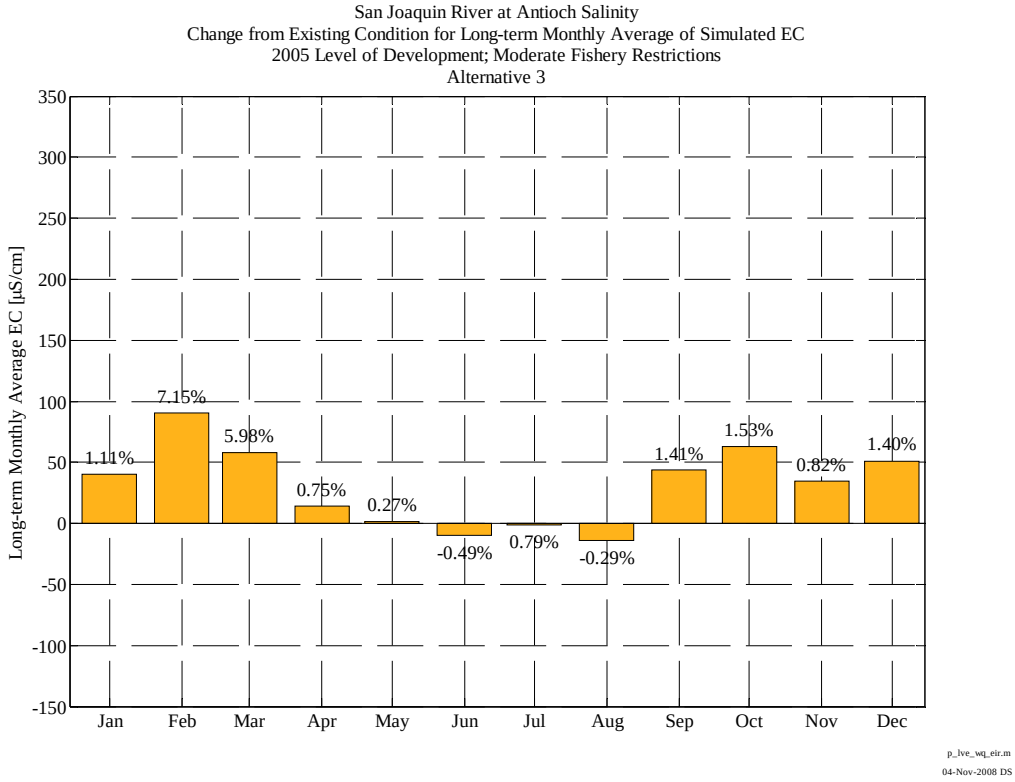
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

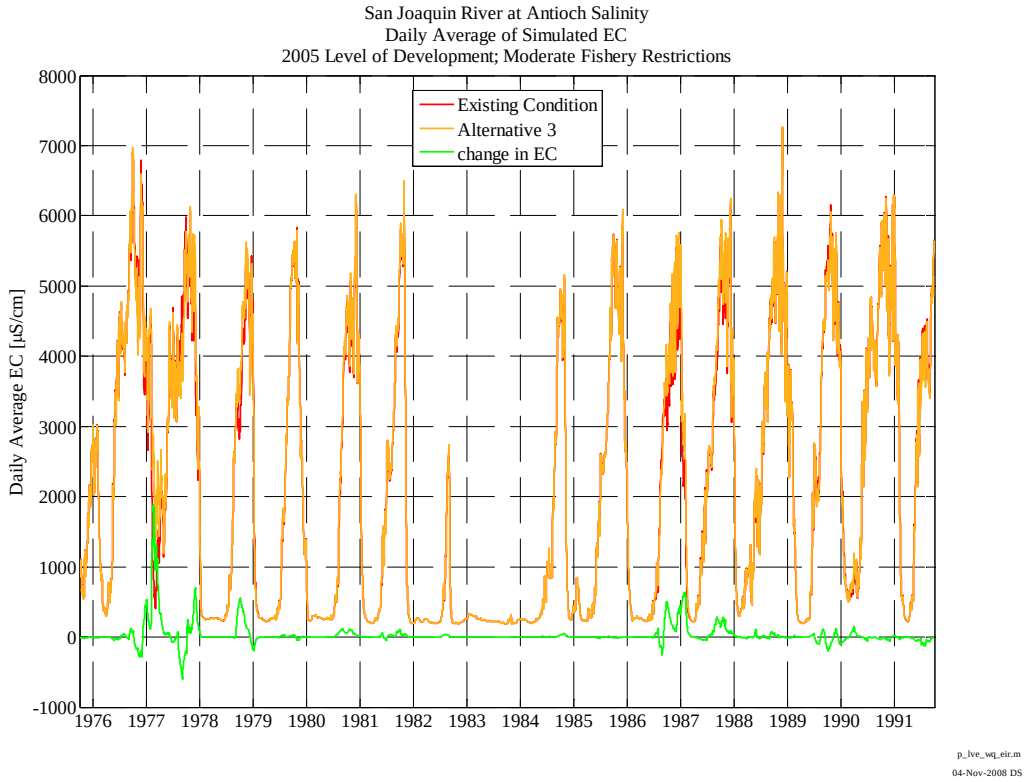
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	759	1,177	2,277	2,597	1,479	433	548	1,820	3,759	4,353	4,421	5,924
1977	5,287	5,222	4,676	3,938	2,679	1,871	1,950	2,456	3,885	3,673	3,780	4,762
1978	5,387	5,153	3,129	431	255	265	270	255	255	561	1,941	3,442
1979	4,294	5,136	4,395	1,060	273	237	237	271	356	1,270	2,845	4,868
1980	5,244	3,524	1,479	287	289	286	263	259	271	534	2,118	4,080
1981	4,542	4,648	4,407	1,129	247	205	244	535	1,501	2,489	3,136	4,644
1982	5,625	1,538	215	243	232	244	220	202	205	427	1,844	592
1983	201	202	243	315	301	263	245	231	226	220	215	195
1984	243	198	231	252	231	204	228	320	632	992	2,029	4,306
1985	4,602	1,253	310	594	369	234	311	486	1,456	2,459	3,135	4,864
1986	5,099	4,895	3,189	777	259	271	250	246	315	697	1,963	3,493
1987	3,971	4,499	5,114	3,354	923	246	338	875	1,658	2,510	3,394	4,763
1988	5,348	5,104	4,356	1,096	386	668	891	1,432	1,714	2,847	3,755	4,832
1989	5,292	5,322	4,301	3,196	1,714	307	202	239	1,160	2,211	3,187	4,783
1990	5,394	5,164	4,275	1,559	607	768	856	1,609	3,116	4,199	4,033	4,713
1991	5,489	4,928	5,198	4,175	1,271	296	326	1,364	3,021	3,932	3,848	4,813
Avg	4,174	3,623	2,987	1,563	720	425	461	787	1,471	2,086	2,853	4,067
W/AN/BN	3,728	2,950	1,840	481	263	253	245	255	323	672	1,851	2,997
D/C	4,520	4,146	3,879	2,404	1,075	559	630	1,202	2,363	3,186	3,632	4,900

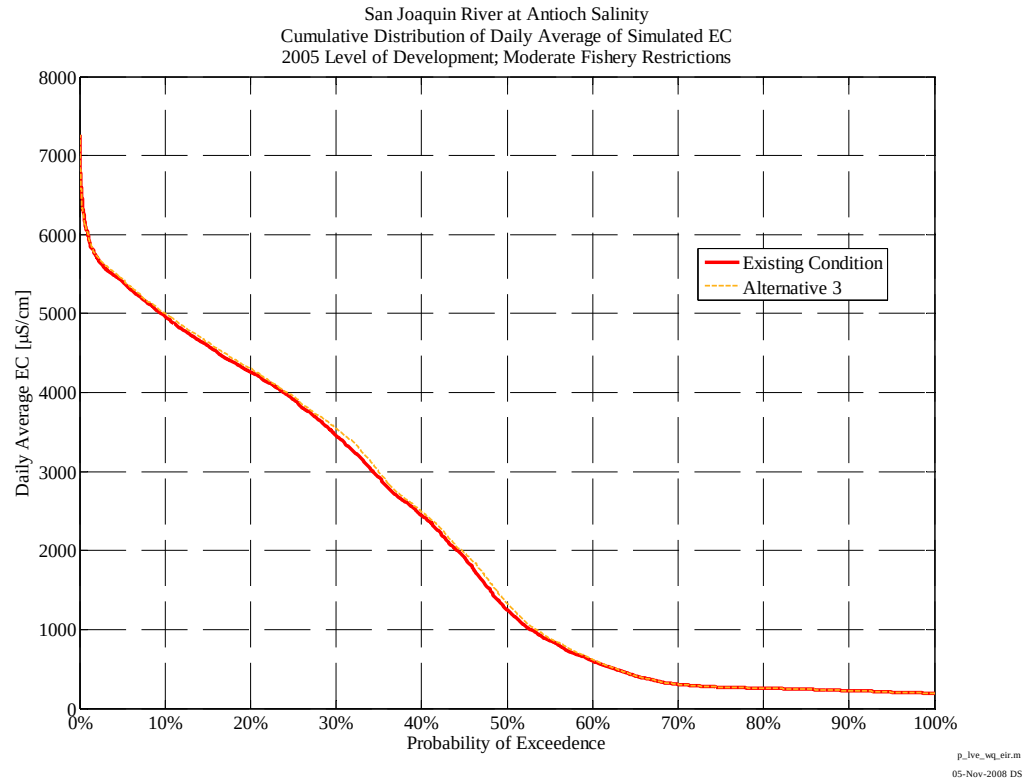
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-1.3%	-1.0%	-0.2%	-0.3%	-0.4%	-0.2%	-0.1%	-1.4%	-0.8%	0.5%	0.1%	1.2%
1977	-1.9%	-4.4%	6.0%	6.5%	93.5%	86.8%	11.4%	2.0%	-0.5%	-0.7%	-7.4%	-6.5%
1978	2.0%	7.4%	9.7%	2.6%	0.0%	-0.4%	0.6%	0.8%	-0.6%	-0.3%	-0.3%	10.3%
1979	11.2%	3.1%	-1.5%	-7.8%	-1.8%	-0.9%	-0.3%	0.3%	-1.0%	1.4%	0.3%	0.3%
1980	0.0%	-0.6%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	3.2%	4.2%	2.1%
1981	2.0%	1.4%	0.5%	0.3%	0.1%	0.0%	0.0%	3.4%	-0.7%	0.8%	0.7%	1.6%
1982	0.8%	1.5%	0.5%	0.4%	0.2%	0.0%	0.0%	-0.1%	0.0%	2.9%	1.8%	0.9%
1983	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-1.3%	0.7%	0.4%	0.5%	0.2%	0.3%
1985	0.9%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%	-1.0%	-0.1%	0.1%	0.0%
1986	-0.3%	-0.1%	-0.1%	-0.2%	0.0%	-0.4%	-0.7%	0.4%	-0.7%	8.4%	-6.2%	8.1%
1987	8.9%	2.8%	6.5%	19.5%	27.7%	3.6%	-1.6%	-2.8%	-2.5%	0.6%	3.5%	5.0%
1988	4.3%	2.0%	1.4%	1.1%	-1.1%	-1.9%	-0.1%	2.3%	-0.1%	0.5%	-0.2%	1.0%
1989	0.4%	0.0%	-0.1%	-0.4%	0.6%	-0.2%	0.1%	0.4%	1.9%	-2.4%	0.0%	-0.6%
1990	-2.4%	0.6%	-0.8%	-4.2%	-2.7%	10.2%	5.9%	0.5%	-0.6%	-0.3%	-0.1%	-0.5%
1991	-0.2%	-0.7%	0.0%	0.1%	-1.7%	-0.1%	-1.8%	-2.4%	-1.3%	-2.3%	-1.5%	-0.5%
Avg	1.5%	0.8%	1.4%	1.1%	7.1%	6.0%	0.7%	0.3%	-0.5%	0.8%	-0.3%	1.4%
W/AN/BN	2.0%	1.6%	1.3%	-0.7%	-0.2%	-0.4%	-0.3%	0.3%	-0.3%	2.3%	0.0%	3.1%
D/C	1.2%	0.2%	1.5%	2.5%	12.9%	10.9%	1.5%	0.2%	-0.6%	-0.4%	-0.5%	0.1%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1.11%
7.15%
5.98%
0.75%
0.27%
-0.49%
0.79%
-0.29%
1.41%
1.53%
0.82%
1.40%
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

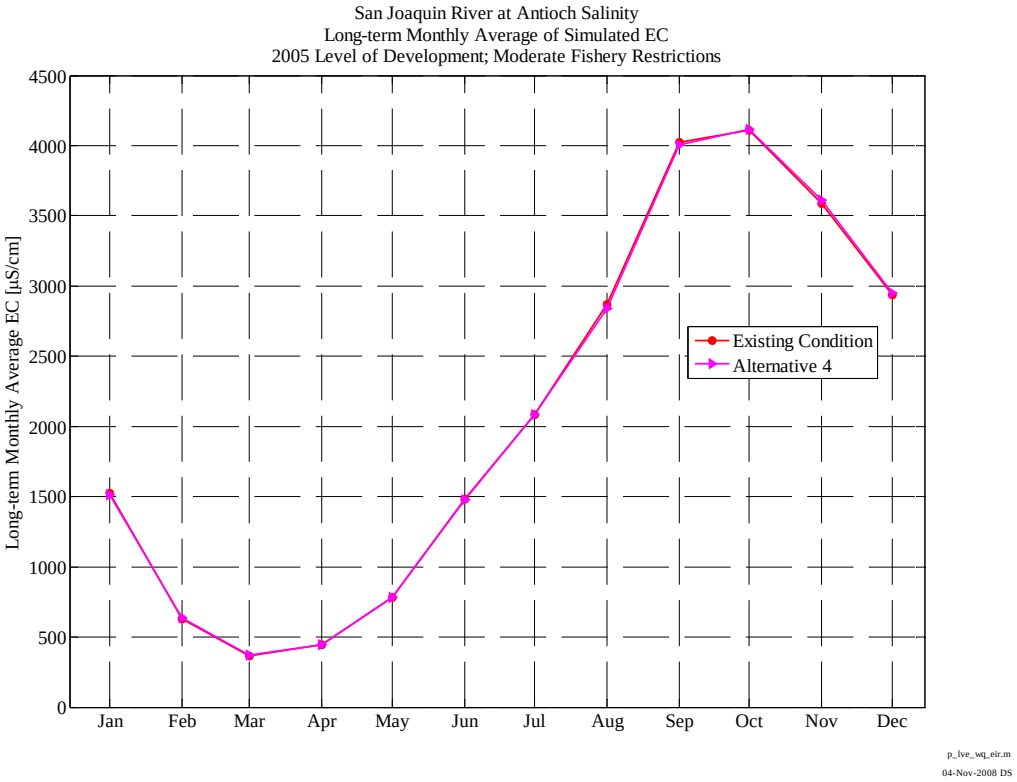
Alternative 4

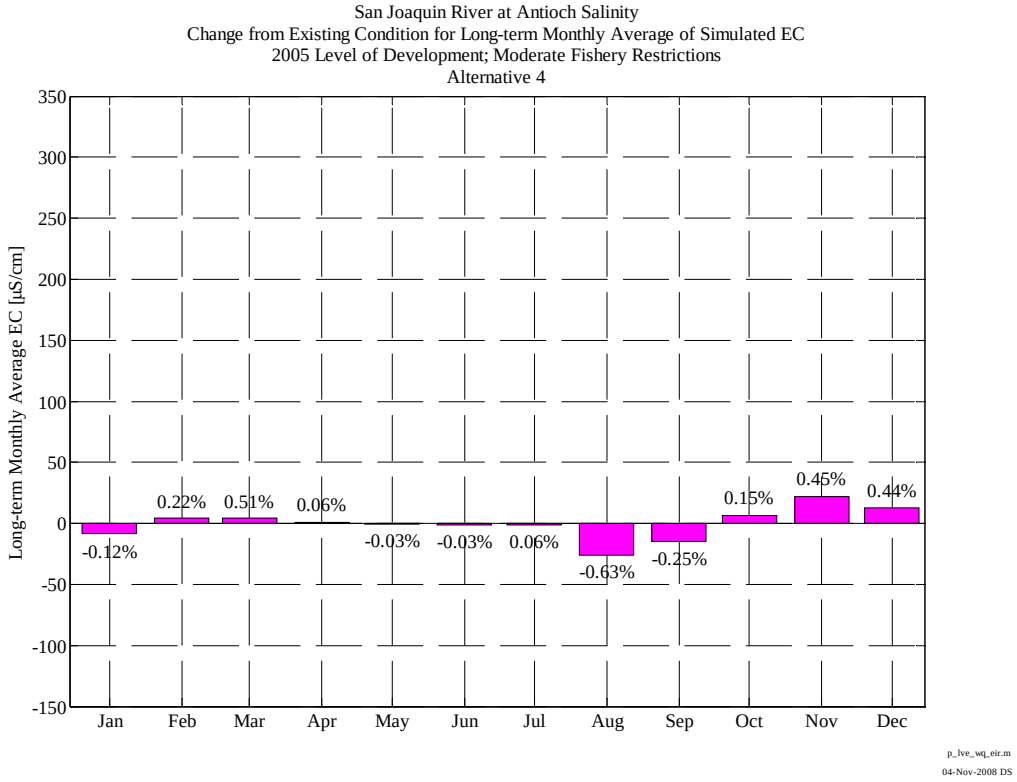
San Joaquin River at Antioch Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

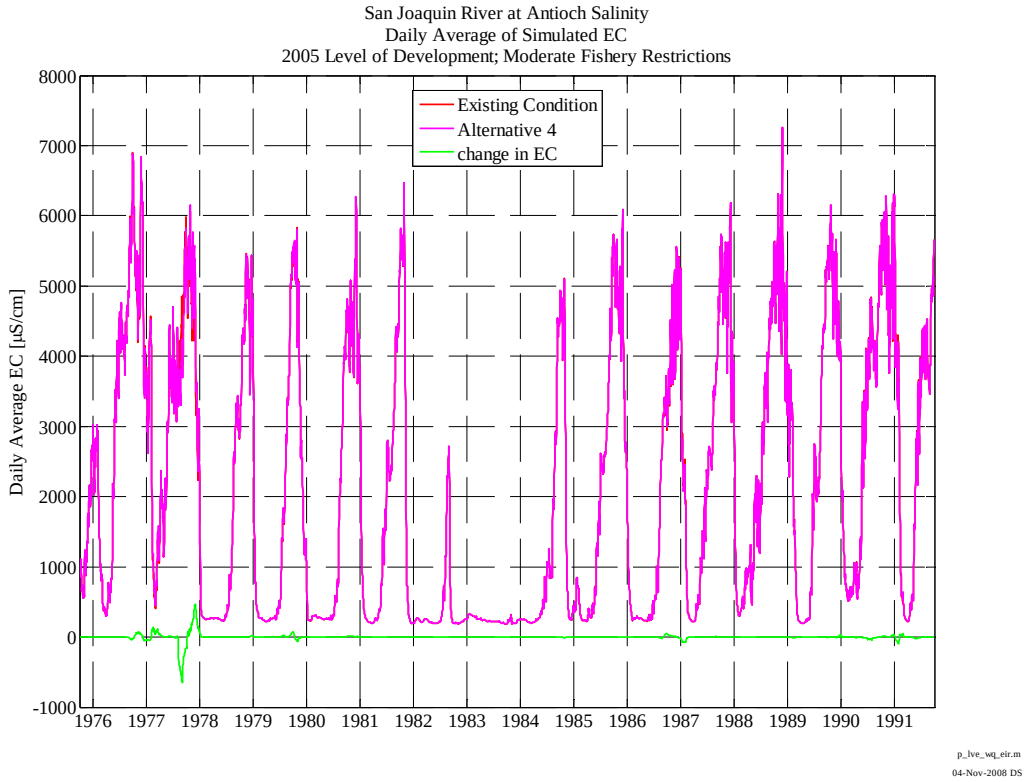
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	770	1,190	2,281	2,603	1,484	434	548	1,846	3,789	4,334	4,413	5,832
1977	5,414	5,517	4,383	3,654	1,463	1,068	1,771	2,411	3,912	3,697	3,675	4,801
1978	5,327	5,095	3,054	430	255	266	268	253	257	565	1,948	3,125
1979	3,865	4,978	4,471	1,152	278	239	238	270	361	1,265	2,843	4,895
1980	5,234	3,529	1,481	286	287	286	263	258	272	518	2,036	4,003
1981	4,463	4,591	4,391	1,127	247	205	244	517	1,512	2,468	3,114	4,575
1982	5,584	1,517	214	242	232	244	220	202	205	416	1,813	588
1983	201	202	242	315	301	263	245	231	225	220	215	195
1984	243	198	231	252	231	205	231	318	630	987	2,026	4,295
1985	4,557	1,235	309	594	369	234	311	485	1,470	2,461	3,132	4,867
1986	5,114	4,901	3,193	779	259	272	252	245	318	646	2,080	3,259
1987	3,675	4,386	4,794	2,743	701	237	344	901	1,700	2,494	3,282	4,538
1988	5,128	5,004	4,297	1,083	390	681	892	1,400	1,715	2,834	3,760	4,784
1989	5,271	5,321	4,307	3,209	1,694	307	203	239	1,139	2,263	3,188	4,810
1990	5,523	5,134	4,317	1,634	625	698	803	1,598	3,121	4,181	4,025	4,734
1991	5,506	4,968	5,219	4,119	1,314	303	332	1,386	3,046	4,026	3,908	4,838
Avg	4,117	3,611	2,949	1,514	633	371	448	785	1,480	2,086	2,841	4,009
W/AN/BN	3,653	2,917	1,841	494	264	254	245	254	324	660	1,851	2,908
D/C	4,479	4,150	3,811	2,307	921	463	606	1,198	2,378	3,195	3,611	4,864

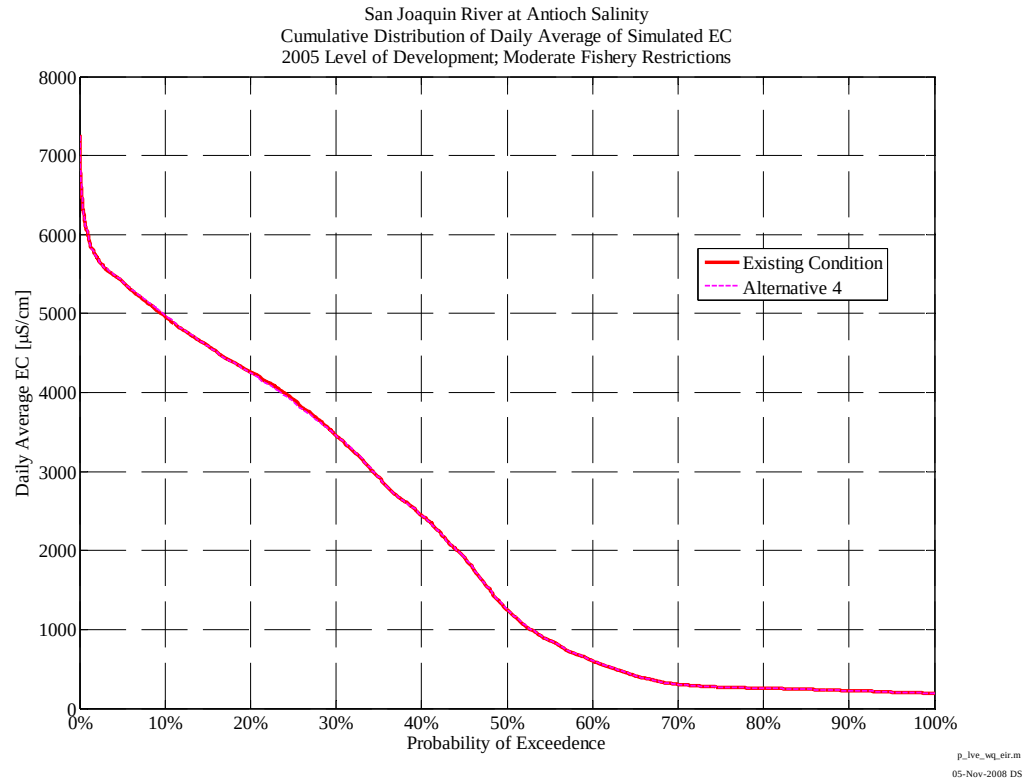
Percent (%) Change from Existing Condition for San Joaquin River at Antioch Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%
1977	0.5%	1.0%	-0.7%	-1.2%	5.7%	6.6%	1.2%	0.1%	0.2%	-0.1%	-10.0%	-5.7%
1978	0.9%	6.2%	7.1%	2.2%	0.0%	0.1%	0.0%	0.0%	0.1%	0.3%	0.1%	0.1%
1979	0.1%	-0.1%	0.2%	0.3%	0.1%	-0.1%	-0.1%	0.0%	0.1%	1.0%	0.2%	0.9%
1980	-0.2%	-0.4%	-0.1%	-0.3%	-0.4%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.1%
1981	0.3%	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1982	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.4%	-0.5%	0.8%
1987	0.8%	0.2%	-0.1%	-2.2%	-3.1%	-0.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	-0.6%	-0.2%	0.2%	0.4%	0.0%	-0.1%	0.1%	0.0%
1990	-0.1%	0.0%	0.2%	0.3%	0.2%	0.0%	-0.6%	-0.2%	-0.4%	-0.7%	-0.3%	-0.1%
1991	0.1%	0.1%	0.4%	-1.2%	1.7%	2.1%	0.1%	-0.8%	-0.5%	0.0%	0.0%	0.0%
Avg	0.2%	0.5%	0.4%	-0.1%	0.2%	0.5%	0.1%	0.0%	0.0%	0.1%	-0.6%	-0.2%
W/AN/BN	0.1%	0.8%	1.0%	0.3%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.3%
D/C	0.2%	0.2%	0.0%	-0.5%	0.4%	0.9%	0.1%	0.0%	-0.1%	-0.1%	-1.1%	-0.7%


San Joaquin River at Antioch Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
-0.12%
0.22%
0.51%
0.06%
-0.03%
-0.03%
0.06%
-0.63%
-0.25%
0.15%
0.45%
0.44%
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Antioch Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
8000
7000
6000
5000
4000
3000
2000
1000
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Old River at Rock Slough

Existing Condition

Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	228	223	404	604	524	315	307	383	616	771	754	983
1977	1,015	877	1,001	792	765	501	459	521	713	745	724	886
1978	1,133	1,171	743	431	371	409	423	368	283	264	299	457
1979	539	754	909	690	355	304	340	341	242	242	397	731
1980	930	673	434	355	411	439	413	370	296	279	302	556
1981	716	715	896	697	294	251	331	394	298	476	595	797
1982	975	628	221	349	342	342	257	247	247	259	280	262
1983	197	234	382	428	357	287	319	282	260	266	214	195
1984	201	231	324	395	310	251	325	352	255	237	287	602
1985	755	487	225	229	256	278	373	429	296	451	588	815
1986	934	854	861	459	416	369	353	289	267	281	301	468
1987	534	660	880	779	476	309	357	383	318	468	615	786
1988	911	852	980	720	312	322	348	355	366	406	616	845
1989	988	999	968	707	685	364	290	283	245	468	617	885
1990	982	921	921	596	351	288	306	332	496	722	764	793
1991	1,043	1,046	1,024	1,100	856	381	297	300	472	719	755	805
Avg	755	708	698	583	443	338	344	352	354	441	507	679
W/AN/BN	701	649	554	444	366	343	347	321	264	261	297	467
D/C	797	753	811	692	502	334	341	375	424	580	670	844

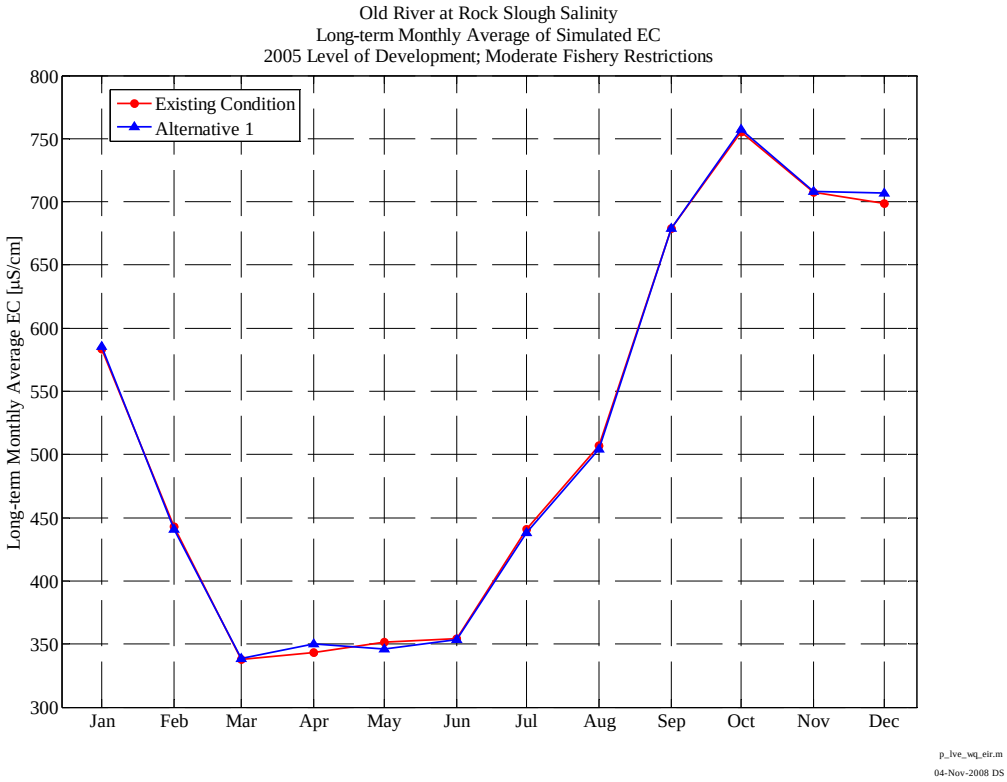
Alternative 1

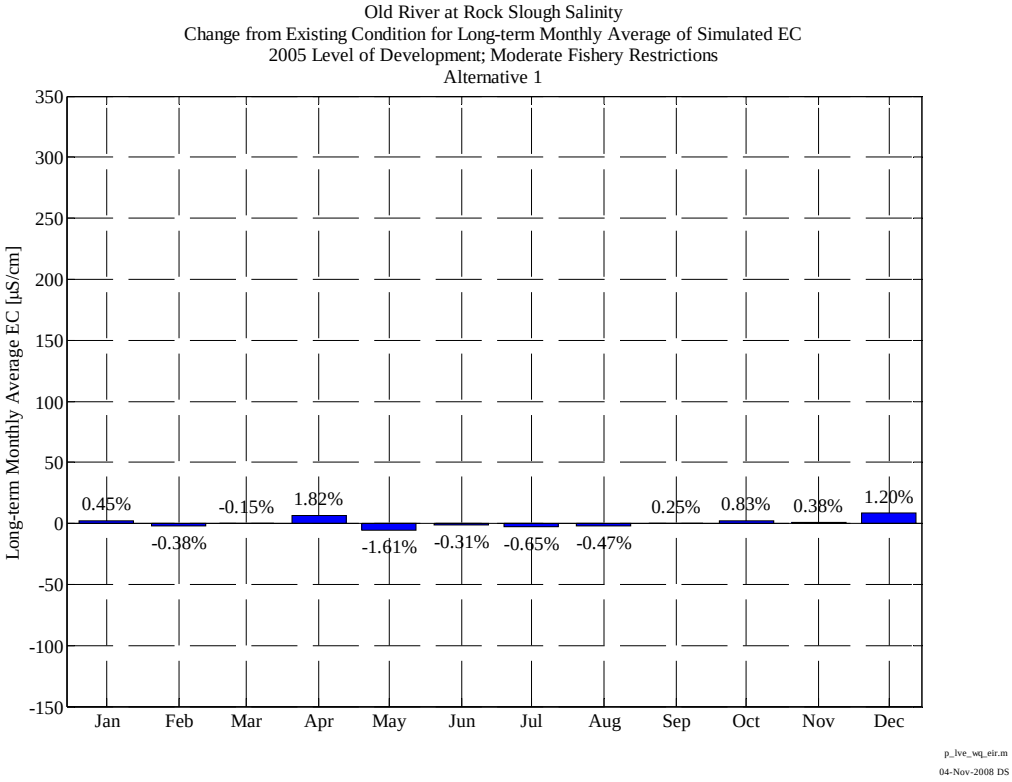
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

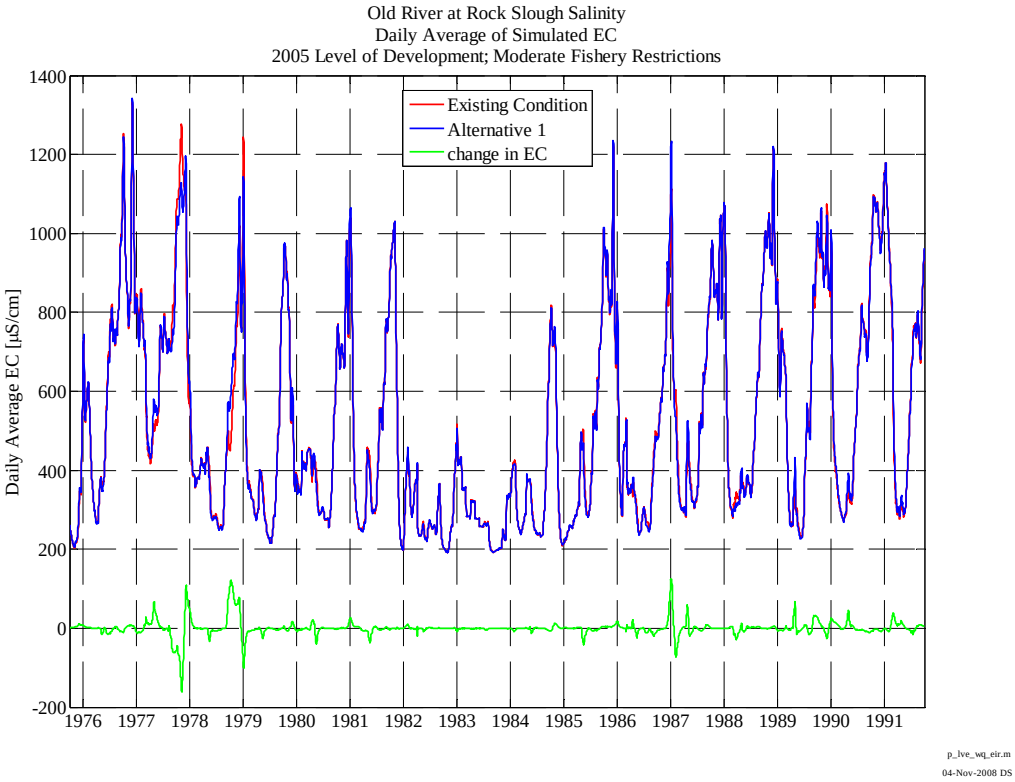
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	229	227	413	609	526	315	307	376	604	764	756	975
1977	1,013	884	1,002	781	763	516	485	555	717	742	711	827
1978	1,059	1,101	817	447	372	407	422	352	278	259	298	508
1979	642	816	908	646	347	300	339	327	241	242	394	730
1980	929	676	439	350	410	438	426	350	296	280	302	555
1981	715	716	906	712	298	249	325	372	300	473	593	796
1982	974	627	221	354	343	340	255	243	247	259	280	262
1983	197	234	381	426	357	287	318	281	259	263	214	195
1984	201	231	324	391	308	250	325	347	254	237	286	598
1985	757	494	226	230	257	278	374	404	293	446	583	816
1986	938	858	871	466	416	371	359	278	267	272	293	454
1987	530	658	922	826	429	306	380	374	320	465	614	793
1988	912	853	980	719	316	304	343	350	369	409	619	846
1989	987	1,000	970	701	682	362	311	281	241	470	610	915
1990	997	915	919	616	361	286	322	346	496	717	758	783
1991	1,038	1,043	1,017	1,097	866	402	309	306	470	710	760	812
Avg	757	708	707	586	441	338	350	346	353	438	505	679
W/AN/BN	706	649	566	440	365	342	349	311	263	259	295	472
D/C	797	754	817	699	500	335	351	374	423	577	667	840

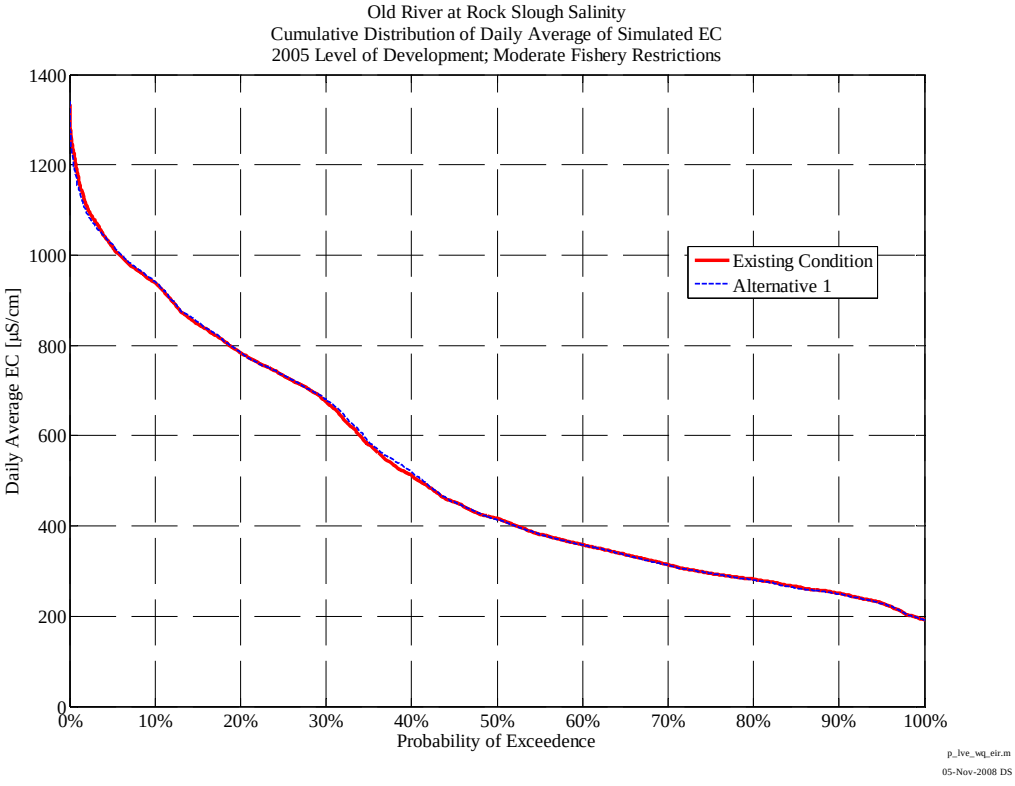
Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.5%	1.6%	2.2%	0.8%	0.3%	-0.1%	0.0%	-1.7%	-1.8%	-0.8%	0.2%	-0.8%
1977	-0.2%	0.8%	0.1%	-1.4%	-0.3%	3.0%	5.7%	6.4%	0.5%	-0.3%	-1.9%	-6.7%
1978	-6.5%	-5.9%	9.9%	3.6%	0.2%	-0.4%	-0.2%	-4.3%	-2.1%	-2.1%	-0.4%	11.2%
1979	19.1%	8.3%	0.0%	-6.4%	-2.1%	-1.3%	-0.4%	-4.0%	-0.1%	-0.3%	-0.8%	-0.1%
1980	-0.1%	0.4%	1.1%	-1.2%	-0.4%	-0.3%	3.0%	-5.5%	-0.2%	0.2%	0.0%	-0.2%
1981	-0.1%	0.0%	1.1%	2.0%	1.6%	-1.0%	-1.9%	-5.6%	0.8%	-0.6%	-0.3%	-0.1%
1982	-0.1%	0.0%	-0.3%	1.4%	0.2%	-0.3%	-0.7%	-1.7%	0.2%	0.3%	0.2%	0.2%
1983	-0.1%	-0.1%	-0.1%	-0.5%	-0.1%	-0.1%	-0.4%	-0.2%	-0.3%	-1.1%	-0.2%	0.0%
1984	0.0%	-0.1%	-0.2%	-1.2%	-0.5%	0.0%	0.1%	-1.2%	-0.2%	0.1%	-0.3%	-0.8%
1985	0.2%	1.6%	0.3%	0.4%	0.3%	0.2%	0.4%	-5.8%	-1.0%	-1.2%	-0.8%	0.2%
1986	0.5%	0.4%	1.1%	1.5%	0.0%	0.3%	1.7%	-3.8%	-0.1%	-3.3%	-2.5%	-3.1%
1987	-0.8%	-0.3%	4.8%	6.0%	-9.9%	-1.1%	6.4%	-2.4%	0.7%	-0.7%	-0.1%	0.9%
1988	0.0%	0.1%	0.0%	-0.1%	1.0%	-5.6%	-1.5%	-1.2%	0.7%	0.7%	0.5%	0.1%
1989	-0.1%	0.1%	0.1%	-0.8%	-0.4%	-0.5%	7.2%	-0.7%	-1.4%	0.5%	-1.0%	3.5%
1990	1.4%	-0.6%	-0.3%	3.3%	2.8%	-0.6%	5.4%	4.2%	-0.2%	-0.6%	-0.7%	-1.3%
1991	-0.5%	-0.3%	-0.6%	-0.3%	1.2%	5.6%	4.1%	2.0%	-0.6%	-1.2%	0.7%	0.9%
Avg	0.8%	0.4%	1.2%	0.5%	-0.4%	-0.1%	1.8%	-1.6%	-0.3%	-0.7%	-0.5%	0.2%
W/AN/BN	1.8%	0.4%	1.6%	-0.4%	-0.4%	-0.3%	0.5%	-3.0%	-0.4%	-0.9%	-0.6%	1.0%
D/C	0.1%	0.3%	0.9%	1.1%	-0.4%	0.0%	2.9%	-0.5%	-0.2%	-0.5%	-0.4%	-0.4%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.45%
-0.38%
-0.15%
1.82%
-1.61%
-0.31%
-0.65%
-0.47%
0.25%
0.83%
0.38%
1.20%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

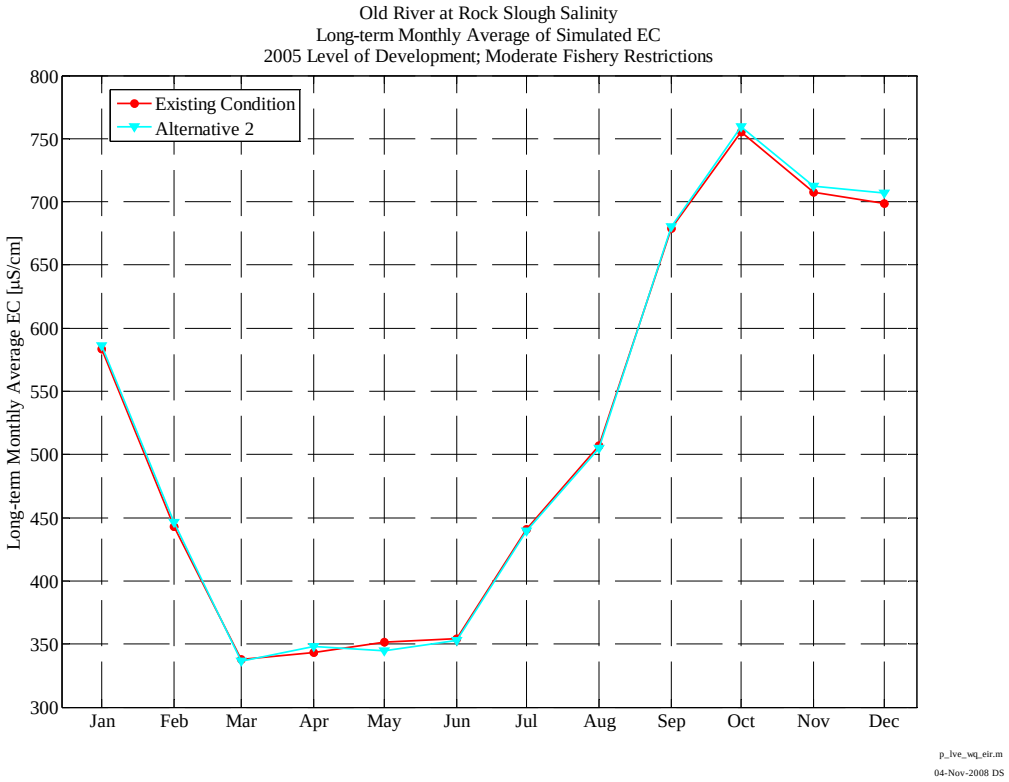
Alternative 2

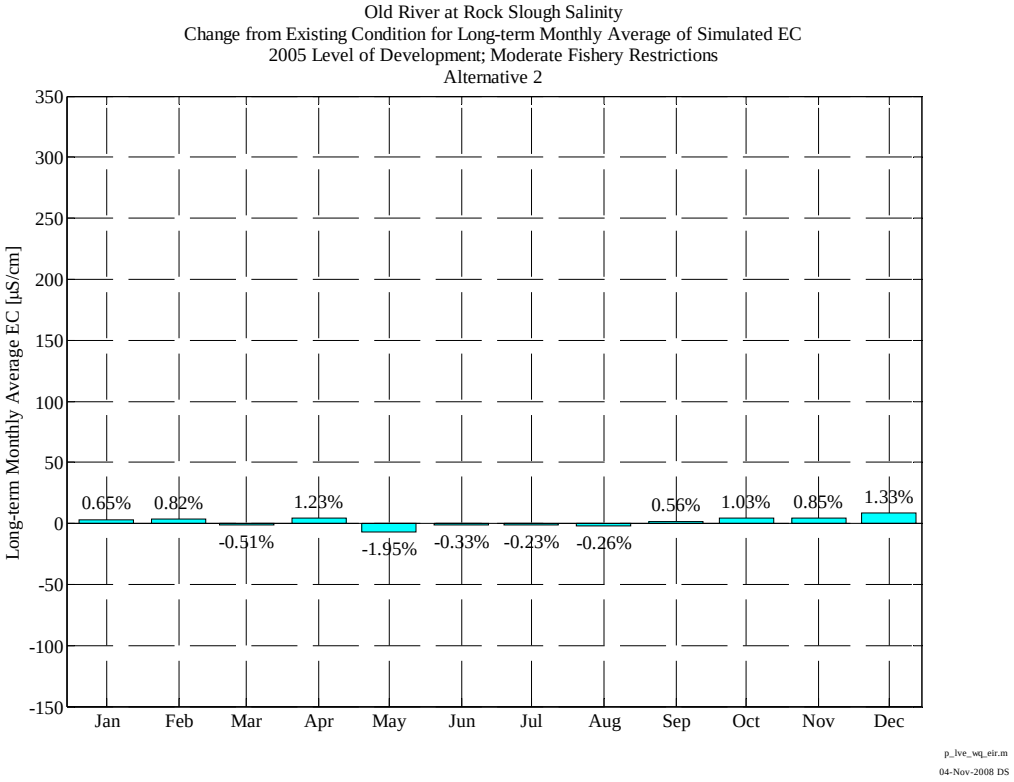
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

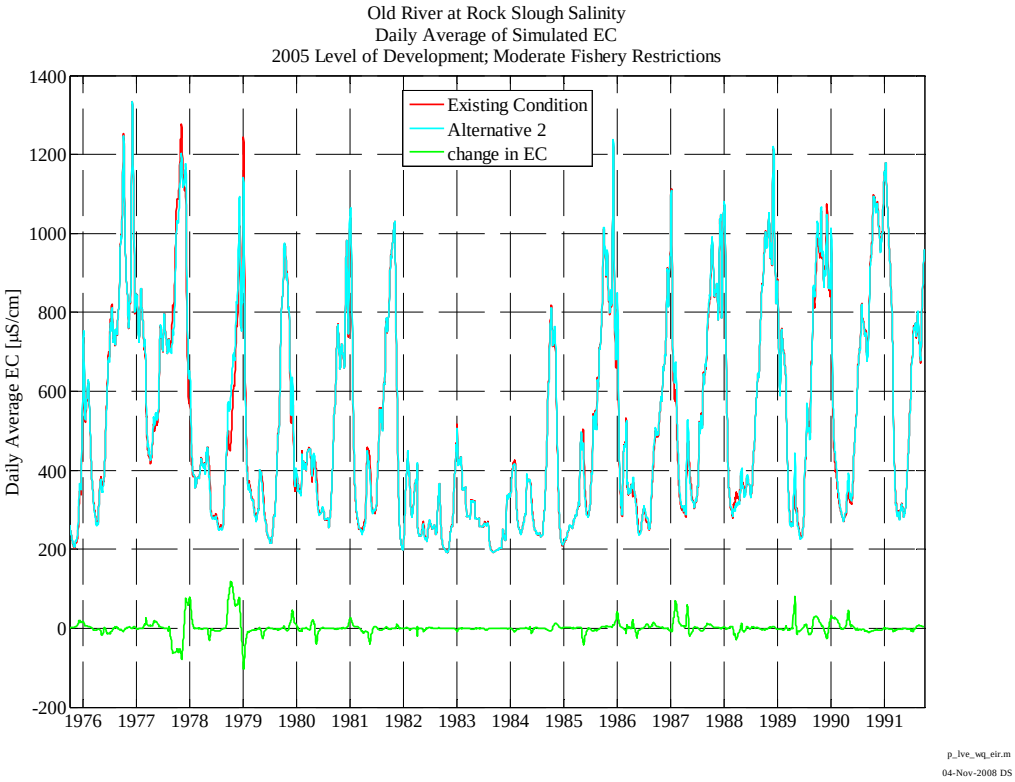
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	230	229	421	613	528	312	303	375	605	764	756	979
1977	1,013	879	1,003	791	768	512	468	536	717	745	709	825
1978	1,077	1,149	812	456	371	407	422	354	279	258	298	507
1979	640	816	908	643	347	299	338	327	241	242	394	730
1980	929	687	456	352	410	438	426	350	295	280	302	555
1981	715	716	906	712	298	247	322	370	300	472	593	797
1982	974	632	221	349	340	340	255	243	247	259	280	262
1983	197	234	380	427	357	287	318	281	259	263	214	195
1984	201	231	324	391	307	250	325	347	254	237	286	597
1985	757	496	226	231	257	279	374	404	293	446	583	816
1986	938	859	879	474	415	370	359	278	265	289	306	478
1987	537	660	877	795	519	317	381	374	319	465	613	797
1988	917	854	981	720	316	304	343	350	367	408	617	842
1989	986	1,001	970	704	683	361	314	283	241	471	608	914
1990	998	915	921	623	369	288	323	346	496	718	759	784
1991	1,037	1,042	1,020	1,100	854	376	295	299	471	715	761	810
Avg	759	712	707	586	446	337	348	345	353	439	505	681
W/AN/BN	708	658	569	442	364	342	349	311	263	261	297	475
D/C	799	755	814	699	510	333	347	371	423	578	667	840

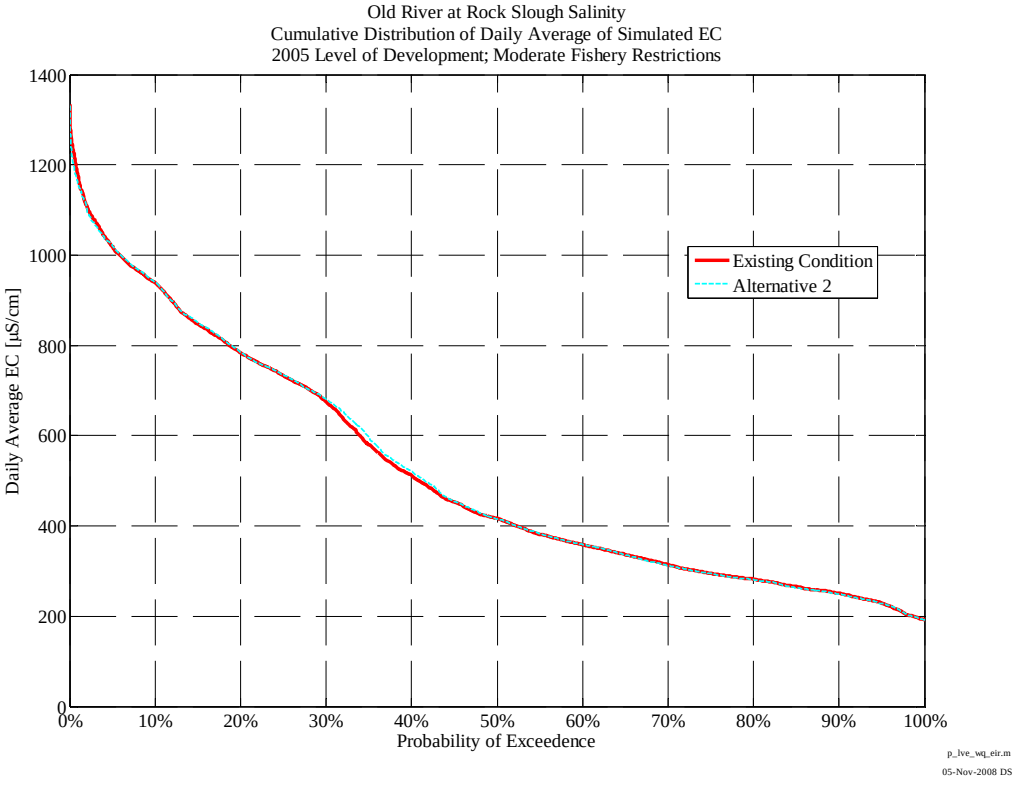
Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.6%	2.8%	4.2%	1.5%	0.6%	-1.1%	-1.1%	-2.1%	-1.7%	-0.9%	0.2%	-0.4%
1977	-0.2%	0.2%	0.2%	-0.1%	0.4%	2.2%	2.0%	2.7%	0.4%	0.0%	-2.2%	-6.9%
1978	-5.0%	-1.9%	9.2%	5.8%	0.1%	-0.4%	-0.2%	-3.9%	-1.7%	-2.5%	-0.5%	11.1%
1979	18.8%	8.2%	0.0%	-6.9%	-2.2%	-1.6%	-0.5%	-4.0%	-0.1%	-0.3%	-0.8%	-0.1%
1980	-0.1%	2.0%	5.0%	-0.9%	-0.3%	-0.2%	3.0%	-5.5%	-0.2%	0.2%	0.0%	-0.2%
1981	-0.1%	0.0%	1.1%	2.0%	1.6%	-1.8%	-2.8%	-5.9%	0.7%	-0.6%	-0.3%	0.0%
1982	0.0%	0.7%	0.0%	0.1%	-0.6%	-0.4%	-0.7%	-1.8%	0.2%	0.3%	0.2%	0.1%
1983	-0.2%	-0.2%	-0.5%	-0.4%	0.0%	0.0%	-0.5%	-0.3%	-0.3%	-1.1%	-0.2%	0.0%
1984	0.0%	-0.1%	-0.2%	-1.2%	-1.1%	-0.3%	0.0%	-1.3%	-0.2%	0.1%	-0.3%	-0.8%
1985	0.2%	1.9%	0.5%	0.9%	0.4%	0.2%	0.4%	-5.8%	-1.0%	-1.2%	-0.8%	0.2%
1986	0.5%	0.5%	2.1%	3.3%	-0.2%	0.2%	1.7%	-4.0%	-0.6%	2.8%	1.8%	2.1%
1987	0.5%	0.0%	-0.3%	2.2%	8.9%	2.5%	6.7%	-2.4%	0.5%	-0.6%	-0.2%	1.4%
1988	0.6%	0.2%	0.1%	0.0%	1.0%	-5.6%	-1.5%	-1.2%	0.4%	0.6%	0.2%	-0.3%
1989	-0.2%	0.2%	0.2%	-0.4%	-0.2%	-0.7%	8.3%	0.3%	-1.3%	0.7%	-1.4%	3.3%
1990	1.6%	-0.7%	0.0%	4.5%	5.2%	0.0%	5.5%	4.3%	-0.1%	-0.5%	-0.6%	-1.2%
1991	-0.6%	-0.4%	-0.3%	-0.1%	-0.3%	-1.4%	-0.7%	-0.2%	-0.4%	-0.6%	0.7%	0.7%
Avg	1.0%	0.8%	1.3%	0.7%	0.8%	-0.5%	1.2%	-2.0%	-0.3%	-0.2%	-0.3%	0.6%
W/AN/BN	2.0%	1.3%	2.2%	0.0%	-0.6%	-0.4%	0.4%	-3.0%	-0.4%	-0.1%	0.0%	1.7%
D/C	0.3%	0.5%	0.6%	1.2%	2.0%	-0.6%	1.9%	-1.2%	-0.3%	-0.3%	-0.5%	-0.4%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.65%
0.82%
-0.51%
1.23%
-1.95%
-0.33%
-0.23%
-0.26%
0.56%
1.03%
0.85%
1.33%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

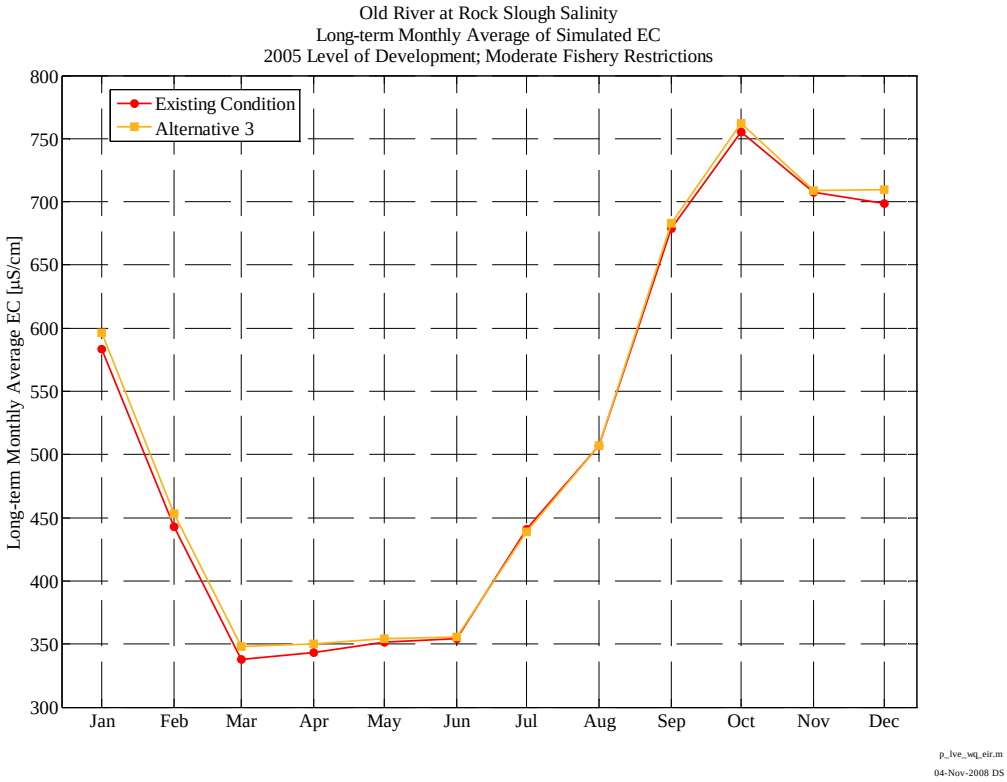
Alternative 3

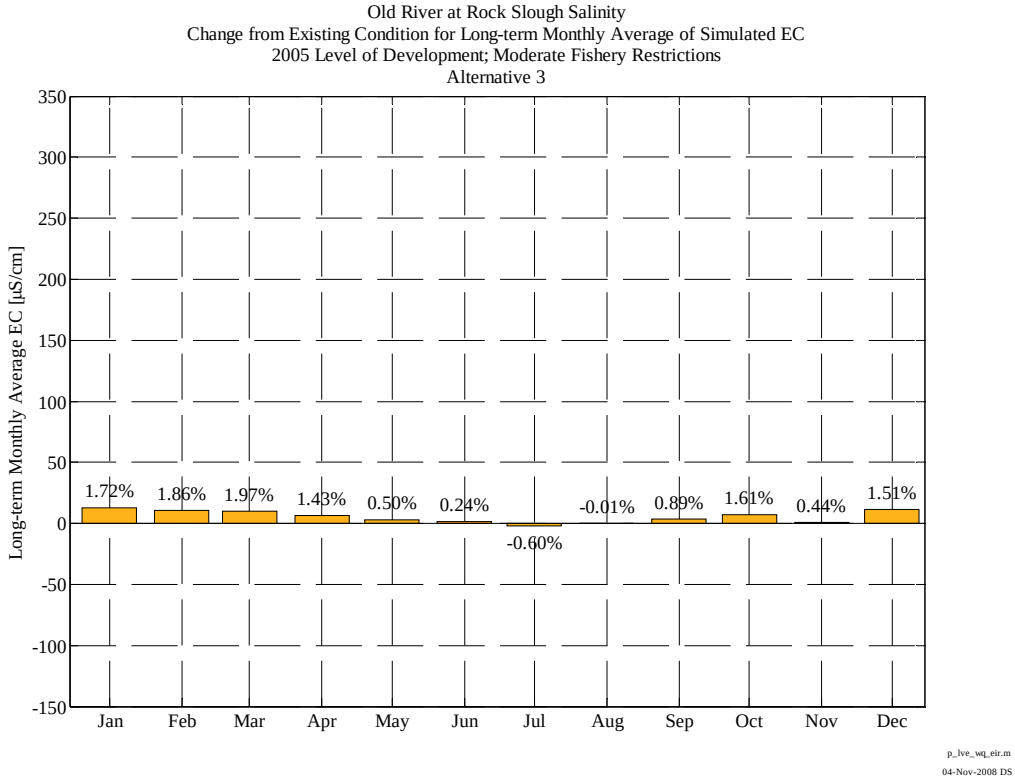
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

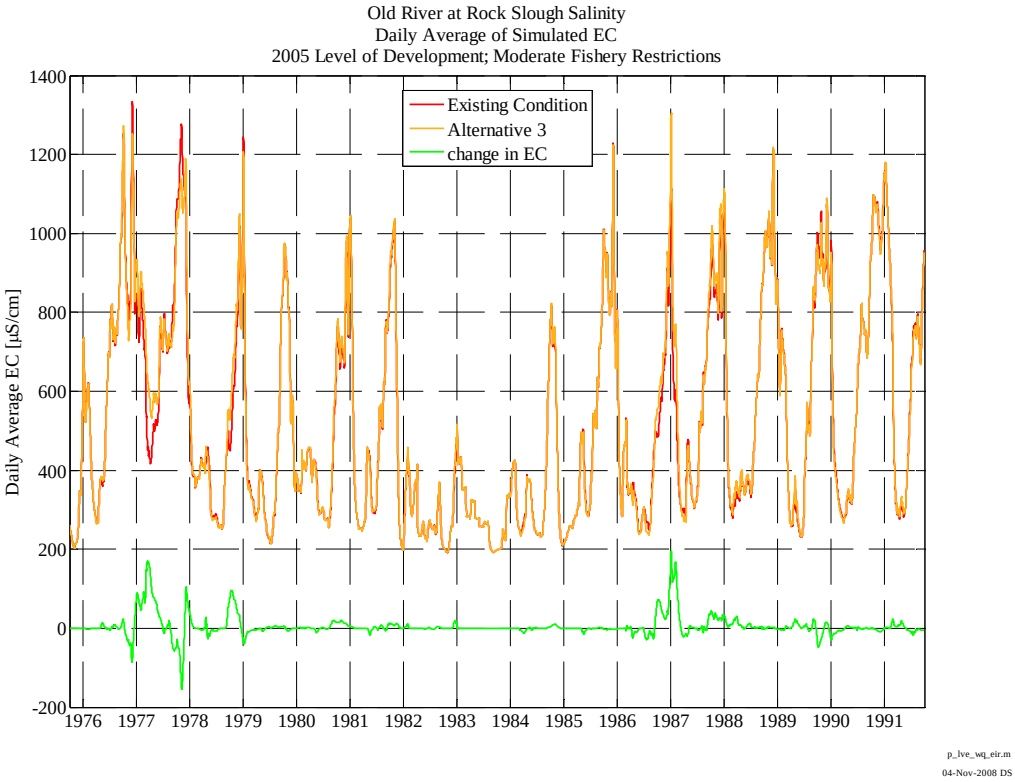
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	228	222	403	603	523	315	307	391	614	772	759	989
1977	1,007	832	1,005	862	838	651	560	581	732	741	723	835
1978	1,074	1,099	811	444	372	406	426	355	277	261	299	494
1979	626	807	910	665	347	299	338	336	244	244	402	735
1980	930	669	434	356	412	440	414	364	296	278	308	574
1981	731	731	904	700	294	251	331	384	300	476	596	803
1982	984	637	222	354	344	341	257	247	247	258	282	263
1983	197	234	395	429	357	287	319	282	260	266	214	195
1984	201	231	324	395	310	244	318	351	255	237	288	604
1985	763	493	226	230	256	278	373	420	294	450	589	815
1986	931	852	859	458	416	370	342	282	267	259	288	482
1987	598	691	951	924	576	304	340	385	319	466	613	808
1988	945	879	1,008	736	321	346	358	356	376	408	617	847
1989	988	1,001	968	704	682	365	299	297	246	472	616	890
1990	945	922	920	577	342	283	309	335	497	722	763	793
1991	1,042	1,041	1,017	1,101	864	389	307	306	467	707	752	800
Avg	762	709	710	596	453	348	350	354	356	439	507	683
W/AN/BN	706	647	565	443	365	341	345	317	264	258	297	478
D/C	805	757	822	715	522	353	354	384	427	579	670	842

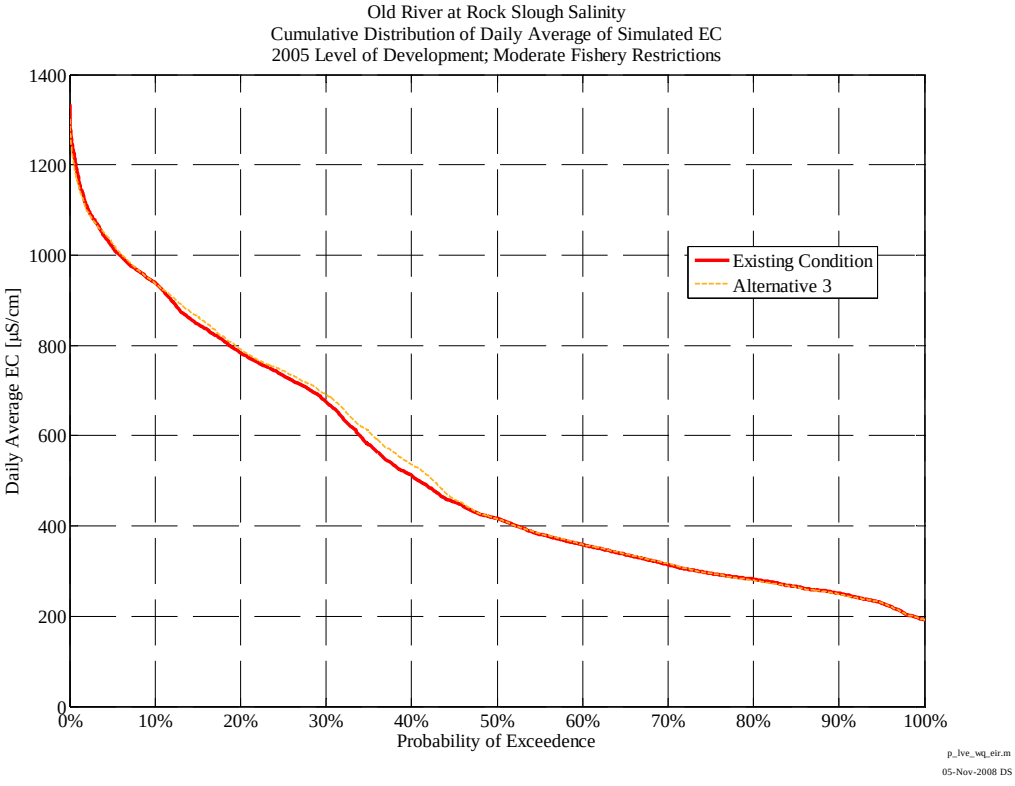
Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.1%	-0.4%	-0.2%	-0.2%	-0.3%	-0.1%	0.0%	2.0%	-0.3%	0.2%	0.6%	0.6%
1977	-0.8%	-5.1%	0.4%	8.8%	9.6%	29.9%	22.1%	11.3%	2.7%	-0.5%	-0.1%	-5.7%
1978	-5.2%	-6.1%	9.1%	3.0%	0.1%	-0.7%	0.8%	-3.6%	-2.4%	-1.2%	-0.1%	8.1%
1979	16.2%	7.0%	0.2%	-3.7%	-2.1%	-1.6%	-0.6%	-1.2%	0.9%	0.9%	1.2%	0.5%
1980	0.0%	-0.6%	-0.2%	0.3%	0.2%	0.3%	0.1%	-1.7%	0.1%	-0.4%	2.1%	3.2%
1981	2.2%	2.2%	0.9%	0.4%	0.2%	0.1%	0.0%	-2.4%	0.8%	0.2%	0.2%	0.8%
1982	1.0%	1.5%	0.4%	1.4%	0.4%	0.0%	0.0%	-0.3%	0.2%	-0.4%	0.7%	0.5%
1983	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-2.6%	-1.9%	-0.3%	0.1%	0.1%	0.2%	0.3%
1985	1.0%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%	-2.1%	-0.5%	-0.2%	0.1%	0.0%
1986	-0.3%	-0.3%	-0.2%	-0.1%	0.0%	0.3%	-3.3%	-2.5%	0.1%	-7.7%	-4.3%	2.9%
1987	12.0%	4.7%	8.1%	18.6%	20.8%	-1.7%	-4.8%	0.5%	0.2%	-0.4%	-0.3%	2.8%
1988	3.7%	3.2%	2.9%	2.4%	2.6%	7.3%	3.0%	0.3%	2.6%	0.6%	0.2%	0.2%
1989	0.0%	0.2%	0.0%	-0.4%	-0.3%	0.5%	3.1%	5.0%	0.5%	1.0%	-0.1%	0.6%
1990	-3.8%	0.1%	-0.1%	-3.1%	-2.5%	-1.9%	1.1%	0.9%	0.0%	0.0%	-0.1%	0.0%
1991	-0.1%	-0.6%	-0.6%	0.1%	0.9%	2.1%	3.5%	2.0%	-1.1%	-1.6%	-0.5%	-0.6%
Avg	1.6%	0.4%	1.5%	1.7%	1.9%	2.0%	1.4%	0.5%	0.2%	-0.6%	0.0%	0.9%
W/AN/BN	1.7%	0.2%	1.8%	0.1%	-0.2%	-0.6%	-0.7%	-1.4%	-0.1%	-1.2%	0.0%	2.2%
D/C	1.6%	0.6%	1.3%	3.0%	3.4%	4.0%	3.1%	2.0%	0.5%	-0.1%	0.0%	-0.1%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
1.72%
1.86%
1.97%
1.43%
0.50%
0.24%
-0.60%
-0.01%
0.89%
1.61%
0.44%
1.51%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

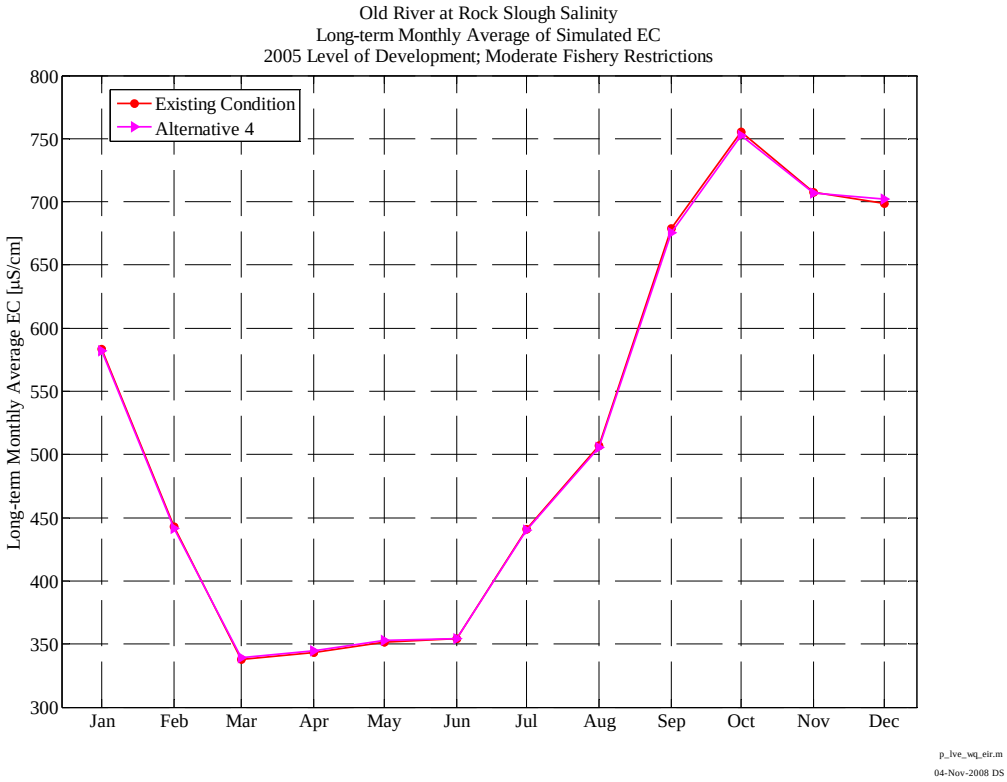
Alternative 4

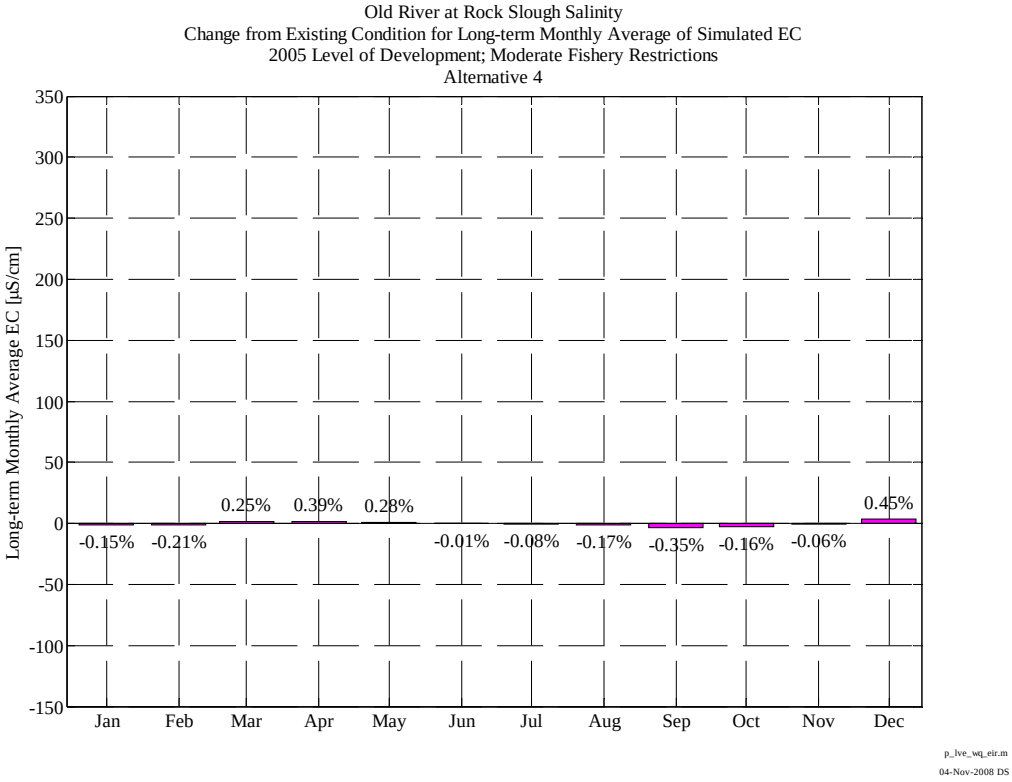
Old River at Rock Slough Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

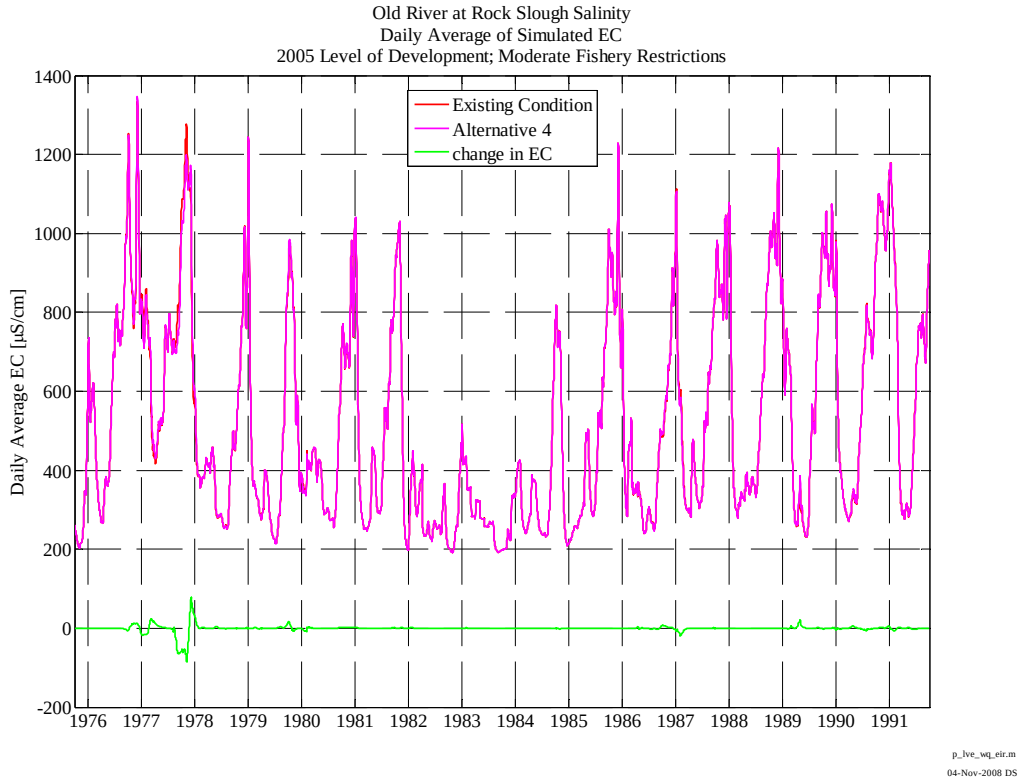
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	228	223	404	604	524	315	307	383	615	771	754	979
1977	1,019	889	1,002	776	761	521	467	525	715	744	707	825
1978	1,076	1,144	795	440	372	409	423	370	285	263	298	457
1979	539	753	908	690	355	303	339	341	241	243	399	738
1980	937	669	434	350	412	440	413	370	296	279	302	557
1981	717	718	898	699	294	251	331	394	298	476	595	798
1982	975	628	221	350	342	342	257	247	247	258	280	262
1983	197	234	382	429	358	287	319	282	260	266	214	195
1984	201	231	324	395	310	251	325	352	254	237	287	603
1985	755	486	225	229	256	278	372	429	296	451	588	815
1986	934	854	861	459	416	369	354	289	267	279	299	470
1987	540	663	879	770	464	308	357	383	318	468	615	786
1988	911	852	980	719	312	322	348	355	366	406	616	845
1989	988	999	968	707	684	365	299	289	245	468	617	885
1990	981	920	922	594	350	288	309	335	495	717	761	792
1991	1,044	1,048	1,026	1,099	852	382	297	300	470	717	755	805
Avg	753	707	702	582	441	339	345	353	354	440	506	676
W/AN/BN	694	645	561	445	366	343	347	322	264	261	297	469
D/C	798	755	811	689	500	337	343	377	424	580	668	837

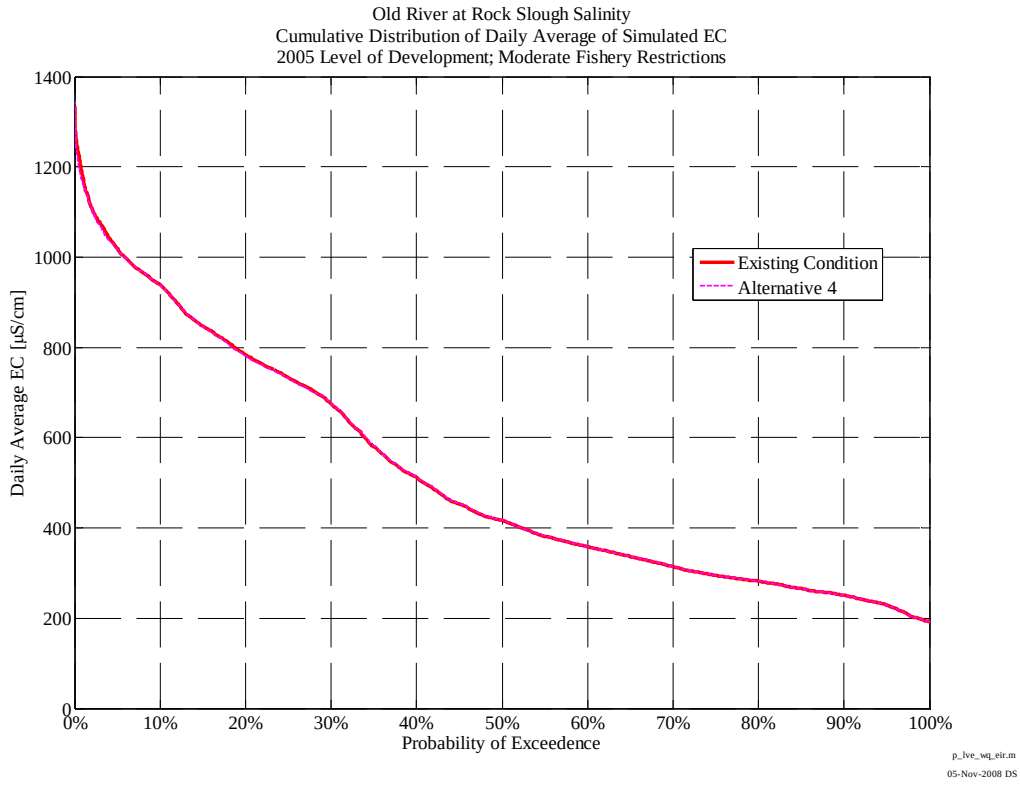
Percent (%) Change from Existing Condition for Old River at Rock Slough Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%
1977	0.3%	1.3%	0.1%	-2.1%	-0.5%	3.9%	1.9%	0.7%	0.2%	-0.1%	-2.4%	-6.9%
1978	-5.1%	-2.3%	6.9%	2.2%	0.1%	0.1%	0.1%	0.6%	0.4%	-0.3%	-0.2%	0.1%
1979	0.0%	-0.1%	0.0%	0.0%	0.3%	-0.3%	-0.2%	0.0%	-0.1%	0.3%	0.5%	0.9%
1980	0.7%	-0.7%	-0.1%	-1.3%	0.1%	0.2%	0.0%	0.0%	-0.1%	-0.1%	0.1%	0.2%
1981	0.2%	0.3%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
1982	0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1985	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.6%	-0.5%	0.3%
1987	1.2%	0.4%	-0.1%	-1.1%	-2.6%	-0.5%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.1%
1988	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	-0.1%	0.4%	3.1%	2.2%	0.3%	0.0%	0.1%	0.1%
1990	-0.1%	0.0%	0.0%	-0.3%	-0.3%	0.0%	1.1%	0.9%	-0.2%	-0.6%	-0.3%	-0.2%
1991	0.0%	0.2%	0.2%	-0.2%	-0.5%	0.4%	0.1%	0.2%	-0.5%	-0.2%	-0.1%	0.0%
Avg	-0.2%	-0.1%	0.5%	-0.1%	-0.2%	0.3%	0.4%	0.3%	0.0%	-0.1%	-0.2%	-0.3%
W/AN/BN	-0.6%	-0.4%	1.0%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%	0.2%
D/C	0.2%	0.2%	0.0%	-0.4%	-0.4%	0.5%	0.7%	0.4%	0.0%	-0.1%	-0.3%	-0.8%


Old River at Rock Slough Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
400
350
300
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.15%
-0.21%
0.25%
0.39%
0.28%
-0.01%
-0.08%
-0.17%
-0.35%
-0.16%
-0.06%
0.45%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River at Rock Slough Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Barker Slough at North Bay Aqueduct

Existing Condition

Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	217	209	212	225	235	238	254	265	250	233	221	214
1977	217	220	220	221	245	264	268	271	275	268	256	246
1978	242	239	236	236	236	237	433	547	426	292	233	222
1979	222	223	221	235	355	457	516	514	400	283	231	220
1980	220	214	213	241	279	282	404	458	360	275	232	222
1981	222	224	227	240	295	310	301	297	280	243	222	216
1982	216	214	226	252	330	395	498	567	471	311	239	222
1983	218	217	248	331	411	431	504	609	503	339	247	223
1984	219	219	226	321	383	375	357	321	271	240	224	220
1985	223	223	252	297	311	308	305	312	286	250	229	221
1986	220	222	227	258	366	452	509	554	448	318	249	229
1987	226	226	227	231	255	269	277	291	281	239	217	214
1988	215	216	217	223	250	293	318	350	328	281	249	238
1989	234	234	234	234	234	234	257	286	271	243	226	219
1990	215	214	215	222	248	281	302	336	316	271	242	229
1991	227	228	229	229	229	230	231	269	305	288	259	248
Avg	222	221	227	250	291	316	358	390	342	273	236	225
W/AN/BN	222	221	228	268	337	375	460	510	411	294	236	223
D/C	222	222	226	236	256	270	279	297	288	257	236	227

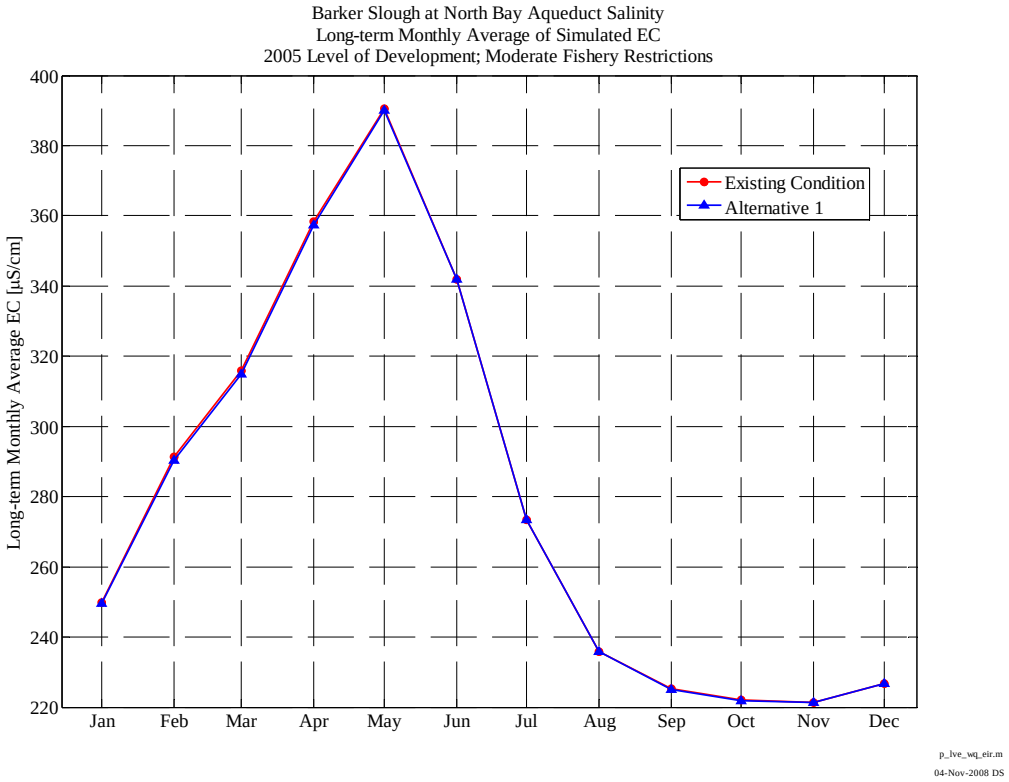
Alternative 1

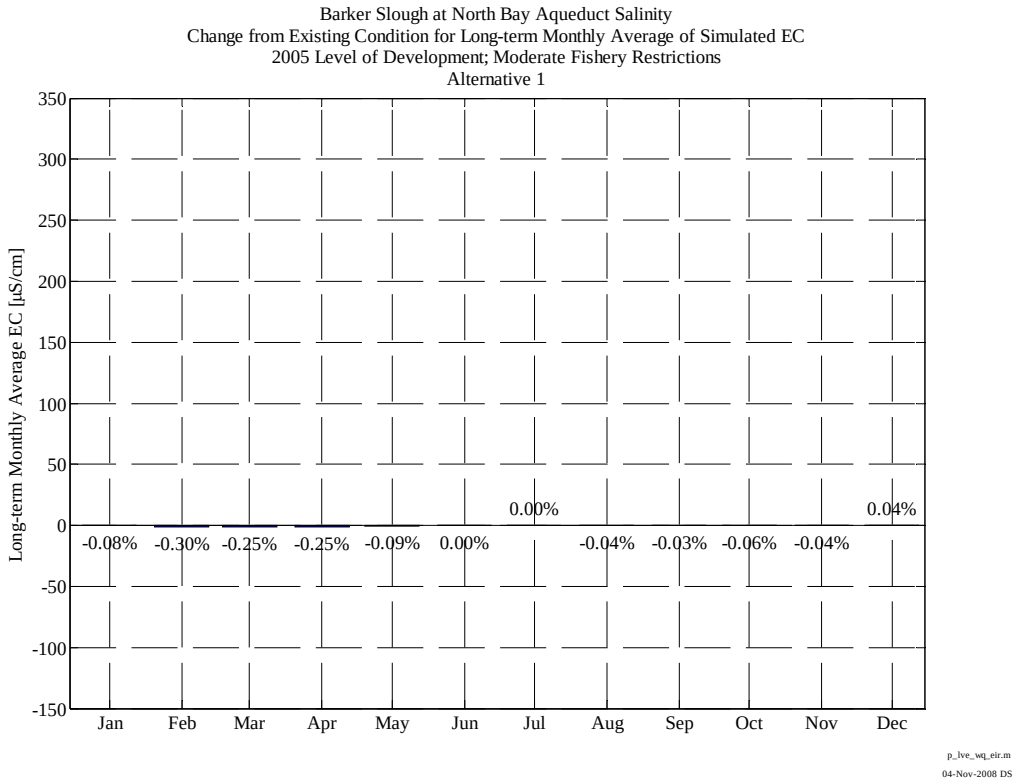
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

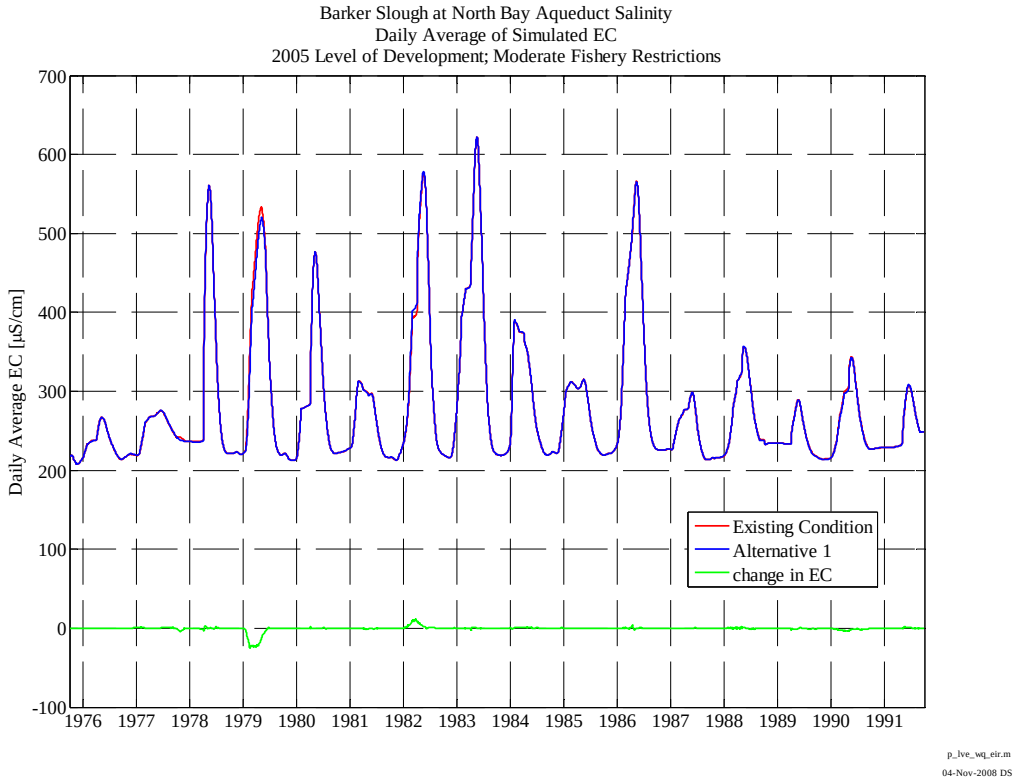
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	217	210	212	225	235	237	254	265	250	233	221	215
1977	217	220	220	222	246	264	268	271	275	269	257	246
1978	240	237	236	236	236	236	433	547	426	292	233	222
1979	222	223	221	231	334	434	496	506	399	283	231	220
1980	220	214	213	241	279	281	404	458	360	275	232	222
1981	222	224	227	240	295	309	300	296	279	243	222	217
1982	216	214	226	253	336	405	505	570	472	312	239	222
1983	218	217	249	331	411	431	505	609	503	339	247	223
1984	219	219	226	321	384	375	358	322	271	240	224	220
1985	223	223	252	297	311	308	305	312	286	251	229	221
1986	220	221	227	258	366	452	510	554	449	318	250	229
1987	226	226	227	231	255	270	277	291	281	239	218	214
1988	216	216	217	224	251	293	318	351	328	281	248	238
1989	234	234	234	234	234	234	256	285	271	242	225	218
1990	215	214	214	221	246	279	299	334	315	269	240	228
1991	227	228	229	229	229	230	231	270	306	289	260	248
Avg	222	221	227	250	290	315	357	390	342	273	236	225
W/AN/BN	222	221	228	267	335	373	459	509	411	294	236	223
D/C	222	222	226	236	256	269	279	297	288	257	235	227

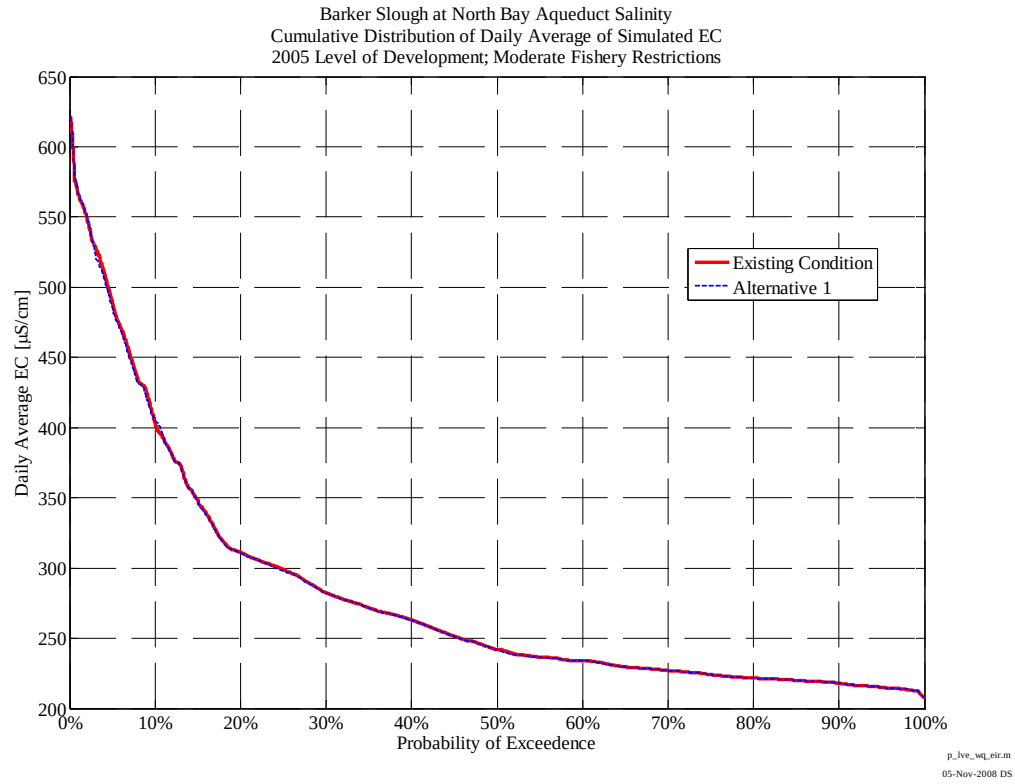
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
1977	0.0%	0.1%	0.2%	0.4%	0.4%	0.0%	-0.1%	-0.1%	0.1%	0.4%	0.2%	0.1%
1978	-0.9%	-0.8%	0.1%	0.0%	-0.2%	-0.3%	0.2%	0.0%	0.0%	0.1%	0.0%	-0.1%
1979	0.0%	0.0%	0.0%	-1.8%	-5.9%	-5.0%	-3.9%	-1.6%	-0.2%	-0.1%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.3%	-0.2%	-0.3%	0.0%	0.0%	0.1%
1982	0.1%	0.1%	0.0%	0.5%	1.6%	2.4%	1.3%	0.5%	0.1%	0.3%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.1%	0.2%	0.0%	0.0%
1985	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1986	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	-0.1%	0.1%	0.0%	0.0%	0.0%
1987	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%
1988	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.2%	-0.2%	-0.3%	-0.2%	-0.2%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.3%	0.1%	-0.2%	-0.4%	-0.3%
1990	-0.2%	-0.1%	-0.2%	-0.3%	-0.7%	-0.9%	-1.1%	-0.6%	-0.4%	-0.5%	-0.6%	-0.3%
1991	0.0%	0.1%	0.1%	0.0%	0.0%	-0.1%	0.0%	0.4%	0.3%	0.1%	0.1%	-0.1%
Avg	-0.1%	0.0%	0.0%	-0.1%	-0.3%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	-0.1%	-0.1%	0.0%	-0.2%	-0.6%	-0.4%	-0.3%	-0.1%	0.0%	0.1%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.1%	0.0%	0.0%	-0.1%	-0.1%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Existing Condition
Alternative 1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.08%
-0.30%
-0.25%
-0.25%
-0.09%
0.00%
0.00%
-0.04%
-0.03%
-0.06%
-0.04%
0.04%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 1
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 1
p_lve_wq_eir.m
05-Nov-2008 DS

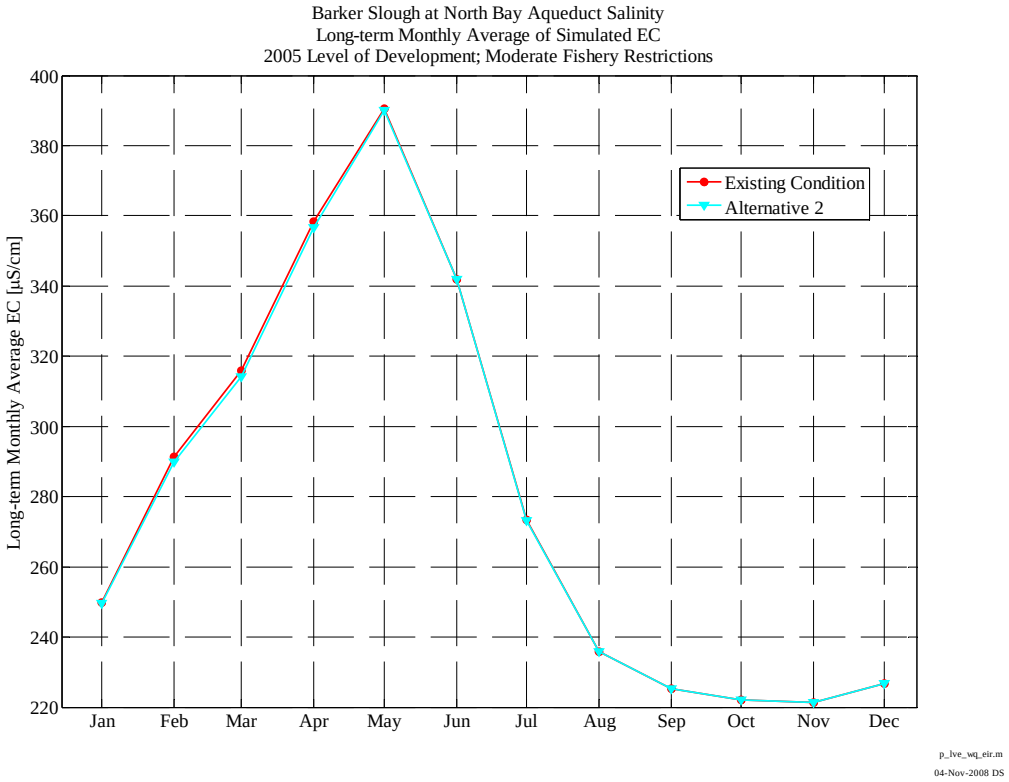
Alternative 2

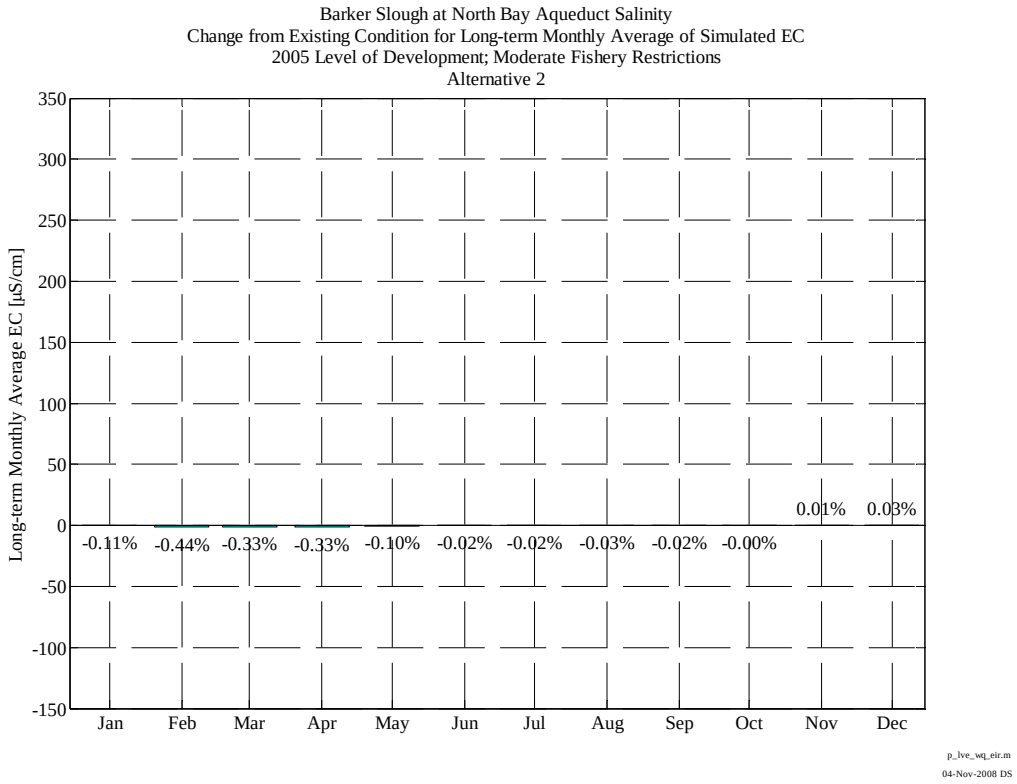
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

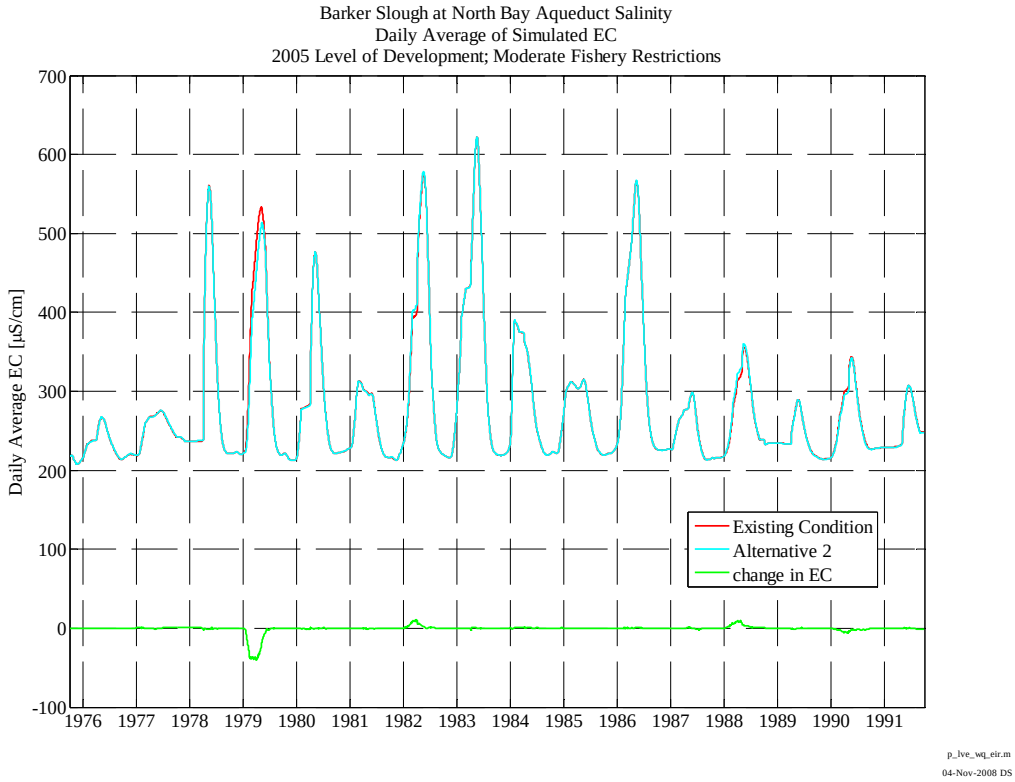
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	217	210	212	225	235	237	254	265	250	233	221	215
1977	217	220	220	222	246	264	268	270	275	269	257	247
1978	243	240	237	237	237	237	432	546	425	292	233	222
1979	222	223	221	229	321	419	483	502	398	282	231	220
1980	220	214	213	241	278	280	404	458	360	275	232	222
1981	222	224	227	240	295	309	300	296	279	243	222	217
1982	216	214	226	253	335	404	504	569	472	312	239	222
1983	218	217	248	331	411	431	505	609	503	339	247	223
1984	219	219	226	321	384	375	358	322	271	240	224	220
1985	223	223	252	297	311	308	305	312	286	251	229	221
1986	220	221	227	258	366	452	509	555	449	318	250	230
1987	226	226	227	231	255	269	277	292	280	238	217	214
1988	215	216	217	224	254	301	326	354	331	282	249	239
1989	234	234	234	234	234	234	257	285	271	242	225	218
1990	215	214	215	221	246	278	297	333	315	269	240	228
1991	227	228	229	229	229	229	231	269	305	288	259	248
Avg	222	221	227	250	290	314	357	390	342	273	236	225
W/AN/BN	223	221	228	267	333	371	456	509	411	294	236	223
D/C	222	222	226	236	256	270	279	298	288	257	235	227

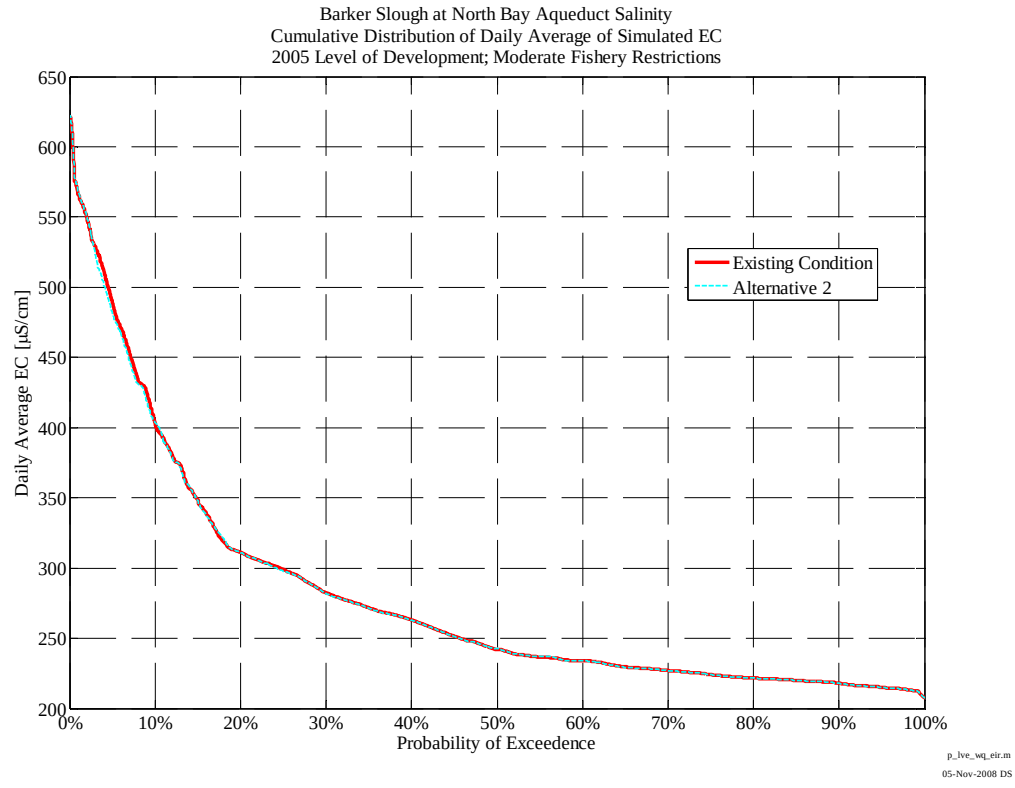
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
1977	0.0%	0.1%	0.1%	0.3%	0.2%	-0.1%	-0.2%	-0.2%	0.0%	0.4%	0.4%	0.3%
1978	0.2%	0.2%	0.3%	0.3%	0.3%	0.2%	-0.2%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%
1979	0.0%	0.0%	0.0%	-2.7%	-9.5%	-8.3%	-6.4%	-2.5%	-0.5%	-0.2%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.4%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	0.0%	0.0%
1982	0.1%	0.1%	0.0%	0.5%	1.4%	2.2%	1.2%	0.5%	0.1%	0.3%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%
1985	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
1986	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.1%	0.0%	0.1%	0.1%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	-0.2%	-0.5%	-0.1%	-0.1%
1988	-0.1%	0.0%	-0.1%	0.4%	1.6%	2.5%	2.6%	1.2%	0.8%	0.4%	0.3%	0.3%
1989	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.2%	0.1%	-0.1%	-0.2%	-0.2%
1990	-0.1%	-0.1%	0.0%	-0.2%	-0.8%	-1.2%	-1.6%	-0.8%	-0.5%	-0.6%	-0.7%	-0.4%
1991	-0.1%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.1%	0.1%	0.1%	-0.1%	-0.3%	-0.4%
Avg	0.0%	0.0%	0.0%	-0.1%	-0.4%	-0.3%	-0.3%	-0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.1%	-0.3%	-1.1%	-0.9%	-0.8%	-0.2%	-0.1%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.11%
-0.44%
-0.33%
-0.33%
-0.10%
-0.02%
-0.02%
-0.03%
-0.02%
-0.00%
0.01%
0.03%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 2
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 2
p_lve_wq_eir.m
05-Nov-2008 DS

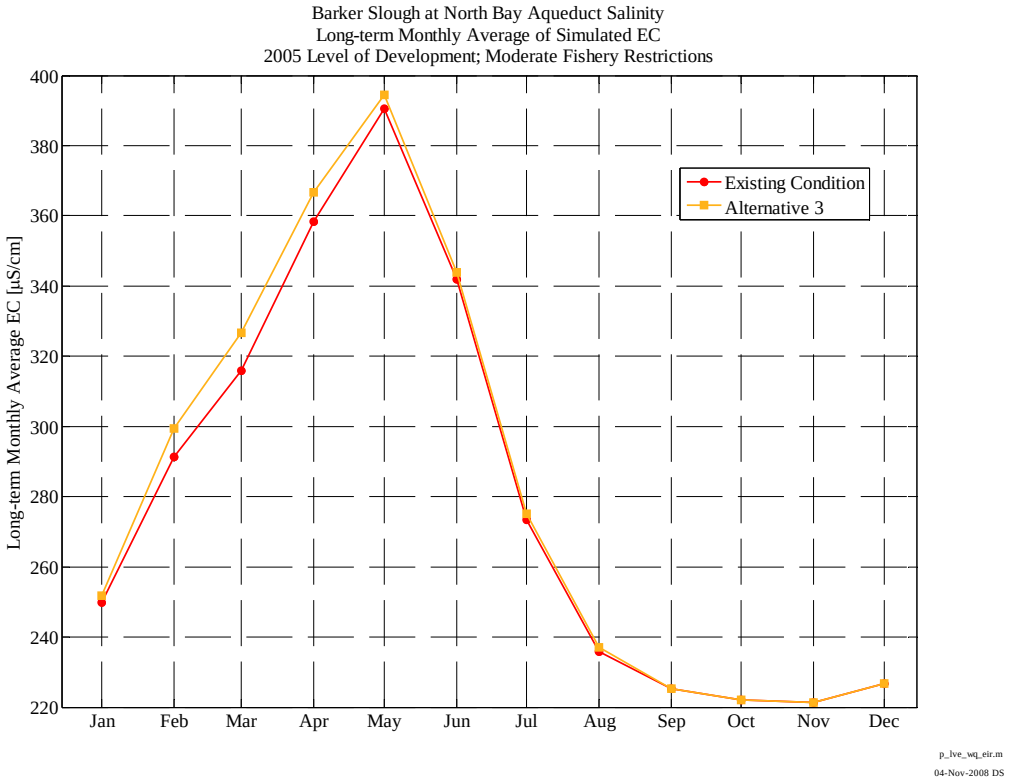
Alternative 3

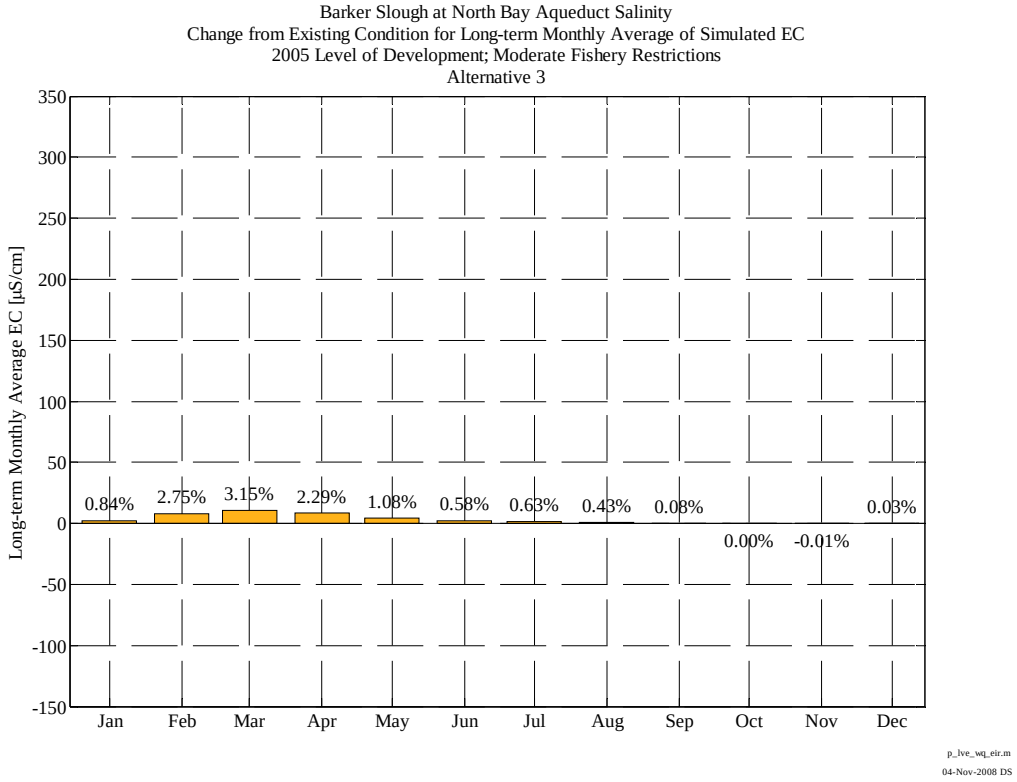
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

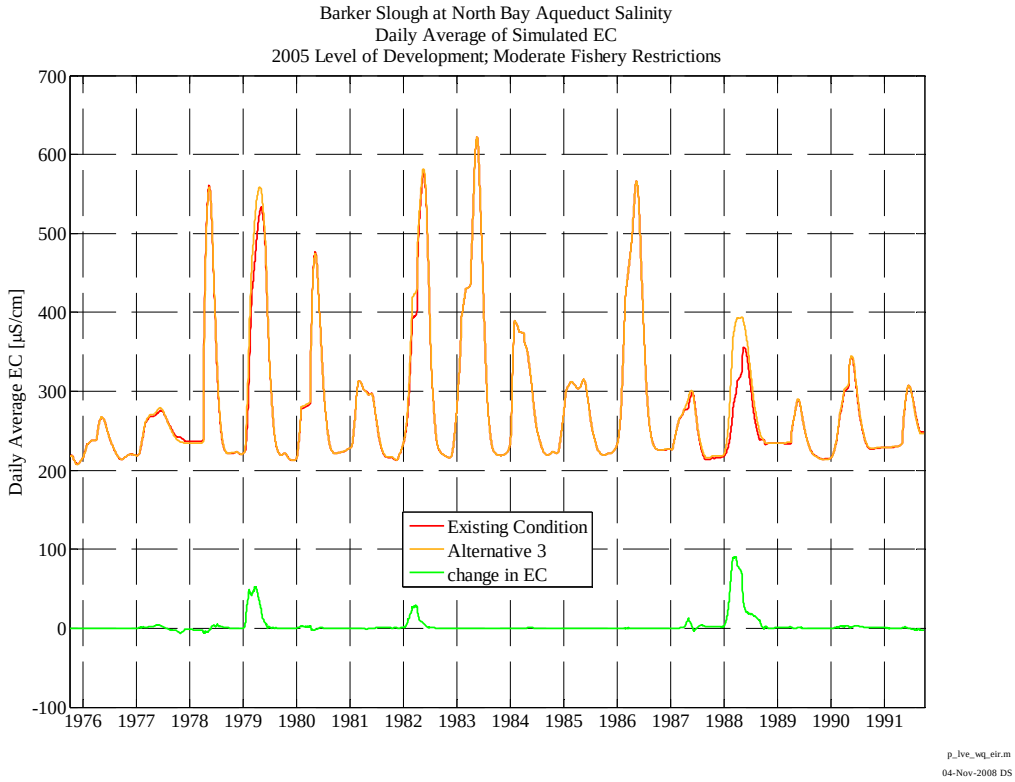
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	217	209	212	225	235	238	254	265	250	233	221	215
1977	217	220	219	222	246	265	270	274	278	269	255	244
1978	238	235	235	235	235	235	428	545	429	295	234	222
1979	222	223	221	249	399	505	554	527	403	284	231	220
1980	220	214	213	242	281	284	403	457	361	275	232	222
1981	222	224	227	240	295	310	300	296	280	244	222	217
1982	216	214	227	256	348	423	513	573	473	312	239	222
1983	218	217	248	331	411	431	504	609	503	339	247	223
1984	219	219	226	321	384	375	357	322	271	240	224	220
1985	223	223	251	297	311	308	305	312	286	251	229	221
1986	220	222	227	258	366	452	509	554	448	318	249	229
1987	226	226	227	231	255	270	283	298	279	242	221	216
1988	217	218	218	236	311	382	393	385	347	298	261	242
1989	235	234	235	235	235	235	258	286	271	242	225	218
1990	215	214	214	222	249	284	305	337	319	273	243	230
1991	228	229	229	229	230	230	231	270	305	287	258	247
Avg	222	221	227	252	299	327	367	394	344	275	237	225
W/AN/BN	222	221	228	270	346	386	467	512	412	295	237	223
D/C	222	222	226	237	263	280	289	303	291	260	237	228

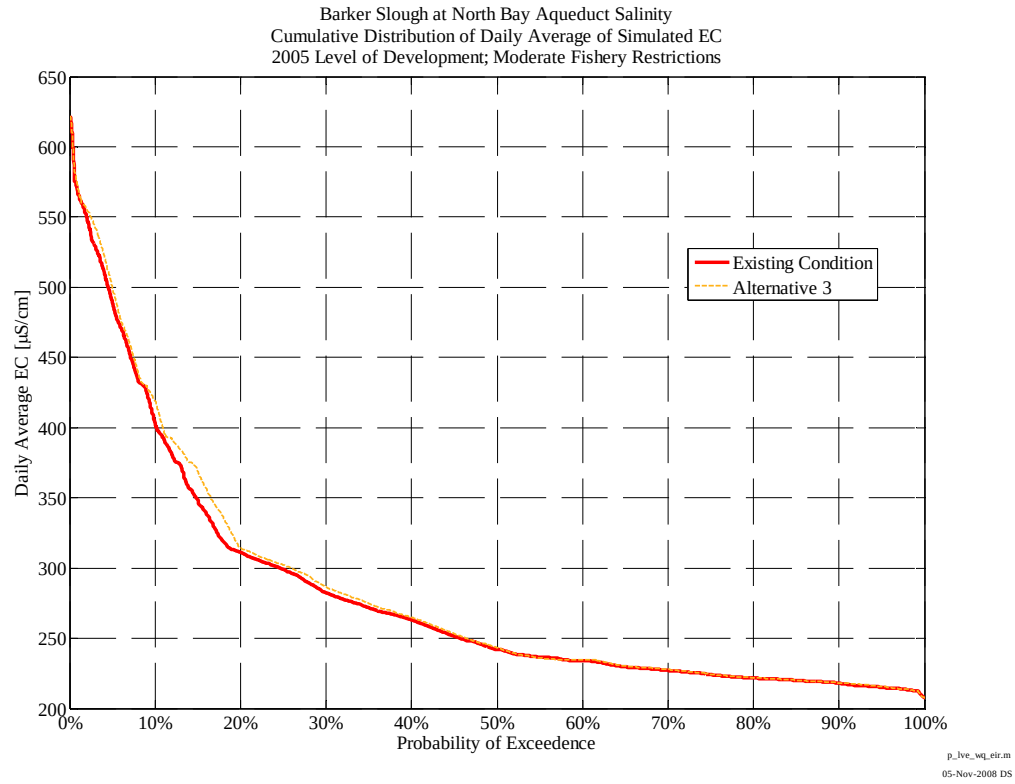
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	-0.1%	-0.2%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.1%	0.1%	0.0%
1977	0.0%	-0.1%	-0.1%	0.3%	0.5%	0.5%	0.9%	1.3%	1.2%	0.2%	-0.6%	-1.0%
1978	-1.9%	-1.6%	-0.6%	-0.7%	-0.8%	-0.9%	-1.1%	-0.3%	0.7%	1.2%	0.6%	0.2%
1979	0.1%	0.1%	0.1%	5.8%	12.5%	10.6%	7.4%	2.5%	0.7%	0.3%	0.1%	0.1%
1980	0.1%	0.1%	0.0%	0.4%	0.9%	0.9%	-0.3%	-0.3%	0.2%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.1%	-0.1%	0.4%	0.4%	0.3%
1982	0.2%	0.2%	0.2%	1.6%	5.4%	7.1%	2.9%	1.2%	0.4%	0.3%	0.1%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%
1987	0.0%	0.2%	0.1%	0.1%	0.0%	0.2%	2.1%	2.3%	-0.7%	1.1%	1.4%	0.9%
1988	0.9%	1.0%	0.7%	5.6%	24.4%	30.2%	23.7%	9.8%	5.8%	6.1%	5.0%	1.3%
1989	0.5%	0.0%	0.2%	0.3%	0.4%	0.6%	0.2%	0.1%	0.1%	-0.1%	-0.2%	-0.2%
1990	-0.2%	-0.2%	-0.2%	0.1%	0.5%	0.9%	0.9%	0.4%	0.9%	0.9%	0.6%	0.6%
1991	0.4%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%	0.3%	0.0%	-0.4%	-0.7%	-0.7%
Avg	0.0%	0.0%	0.0%	0.8%	2.7%	3.1%	2.3%	1.1%	0.6%	0.6%	0.4%	0.1%
W/AN/BN	-0.2%	-0.2%	0.0%	1.0%	2.6%	2.5%	1.3%	0.5%	0.3%	0.3%	0.1%	0.0%
D/C	0.2%	0.1%	0.1%	0.7%	2.9%	3.6%	3.1%	1.6%	0.8%	0.9%	0.7%	0.1%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
0.84%
2.75%
3.15%
2.29%
1.08%
0.58%
0.63%
0.43%
0.08%
0.00%
-0.01%
0.03%
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
Existing Condition
Alternative 3
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
Existing Condition
Alternative 3
p_lve_wq_eir.m
05-Nov-2008 DS

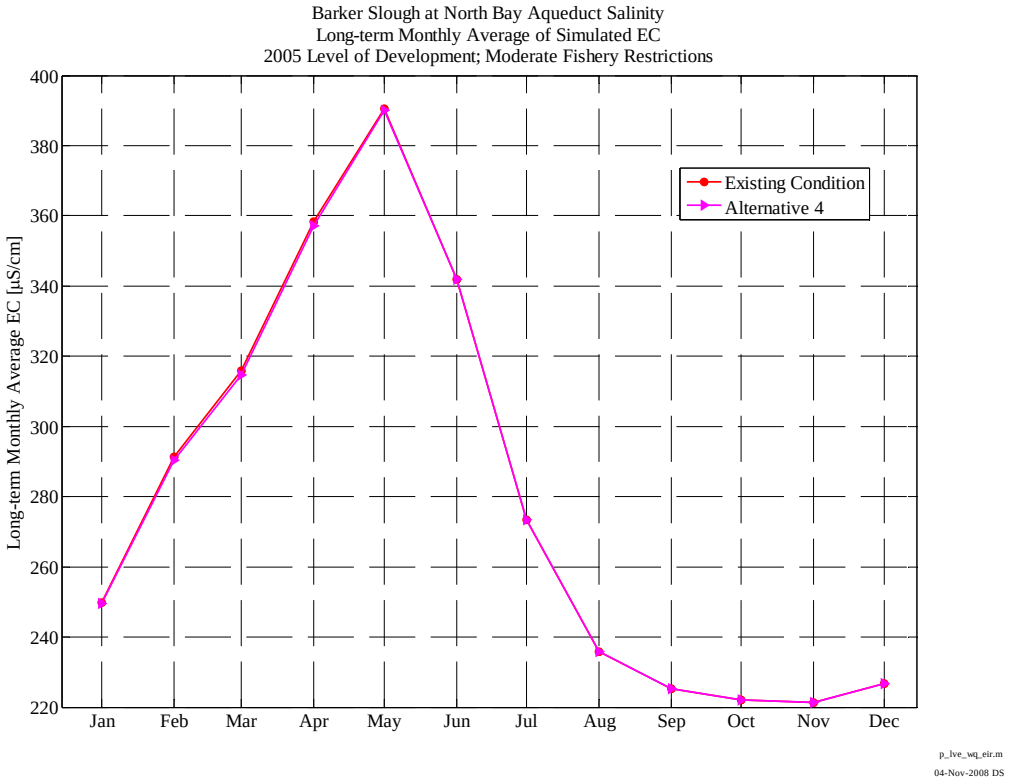
Alternative 4

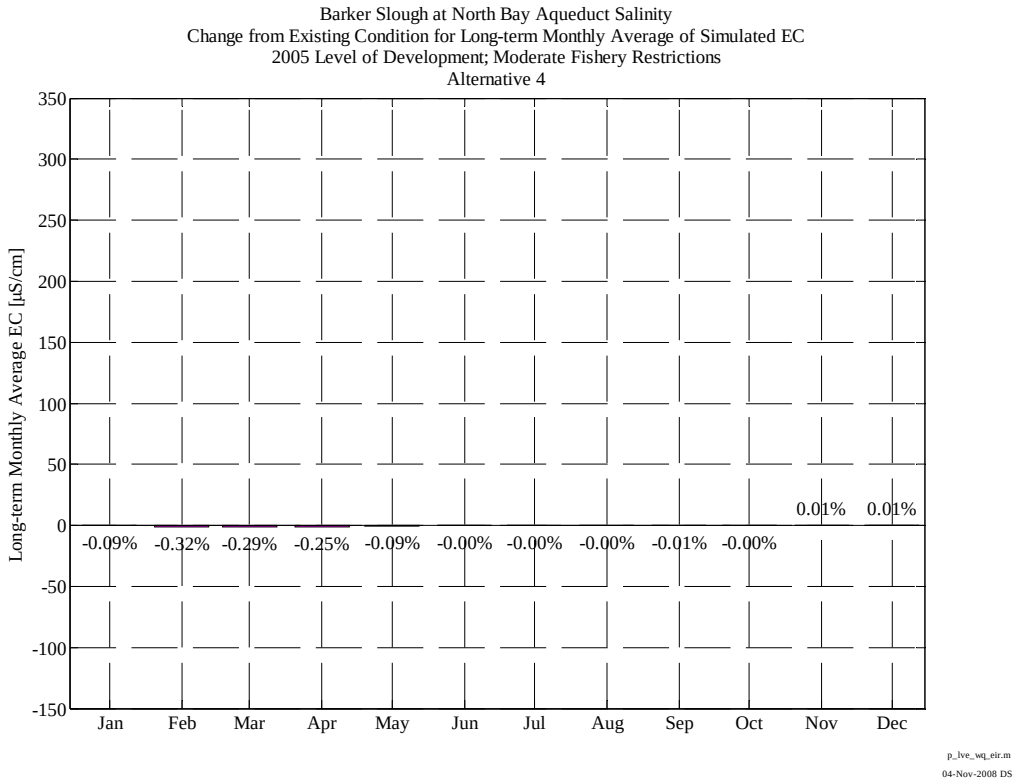
Barker Slough at North Bay Aqueduct Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

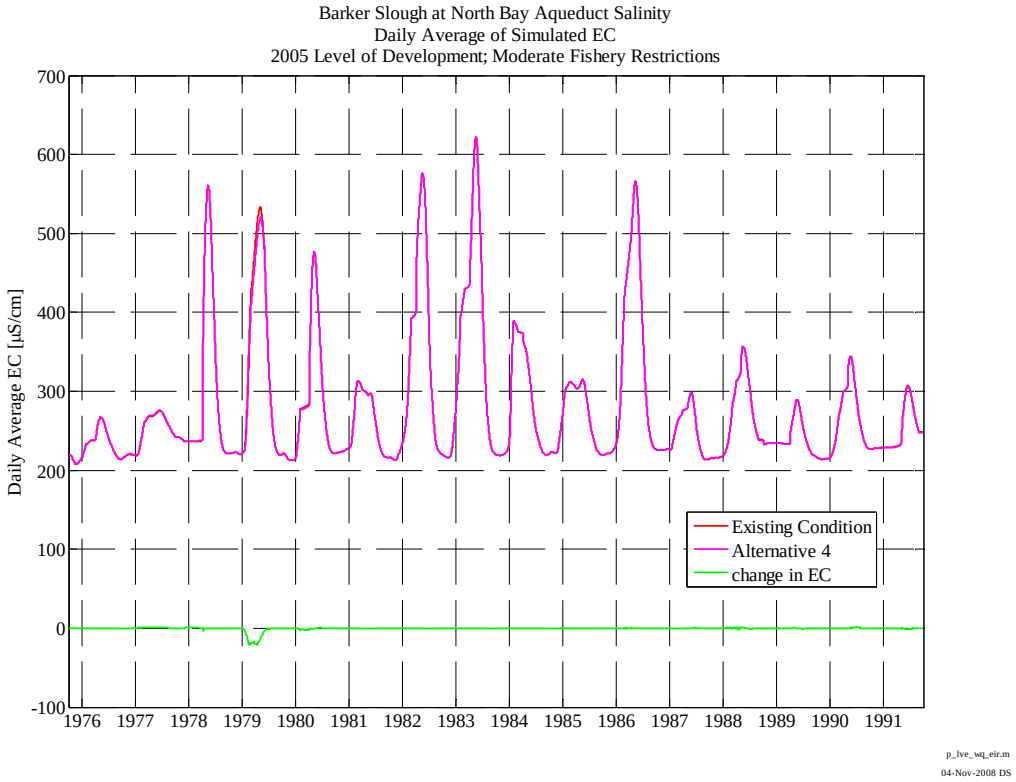
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	217	209	212	225	235	238	254	265	250	233	221	214
1977	217	220	220	222	246	265	269	272	276	269	257	246
1978	242	239	237	237	237	237	432	547	426	292	233	222
1979	222	223	221	232	337	438	498	506	399	282	231	219
1980	220	214	213	241	277	280	403	458	361	275	232	222
1981	222	224	227	240	295	309	300	296	280	243	222	216
1982	216	214	226	252	330	395	498	567	471	311	239	222
1983	218	217	248	331	411	431	504	609	503	339	247	223
1984	219	219	226	321	384	375	357	321	271	240	224	220
1985	223	223	251	297	311	308	305	312	286	250	229	221
1986	220	222	227	258	366	452	509	554	448	318	249	229
1987	226	226	227	231	255	269	277	291	281	239	218	214
1988	216	216	217	224	251	294	317	351	328	281	248	238
1989	234	234	234	234	234	234	257	286	270	242	226	219
1990	215	214	215	222	248	281	302	336	317	272	242	229
1991	227	228	228	229	229	229	231	269	304	288	259	248
Avg	222	221	227	250	290	315	357	390	342	273	236	225
W/AN/BN	222	221	228	267	335	373	457	509	411	294	236	222
D/C	222	222	226	236	256	270	279	298	288	257	236	227

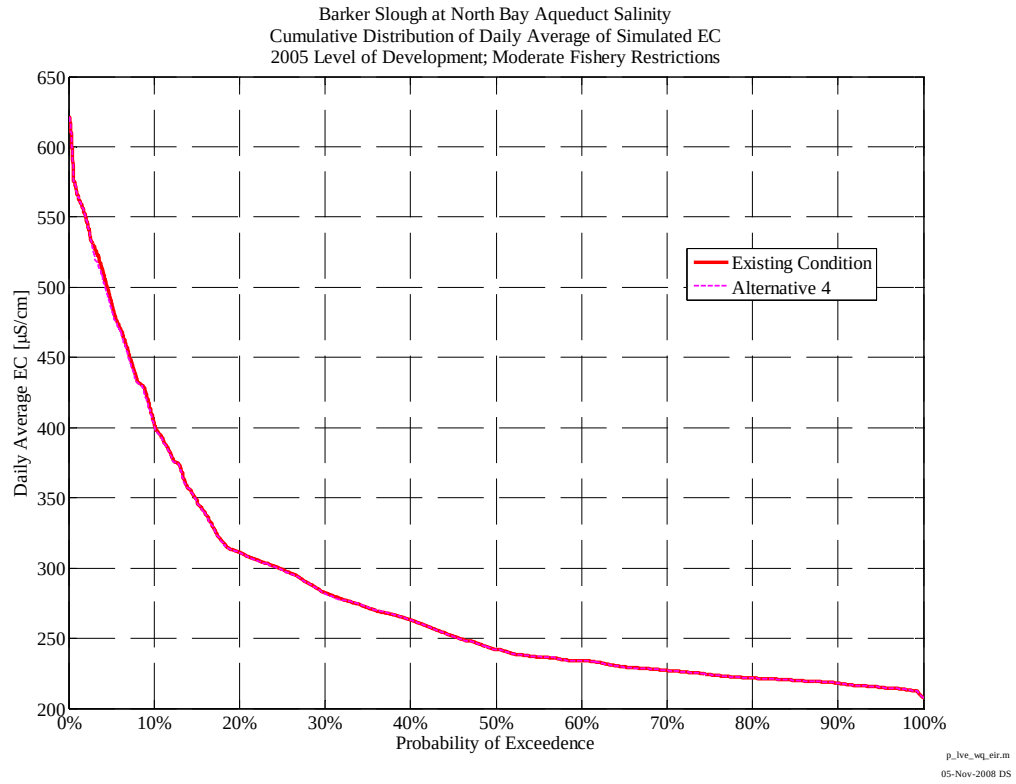
Percent (%) Change from Existing Condition for Barker Slough at North Bay Aqueduct
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.2%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.1%	0.0%
1978	0.0%	0.0%	0.2%	0.2%	0.2%	0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	-1.5%	-5.0%	-4.1%	-3.6%	-1.7%	-0.4%	-0.2%	-0.1%	-0.1%
1980	-0.1%	0.0%	0.0%	-0.2%	-0.6%	-0.6%	-0.2%	-0.1%	0.2%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%	-0.1%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
1988	0.0%	0.1%	0.1%	0.1%	0.2%	0.1%	-0.1%	0.2%	-0.1%	-0.2%	-0.1%	-0.1%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	-0.2%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%	-0.1%	0.0%	0.2%	0.3%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.2%	-0.2%	-0.1%	-0.3%	-0.2%	0.0%	-0.1%
Avg	0.0%	0.0%	0.0%	-0.1%	-0.3%	-0.3%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	-0.2%	-0.8%	-0.7%	-0.6%	-0.2%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Barker Slough at North Bay Aqueduct Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
400
380
360
340
320
300
280
260
240
220
Existing Condition
Alternative 4
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.09%
-0.32%
-0.29%
-0.25%
-0.09%
-0.00%
-0.00%
-0.00%
-0.01%
-0.00%
0.01%
0.01%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
Existing Condition
Alternative 4
change in EC
p_lve_wq_eir.m
04-Nov-2008 DS


Barker Slough at North Bay Aqueduct Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
650
600
550
500
450
400
350
300
250
200
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
Existing Condition
Alternative 4
p_lve_wq_eir.m
05-Nov-2008 DS

Cache Slough at City of Vallejo Intake

Existing Condition

Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	210	245	236	215	206	201	197	198
1977	202	207	210	210	211	251	239	217	206	202	202	203
1978	204	210	420	739	792	793	635	385	270	213	204	204
1979	205	208	210	647	763	591	412	305	234	208	202	202
1980	204	204	328	640	757	658	447	310	244	211	204	204
1981	204	209	211	422	313	229	277	239	212	205	199	199
1982	201	203	427	710	666	675	729	561	287	217	206	204
1983	203	203	204	705	785	792	682	444	284	223	204	202
1984	201	205	497	555	467	294	275	230	210	204	201	202
1985	204	204	205	205	206	218	296	246	212	204	199	200
1986	201	205	207	508	745	788	588	350	259	215	206	205
1987	206	210	211	211	212	214	264	232	208	201	197	197
1988	201	205	206	573	648	392	297	243	214	204	201	204
1989	208	212	213	214	215	234	266	231	206	201	197	197
1990	198	202	206	207	208	249	308	245	215	205	201	203
1991	206	210	212	214	216	235	326	288	224	206	203	204
Avg	203	206	261	435	463	429	392	296	231	207	201	202
W/AN/BN	203	206	328	643	711	656	538	369	255	213	204	203
D/C	203	207	208	274	271	252	279	239	211	203	200	200

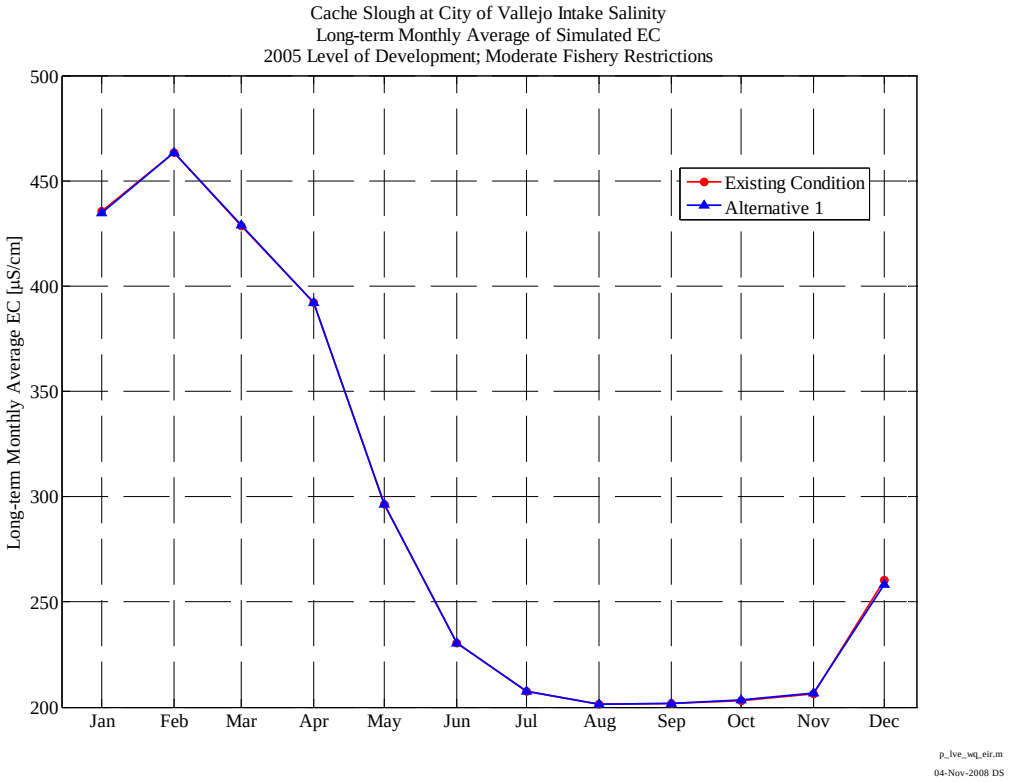
Alternative 1

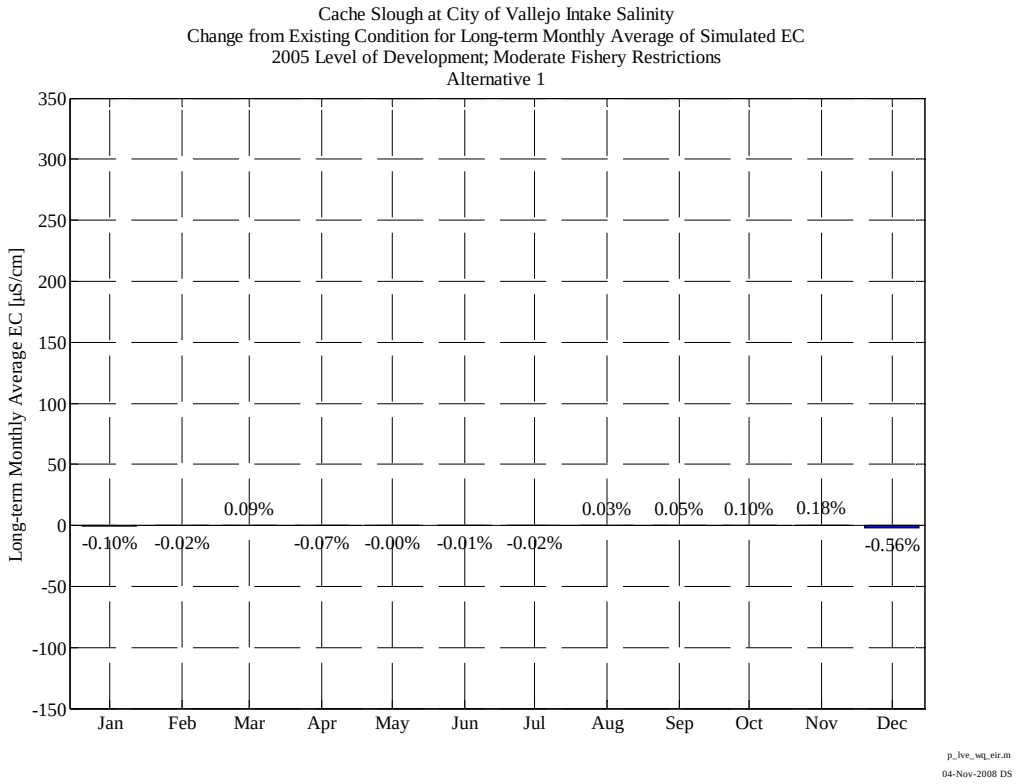
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

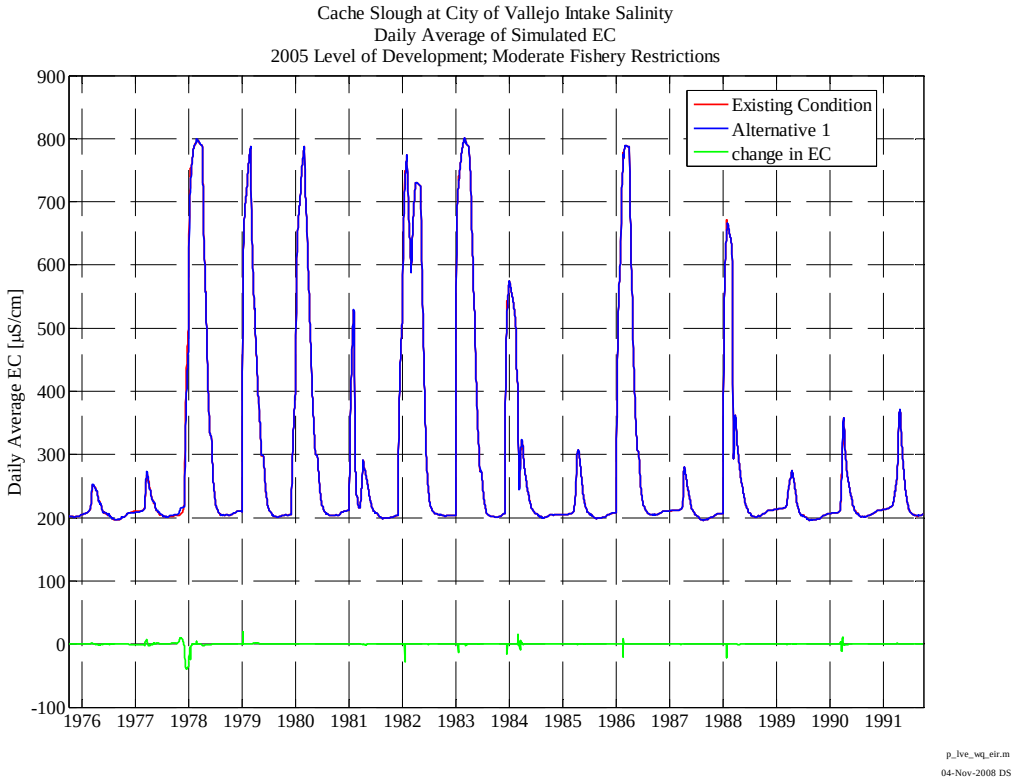
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	210	246	236	214	206	201	197	198
1977	202	207	208	209	211	253	237	218	207	202	202	204
1978	207	216	386	733	793	793	633	384	270	213	204	204
1979	205	208	210	647	763	592	413	305	235	208	202	202
1980	204	204	328	640	757	658	447	310	244	211	204	204
1981	204	209	211	423	313	229	276	239	212	205	199	199
1982	201	203	427	709	666	675	729	561	287	216	206	204
1983	203	203	204	704	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	275	230	210	204	201	202
1985	204	204	205	205	206	218	296	246	211	204	199	200
1986	201	205	207	508	744	788	588	350	259	215	206	205
1987	206	210	211	211	212	214	264	232	208	201	197	198
1988	201	205	206	572	648	392	296	243	213	204	201	204
1989	208	212	213	214	215	234	266	231	206	201	197	197
1990	198	202	206	207	208	249	307	245	215	205	201	203
1991	206	210	212	214	216	235	326	288	224	207	204	204
Avg	203	207	258	435	463	429	392	296	231	207	202	202
W/AN/BN	203	206	323	642	711	656	538	369	255	213	204	203
D/C	203	207	208	273	271	252	278	240	211	203	200	201

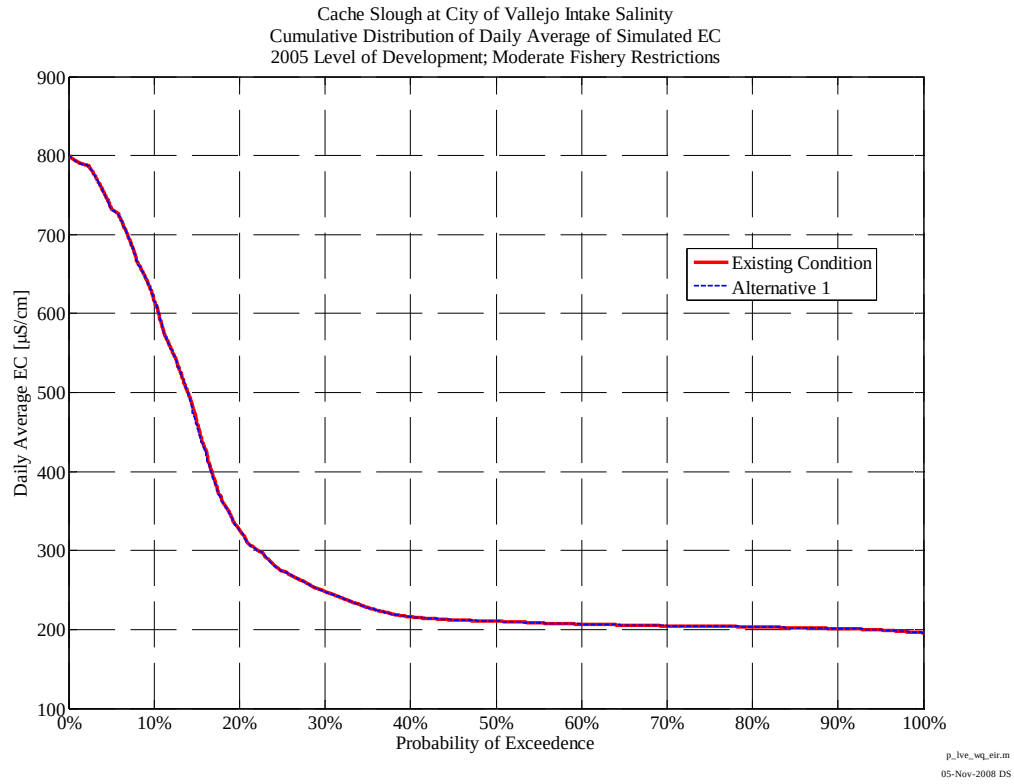
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	-0.2%	-0.1%	0.0%	-0.1%	0.2%	0.1%
1977	0.0%	-0.2%	-0.8%	-0.7%	-0.4%	0.7%	-0.6%	0.3%	0.3%	0.1%	0.2%	0.5%
1978	1.3%	2.7%	-8.2%	-0.7%	0.0%	0.0%	-0.3%	-0.2%	-0.1%	0.0%	-0.1%	0.0%
1979	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.4%	0.2%	0.1%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.1%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%
1987	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%
1988	0.0%	0.1%	0.0%	-0.2%	0.0%	0.1%	-0.1%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	-0.1%	-0.1%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.3%	-0.1%	-0.1%	-0.1%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.1%	0.3%	0.1%
Avg	0.1%	0.2%	-0.6%	-0.1%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
W/AN/BN	0.2%	0.4%	-1.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%	0.1%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Existing Condition
Alternative 1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.10%
-0.02%
0.09%
-0.07%
-0.00%
-0.01%
-0.02%
0.03%
0.05%
0.10%
0.18%
-0.56%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

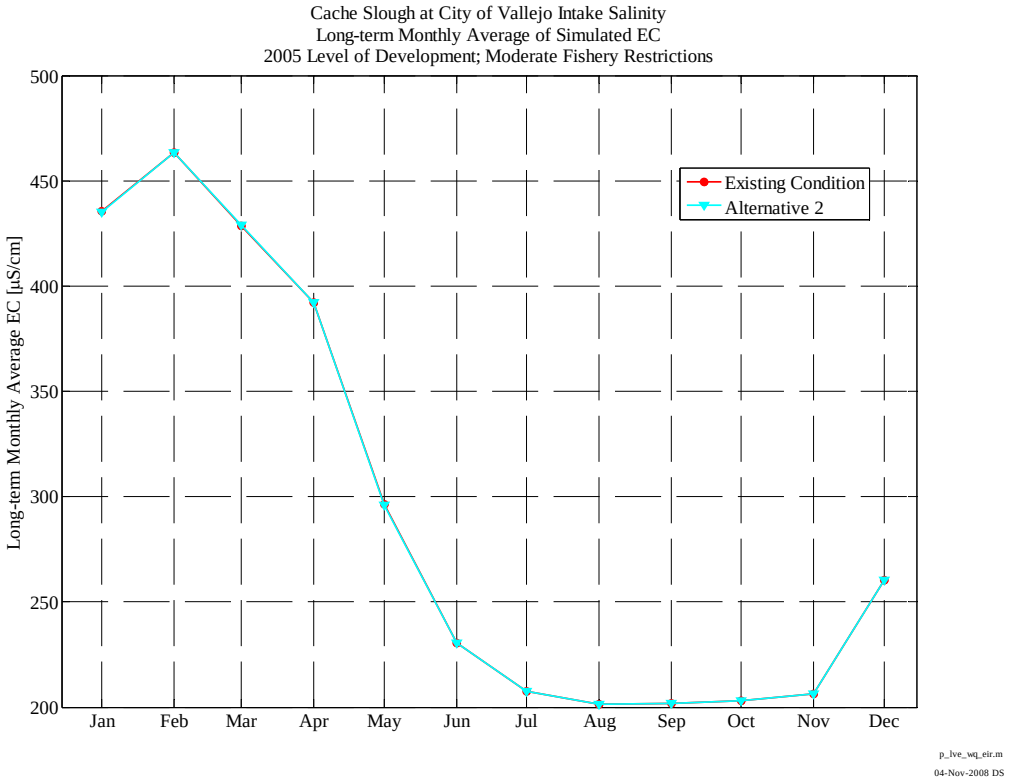
Alternative 2

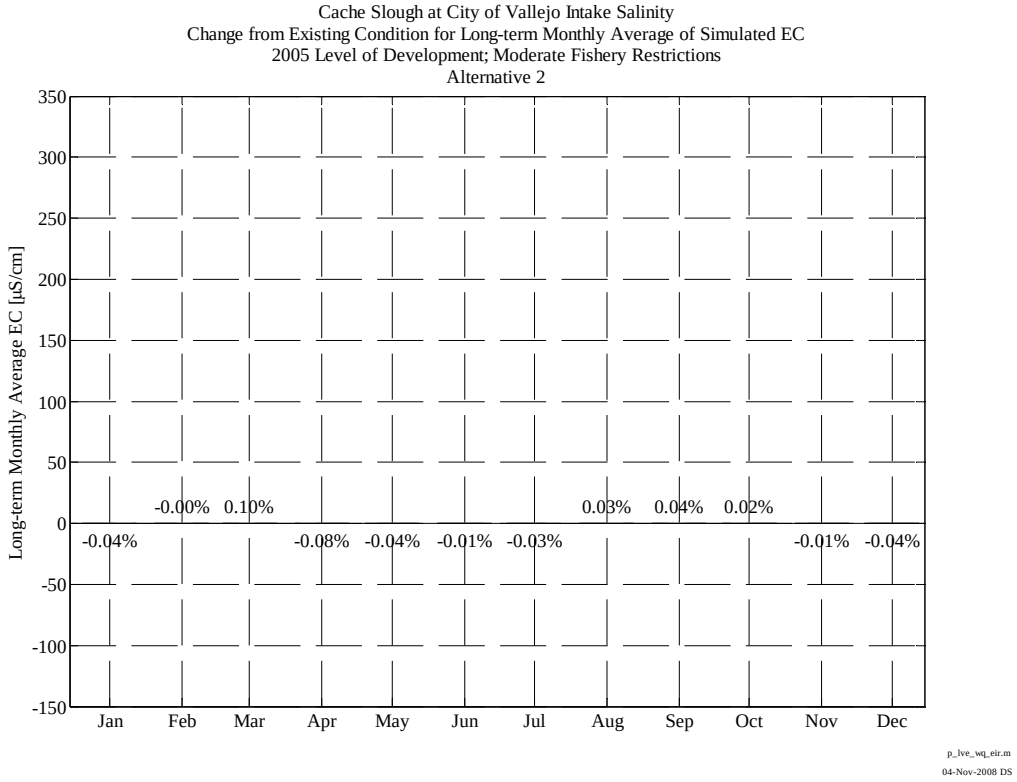
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

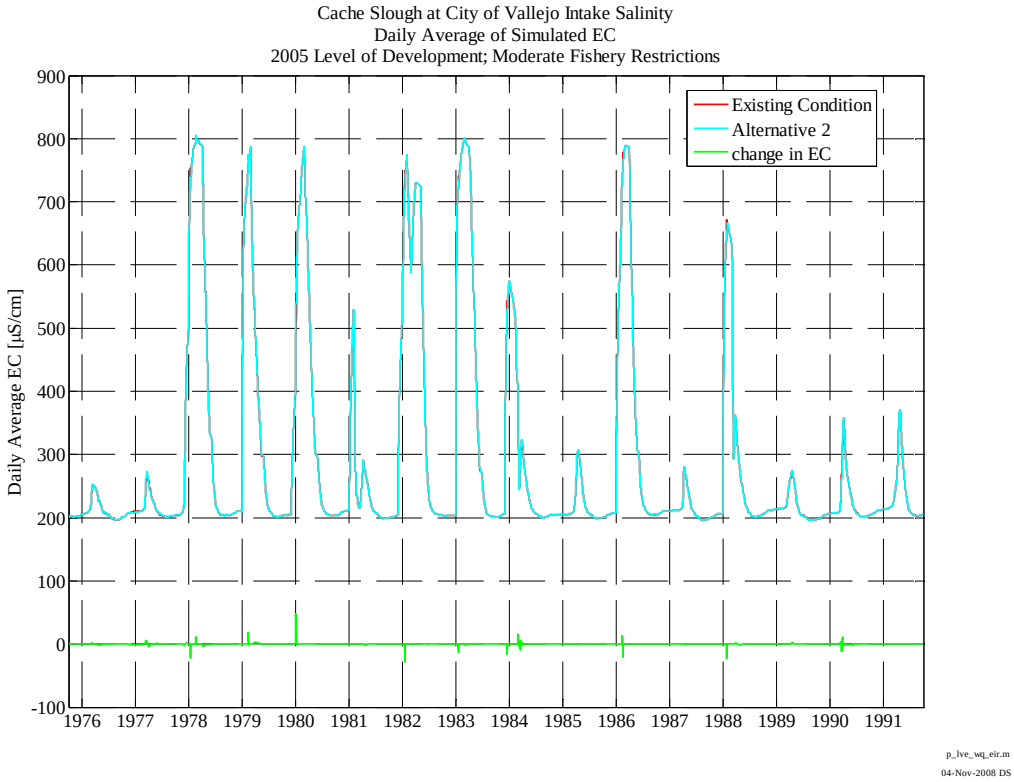
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	210	246	236	214	206	201	197	198
1977	202	207	208	209	211	253	237	218	207	202	202	203
1978	204	210	421	738	793	793	633	384	270	213	204	204
1979	205	208	210	647	764	592	414	305	235	208	202	202
1980	204	204	328	642	757	658	448	311	244	211	204	204
1981	204	209	211	423	313	229	276	239	212	205	199	199
1982	201	203	427	709	666	675	729	561	287	216	206	204
1983	203	203	204	704	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	275	230	210	204	201	202
1985	204	204	205	205	206	218	296	246	211	204	199	200
1986	201	205	207	508	744	788	588	350	259	215	206	205
1987	206	210	211	211	212	214	264	232	208	201	196	197
1988	201	205	206	572	648	392	296	242	213	204	201	204
1989	208	212	213	214	215	234	267	231	206	201	197	197
1990	198	202	206	207	208	249	308	245	214	205	201	203
1991	206	210	212	214	216	235	325	288	224	207	203	204
Avg	203	206	260	435	463	429	392	296	231	207	202	202
W/AN/BN	203	206	328	643	711	656	538	369	255	213	204	203
D/C	203	207	208	273	271	252	278	239	211	203	200	201

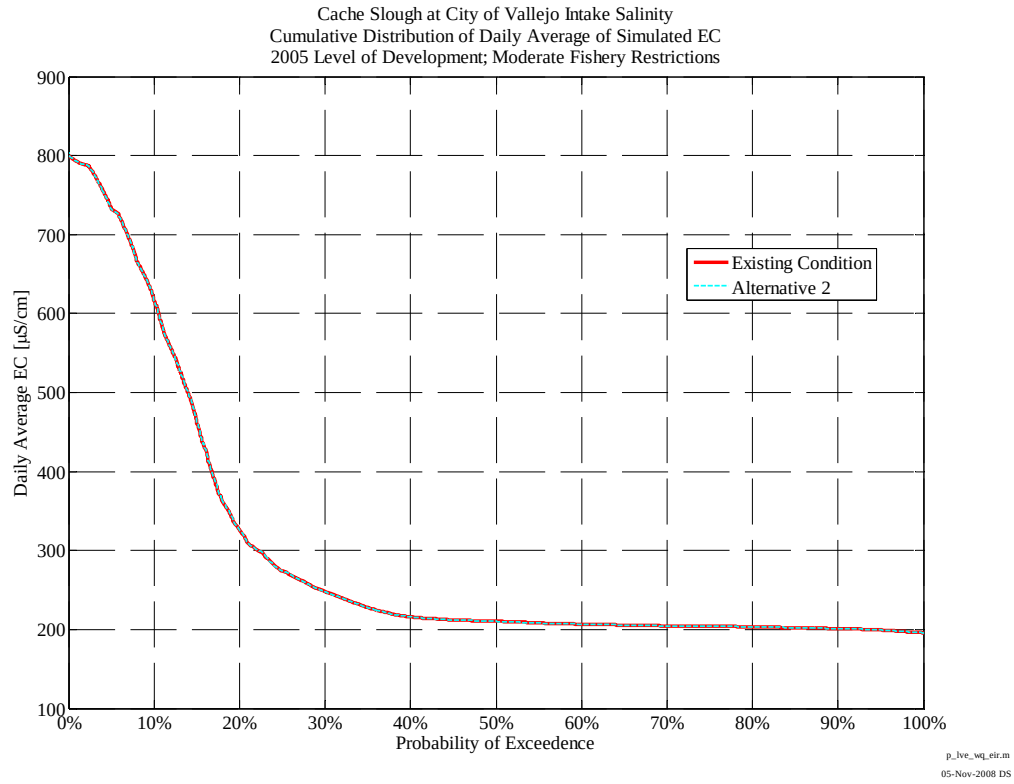
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	-0.2%	-0.1%	0.0%	-0.1%	0.2%	0.1%
1977	0.0%	-0.2%	-0.8%	-0.6%	-0.4%	0.8%	-0.8%	0.0%	0.3%	0.1%	0.1%	0.4%
1978	0.2%	-0.1%	0.1%	-0.1%	0.1%	0.0%	-0.3%	-0.2%	-0.1%	0.0%	-0.1%	-0.1%
1979	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.4%	0.2%	0.2%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	-0.1%	0.0%	0.1%	0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%
1987	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
1988	0.0%	0.0%	-0.1%	-0.2%	0.0%	0.1%	0.0%	-0.1%	-0.1%	-0.1%	0.1%	0.1%
1989	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.1%	-0.1%	-0.1%	-0.1%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.2%	-0.3%	-0.1%	-0.2%	0.0%	0.0%
1991	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.1%	0.2%	0.1%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.1%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.04%
-0.00%
0.10%
-0.08%
-0.04%
-0.01%
-0.03%
0.03%
0.04%
0.02%
-0.01%
-0.04%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

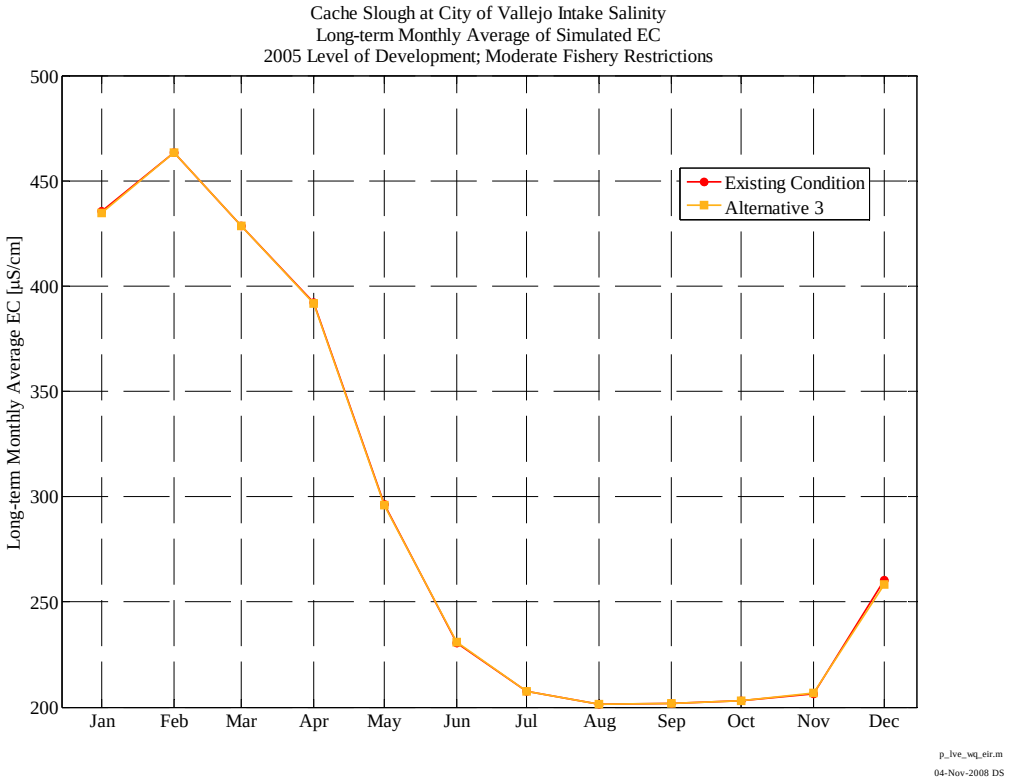
Alternative 3

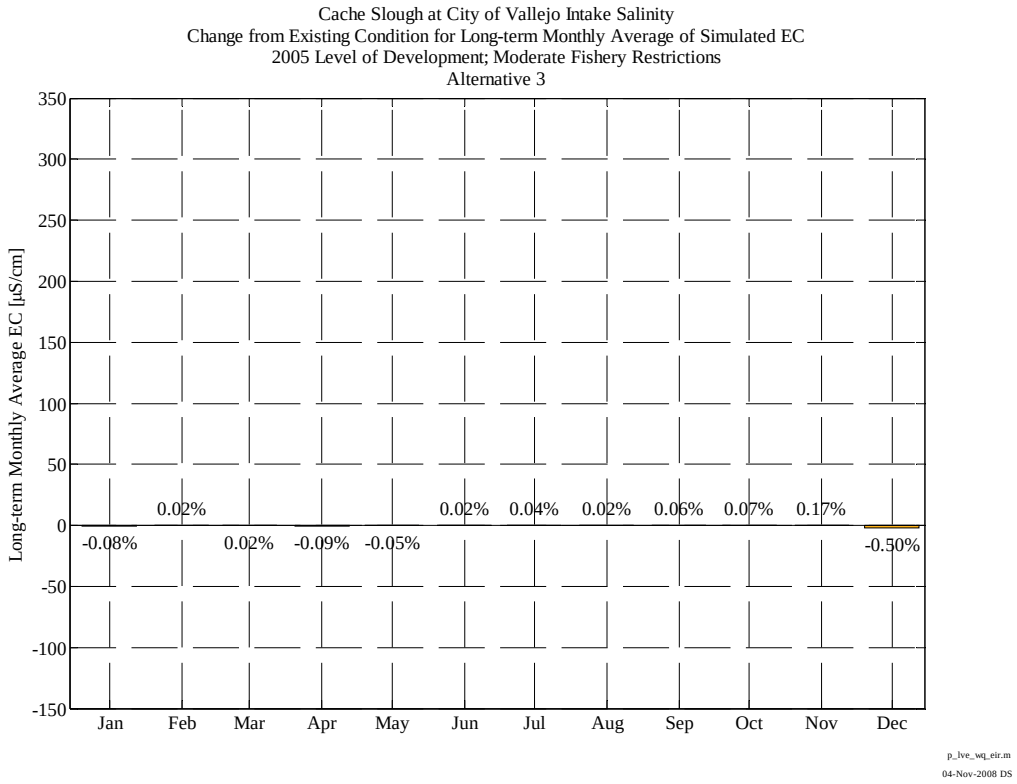
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

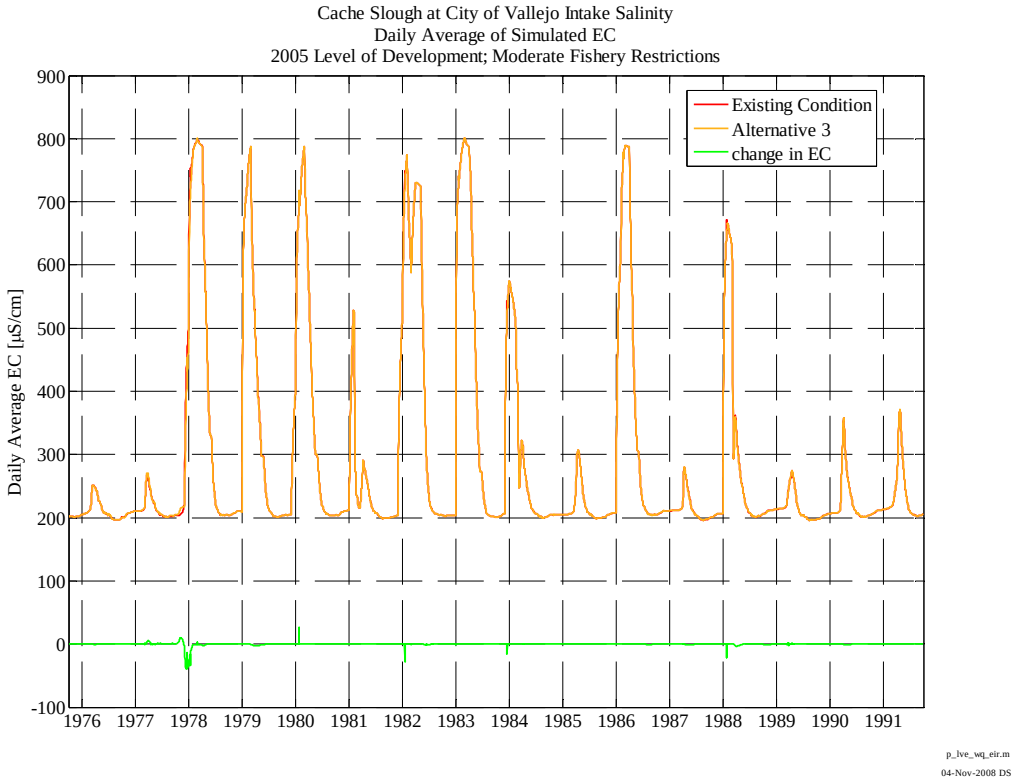
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	210	245	236	215	207	202	197	198
1977	202	207	210	210	212	253	240	218	207	202	202	203
1978	206	216	387	728	792	792	633	385	270	213	204	204
1979	205	208	210	647	763	589	410	304	234	208	202	202
1980	204	204	328	641	757	658	448	311	244	211	204	204
1981	204	209	211	422	313	229	277	239	212	205	200	199
1982	201	203	427	709	666	675	729	561	286	216	206	204
1983	203	203	204	705	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	275	231	210	204	201	202
1985	204	205	205	205	206	218	296	246	211	204	199	200
1986	201	205	207	508	745	788	587	350	259	215	205	205
1987	206	210	211	211	212	214	264	230	208	201	197	198
1988	201	205	206	573	648	391	294	242	214	204	202	204
1989	207	211	213	214	215	234	267	231	206	201	197	197
1990	198	202	205	207	208	249	307	245	215	205	202	203
1991	206	210	212	214	216	235	326	288	224	206	203	204
Avg	203	207	258	435	463	429	392	296	231	208	202	202
W/AN/BN	203	206	323	642	711	656	538	369	255	213	204	203
D/C	203	207	208	274	271	252	278	239	211	204	200	201

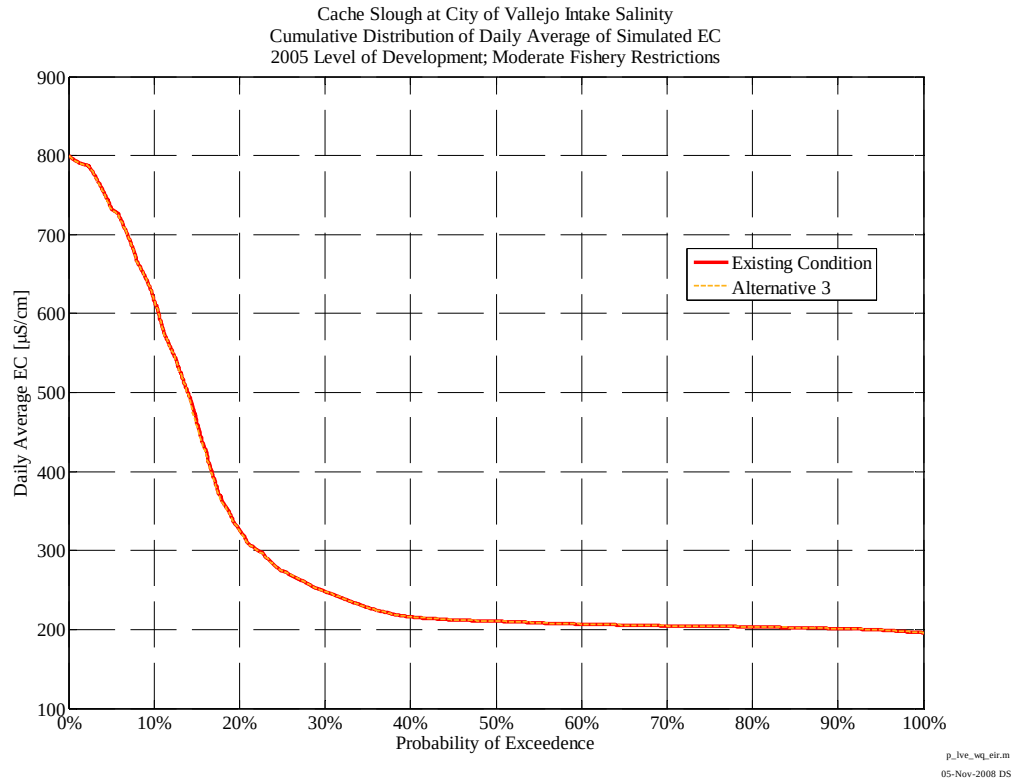
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.0%	0.0%
1977	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.9%	0.5%	0.1%	0.4%	0.1%	0.2%	0.4%
1978	1.1%	2.8%	-8.0%	-1.5%	-0.1%	-0.1%	-0.3%	0.0%	0.1%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.5%	-0.4%	0.0%	0.1%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.1%	0.0%	0.0%
1982	0.0%	-0.1%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	0.0%
1987	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	-0.1%	-0.6%	-0.3%	0.1%	0.1%	0.3%
1988	0.2%	0.1%	0.1%	-0.1%	0.0%	-0.3%	-0.9%	-0.2%	0.2%	0.3%	0.2%	0.1%
1989	-0.4%	-0.3%	0.0%	0.1%	0.2%	0.1%	0.3%	0.2%	0.0%	-0.1%	-0.1%	0.0%
1990	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.3%	-0.2%	0.0%	0.2%	0.1%	0.0%
1991	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	0.1%
Avg	0.1%	0.2%	-0.5%	-0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
W/AN/BN	0.2%	0.4%	-1.2%	-0.2%	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	0.1%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
-0.08%
0.02%
0.02%
-0.09%
-0.05%
0.02%
0.04%
0.02%
0.06%
0.07%
0.17%
-0.50%
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

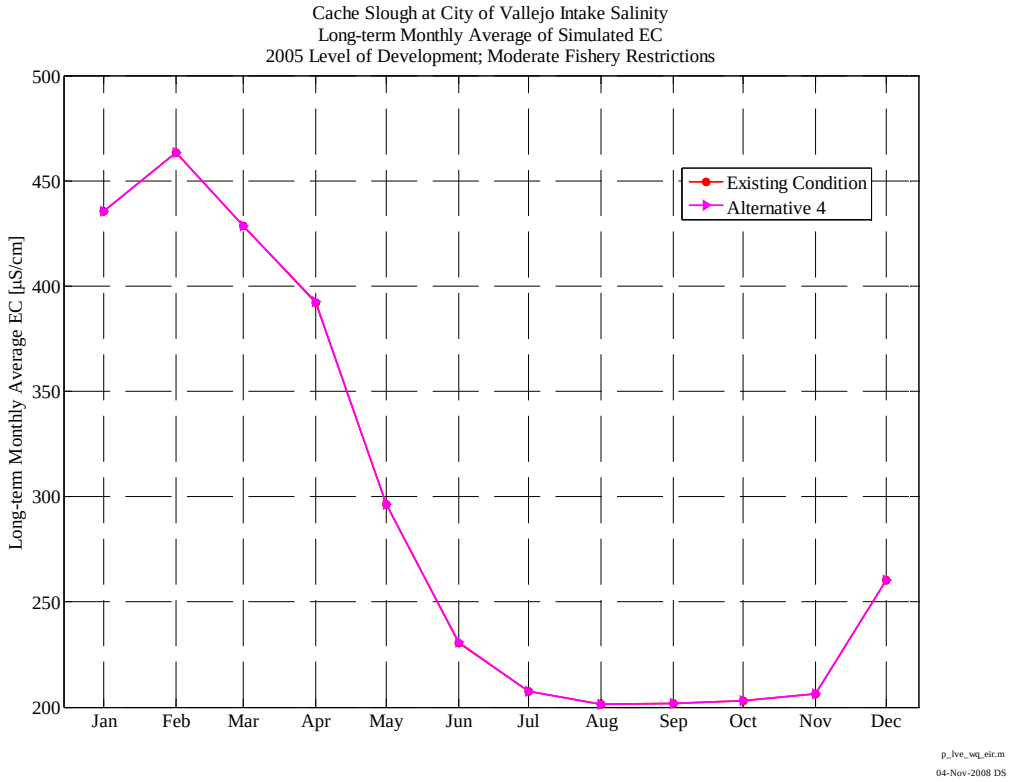
Alternative 4

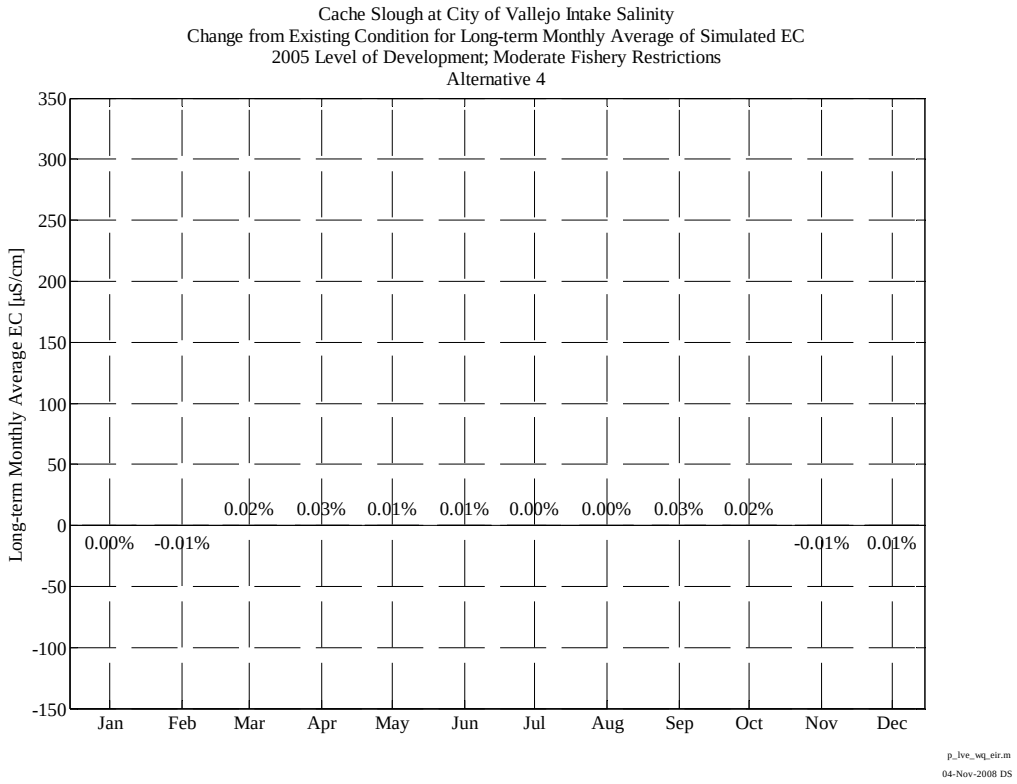
Cache Slough at City of Vallejo Intake Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

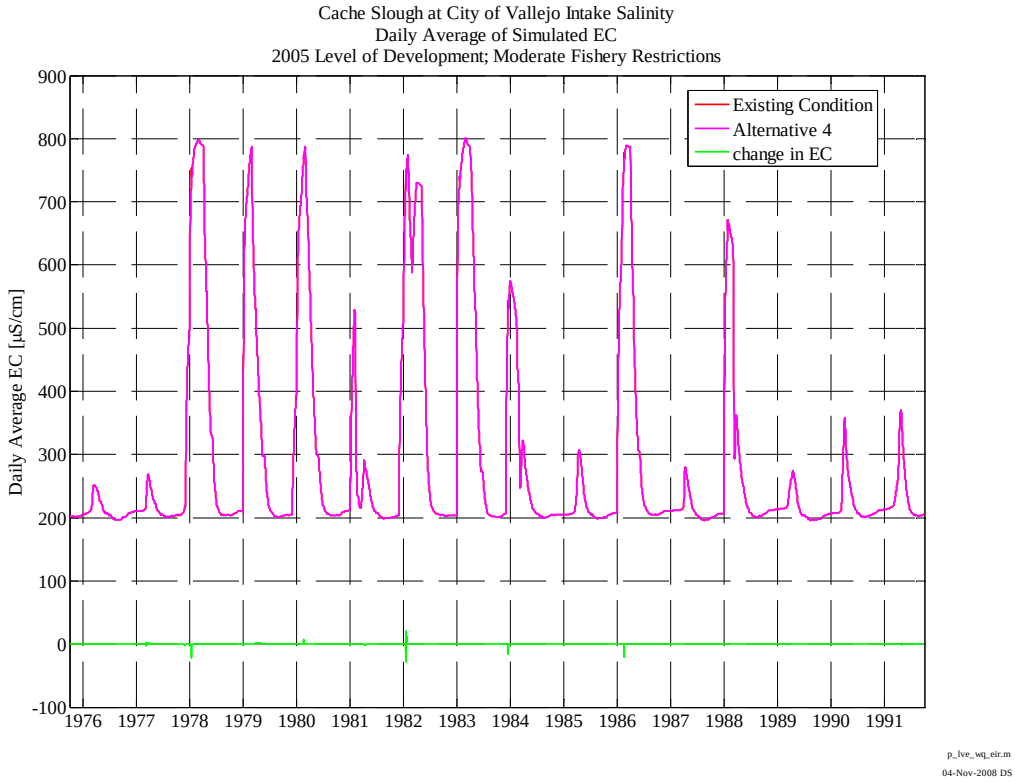
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	202	202	203	206	210	245	236	215	206	201	197	198
1977	202	208	210	210	212	251	239	217	206	202	202	203
1978	204	209	421	738	792	793	635	385	270	213	204	204
1979	205	208	210	647	763	592	414	306	235	208	202	202
1980	204	204	328	640	757	658	447	310	244	211	204	204
1981	204	209	211	423	313	229	276	239	212	205	199	199
1982	201	203	427	710	666	675	729	561	287	217	206	204
1983	203	203	204	705	785	792	682	444	284	223	204	202
1984	201	205	496	555	467	294	275	230	210	204	201	202
1985	204	204	205	205	206	218	296	246	212	204	199	200
1986	201	205	207	508	744	788	588	350	259	215	206	205
1987	206	210	211	211	212	214	264	232	208	201	197	198
1988	201	205	206	573	648	392	297	243	214	204	201	204
1989	208	212	213	214	215	234	266	231	206	201	197	197
1990	198	202	206	207	208	249	308	245	215	205	202	203
1991	206	210	212	214	216	235	325	288	224	206	203	204
Avg	203	206	261	435	463	429	392	296	231	207	201	202
W/AN/BN	203	205	328	643	711	656	539	369	256	213	204	203
D/C	203	207	208	274	271	252	279	239	211	203	200	201

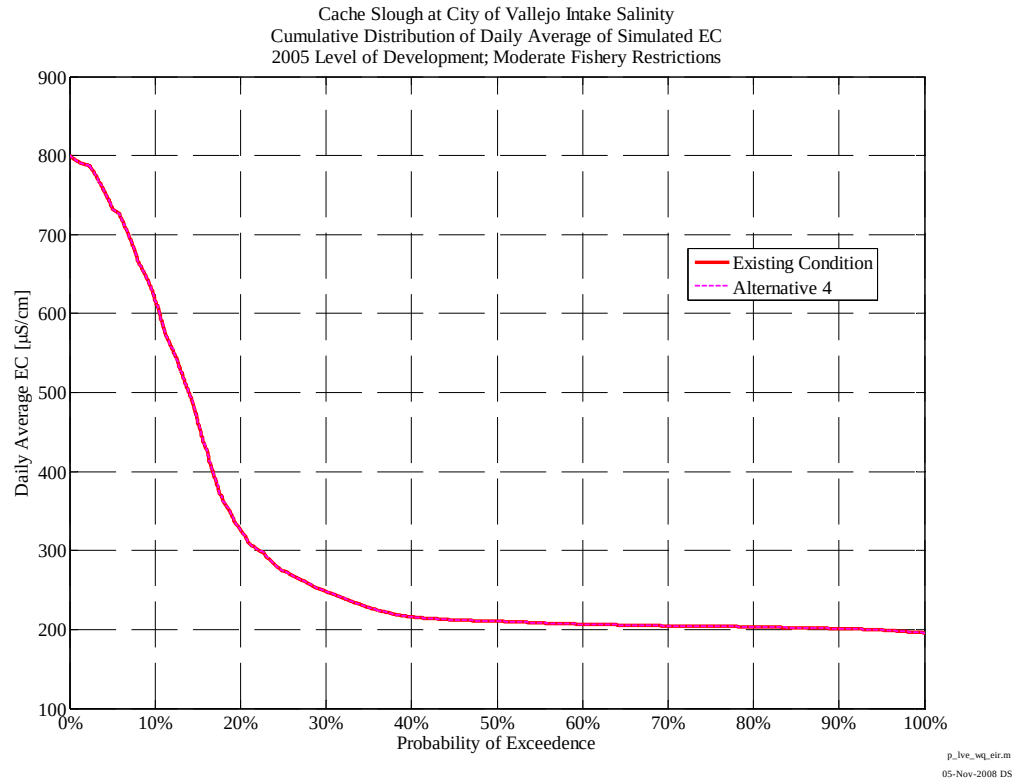
Percent (%) Change from Existing Condition for Cache Slough at City of Vallejo Intake
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.4%
1978	0.2%	-0.2%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.2%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%


Cache Slough at City of Vallejo Intake Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
500
450
400
350
300
250
200
Existing Condition
Alternative 4
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.01%
0.02%
0.03%
0.01%
0.01%
0.00%
0.00%
0.03%
0.02%
-0.01%
0.01%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0
-100
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Cache Slough at City of Vallejo Intake Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
900
800
700
600
500
400
300
200
100
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Old River near Tracy Road Bridge

Existing Condition

Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	951	1,010	650	577	711	709	699	685
1977	676	713	837	913	999	1,019	746	641	717	680	636	693
1978	788	790	876	828	775	718	398	328	421	563	519	497
1979	593	567	765	726	413	359	407	318	464	656	576	581
1980	539	595	786	454	374	415	375	374	391	471	481	531
1981	500	537	744	786	939	932	533	461	693	689	664	664
1982	611	671	808	800	317	337	228	218	374	428	364	276
1983	217	297	386	393	343	286	306	269	246	232	200	258
1984	359	224	314	349	259	400	389	379	542	640	567	511
1985	461	542	796	807	868	947	587	514	700	706	646	627
1986	600	626	780	852	513	326	258	237	399	614	521	489
1987	455	475	727	806	987	989	646	562	711	708	689	684
1988	669	700	835	904	997	1,016	720	653	713	656	533	652
1989	755	752	850	955	1,173	1,029	713	635	714	698	688	670
1990	700	733	854	965	1,168	1,035	762	662	762	682	655	693
1991	723	733	869	1,001	1,250	1,034	744	666	723	641	638	688
Avg	569	593	750	771	770	741	529	468	580	611	567	575
W/AN/BN	530	539	674	629	428	406	337	303	405	515	461	449
D/C	599	636	810	882	1,037	1,001	678	597	716	685	650	673

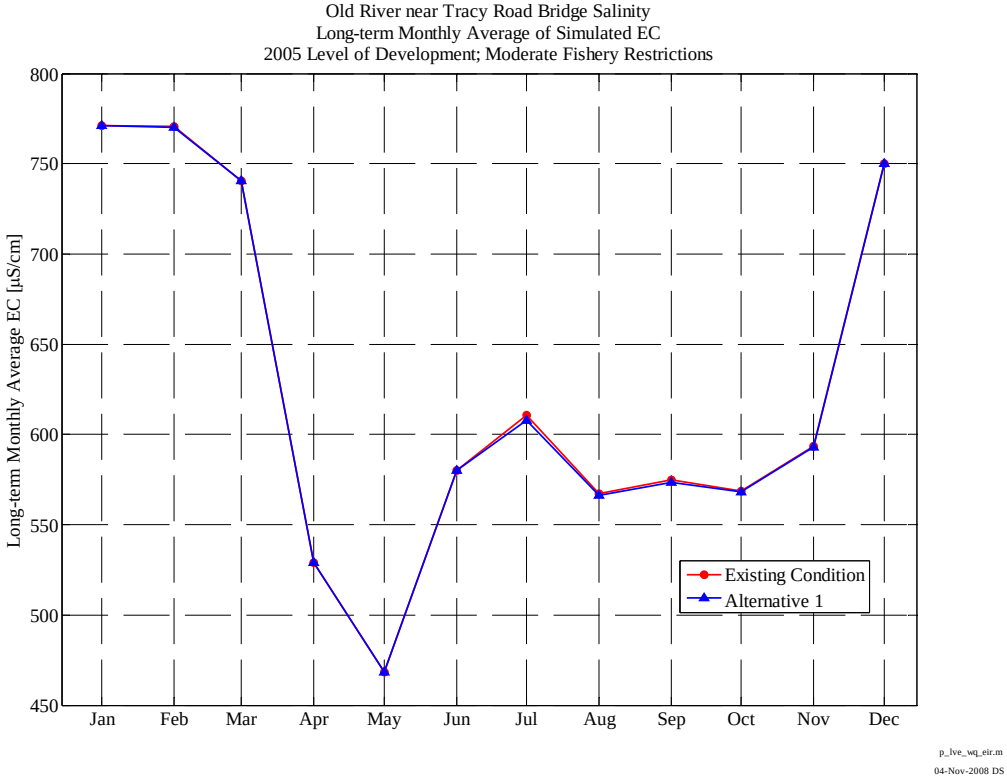
Alternative 1

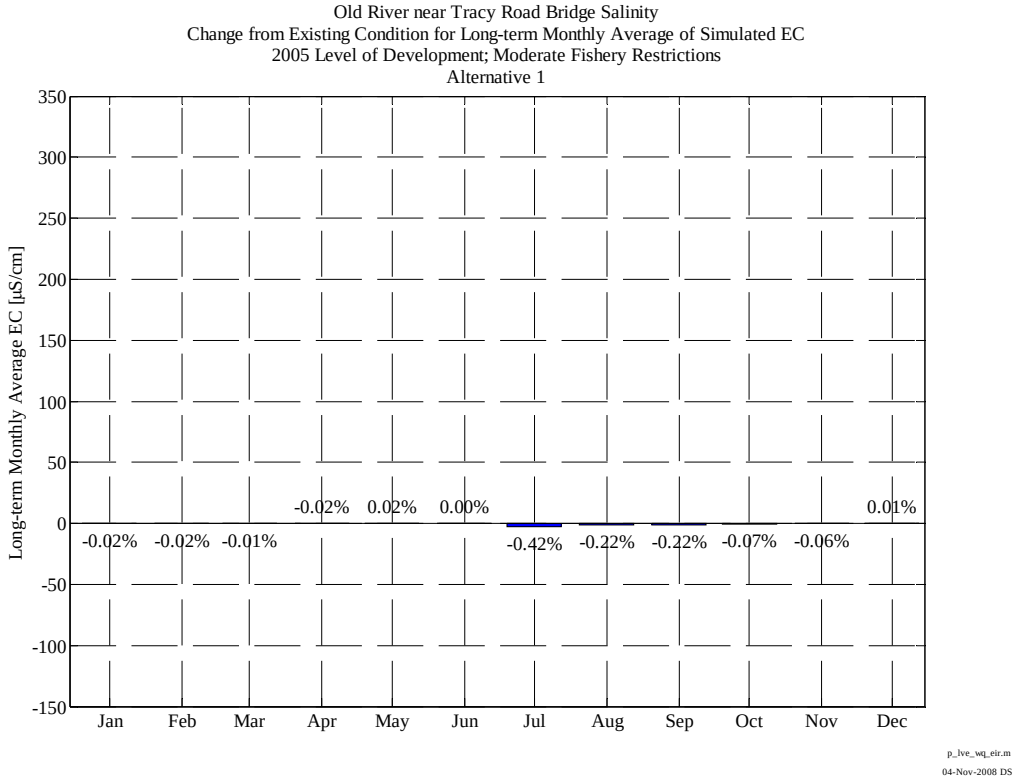
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

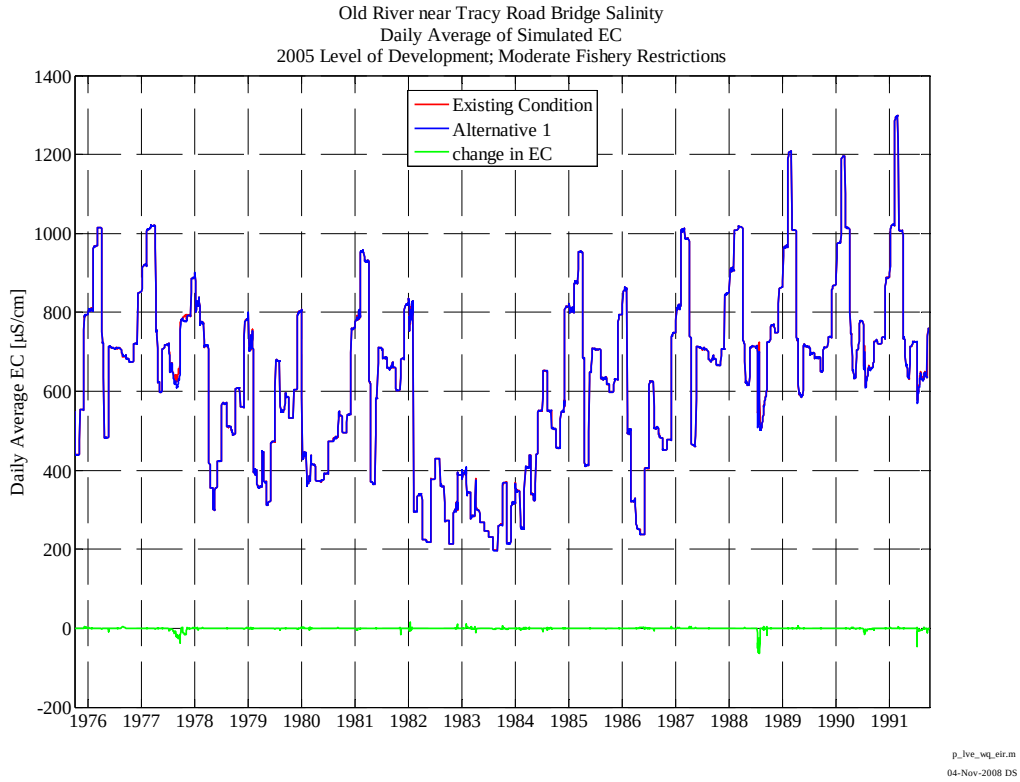
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	950	1,010	650	576	711	709	701	686
1977	676	713	837	912	999	1,019	746	641	717	677	625	673
1978	780	788	876	827	775	718	398	328	421	563	519	497
1979	593	567	765	725	413	359	407	318	464	656	576	581
1980	539	595	786	455	374	415	375	374	391	471	481	531
1981	500	537	744	786	939	932	533	461	693	689	664	664
1982	611	670	808	799	317	337	228	218	374	428	364	276
1983	217	298	386	393	344	285	304	269	246	232	198	258
1984	359	223	314	348	258	400	389	379	542	640	568	511
1985	461	542	796	807	868	947	587	514	700	706	646	626
1986	600	626	780	852	513	326	258	238	399	614	520	489
1987	455	475	728	806	987	989	646	562	711	708	688	684
1988	669	700	835	904	997	1,016	720	653	714	629	532	651
1989	755	752	850	955	1,172	1,029	713	636	714	698	687	670
1990	700	733	854	964	1,167	1,035	763	662	762	676	653	692
1991	723	733	869	1,002	1,250	1,035	744	666	723	634	636	686
Avg	568	593	750	771	770	741	529	468	580	608	566	573
W/AN/BN	528	538	674	628	428	406	337	304	405	515	461	449
D/C	599	636	810	882	1,037	1,001	678	597	716	681	648	670

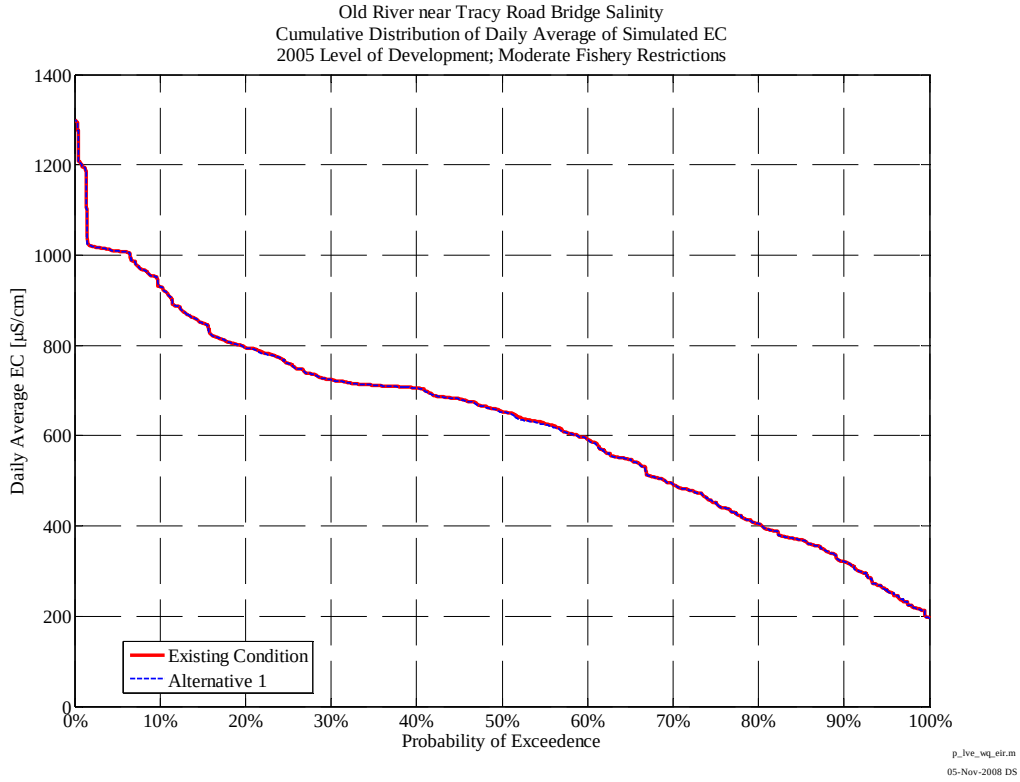
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.3%	0.1%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-1.8%	-2.8%
1978	-1.1%	-0.3%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
1980	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	-0.2%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.1%	0.0%	0.1%	0.2%	-0.2%	-0.6%	-0.1%	-0.1%	-0.1%	-0.8%	-0.2%
1984	0.0%	-0.6%	0.0%	-0.3%	-0.5%	0.0%	0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	-0.1%	0.0%
1987	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-4.1%	-0.2%	-0.2%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-0.9%	-0.3%	-0.1%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.2%	-0.3%	-0.2%
Avg	-0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.2%	-0.2%
W/AN/BN	-0.2%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	-0.2%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.3%	-0.4%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.02%
-0.02%
-0.01%
-0.02%
0.02%
0.00%
-0.42%
-0.22%
-0.22%
-0.07%
-0.06%
0.01%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
Existing Condition
Alternative 1
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

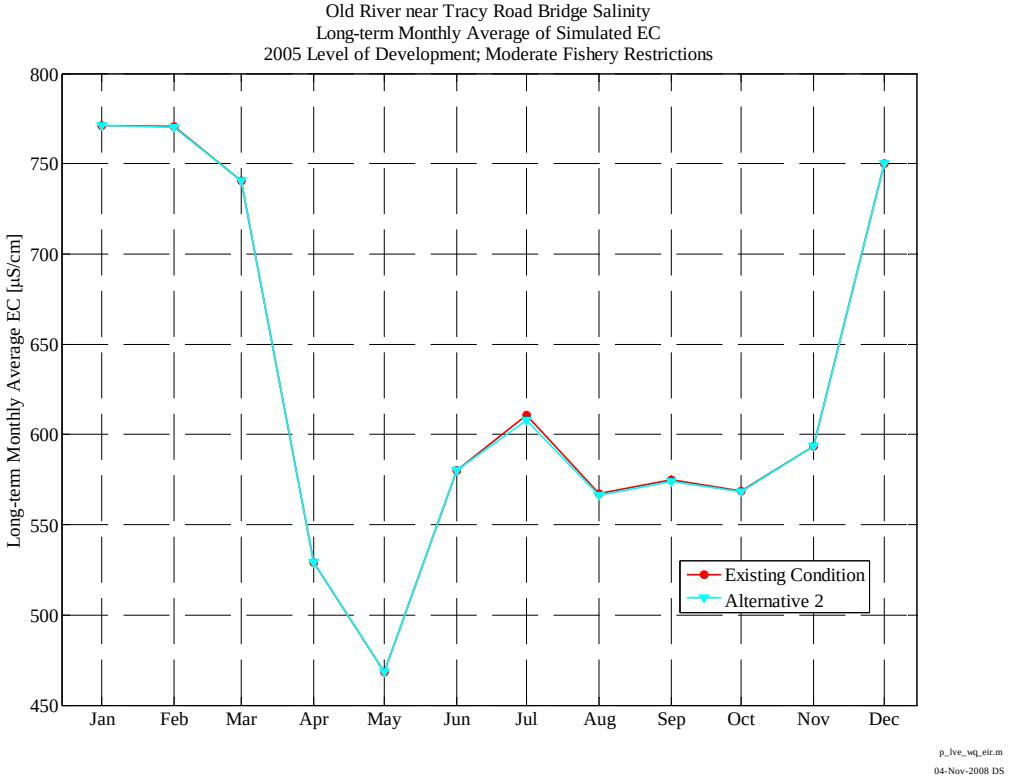
Alternative 2

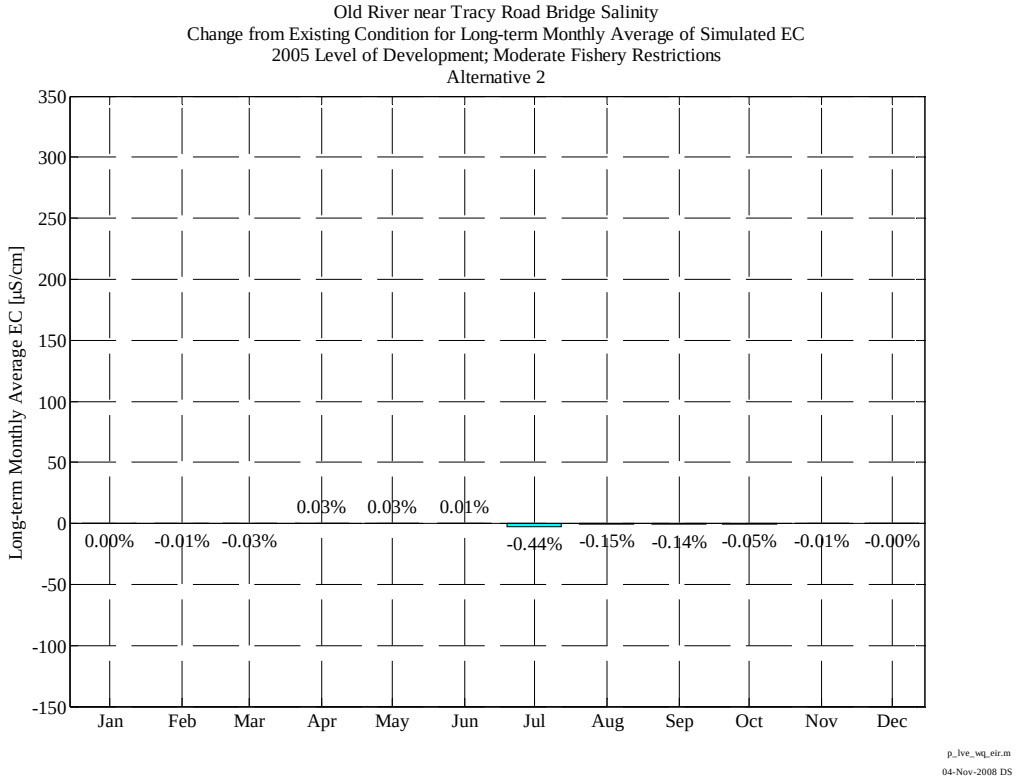
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

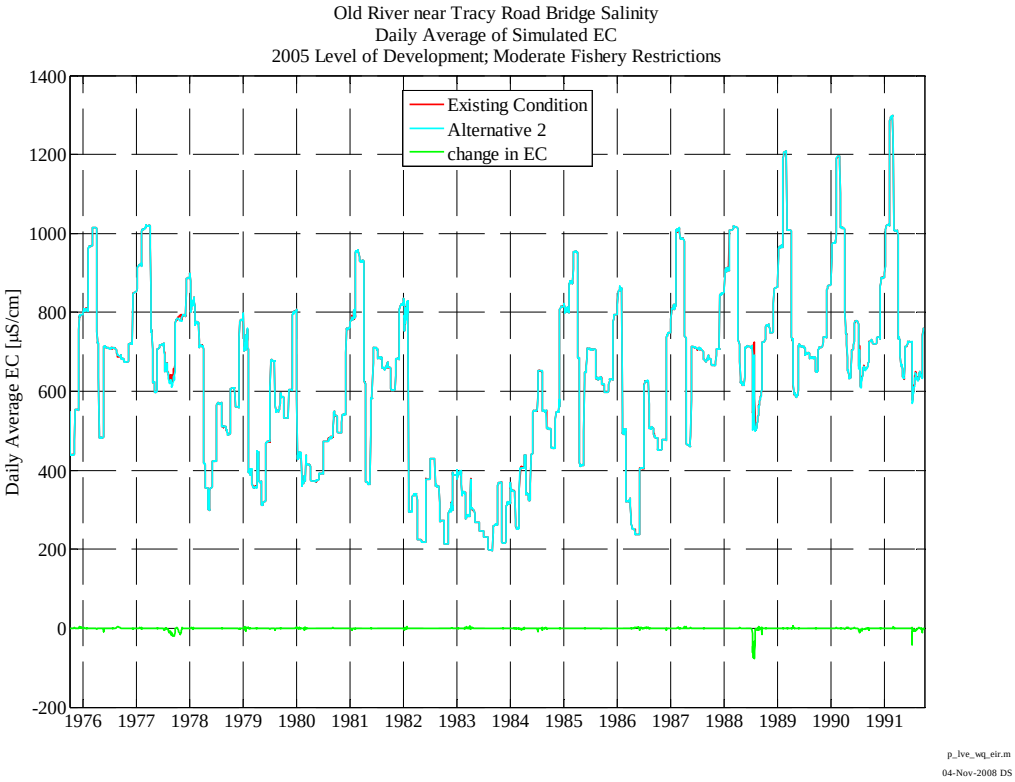
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	950	1,010	650	576	711	709	701	686
1977	676	713	836	913	999	1,019	746	641	717	679	626	681
1978	782	789	876	828	775	718	398	328	421	563	519	497
1979	593	567	764	726	413	358	406	318	464	656	576	581
1980	539	595	787	455	374	415	375	374	391	471	481	531
1981	500	537	744	786	939	932	533	461	693	689	664	664
1982	611	671	808	800	317	337	228	218	374	428	364	276
1983	217	297	386	393	343	285	306	269	246	232	199	258
1984	359	224	314	349	259	399	389	379	542	640	568	511
1985	461	541	796	807	868	947	587	514	700	706	646	626
1986	600	626	780	852	513	326	258	238	399	614	521	489
1987	455	475	727	805	988	989	646	562	711	708	688	684
1988	669	700	835	904	997	1,016	720	653	713	622	531	651
1989	755	752	850	955	1,172	1,029	713	636	714	698	687	670
1990	700	733	854	964	1,168	1,035	763	662	762	677	654	692
1991	723	733	869	1,001	1,250	1,035	744	666	723	634	637	686
Avg	568	593	750	771	770	741	529	469	580	608	566	574
W/AN/BN	529	538	673	629	428	405	337	304	405	515	461	449
D/C	599	636	810	882	1,037	1,001	678	597	716	680	648	671

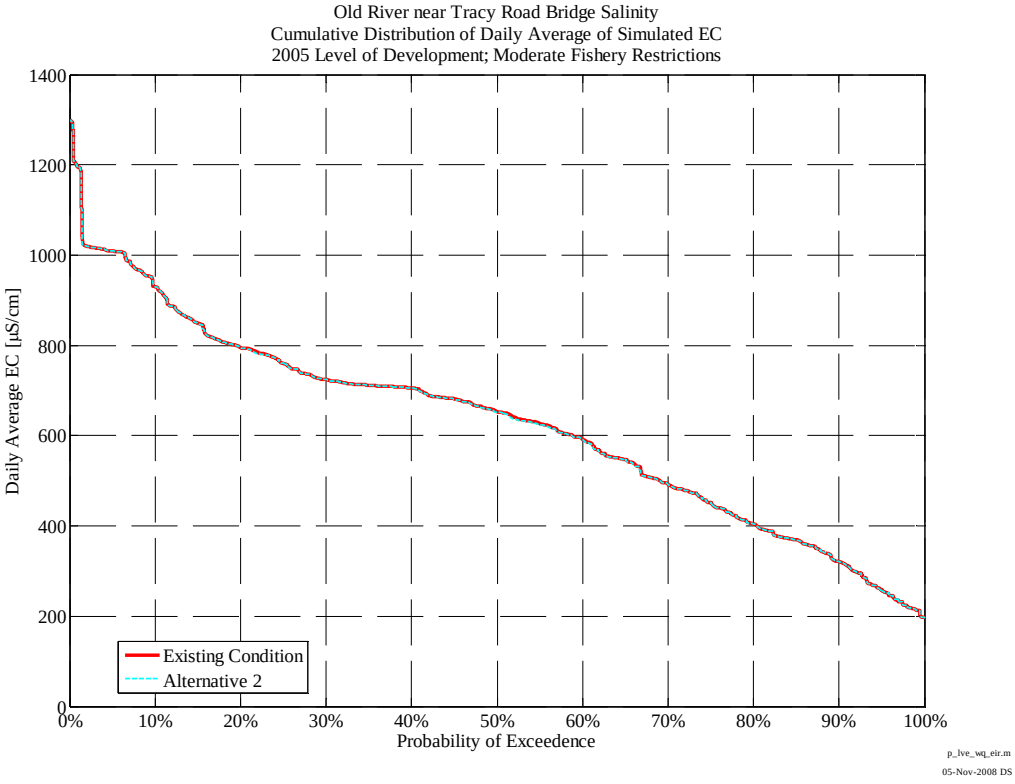
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.3%	0.1%
1977	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-1.6%	-1.8%
1978	-0.9%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	-0.1%	0.1%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
1980	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.2%	0.0%	0.0%	0.0%	-0.1%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.4%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.1%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.1%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.1%	-0.3%	-0.2%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	-0.7%	-0.2%	-0.1%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.1%	-0.2%	-0.2%
Avg	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.2%	-0.1%
W/AN/BN	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-0.2%	-0.2%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.01%
-0.03%
0.03%
0.03%
0.01%
-0.44%
-0.15%
-0.14%
-0.05%
-0.01%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

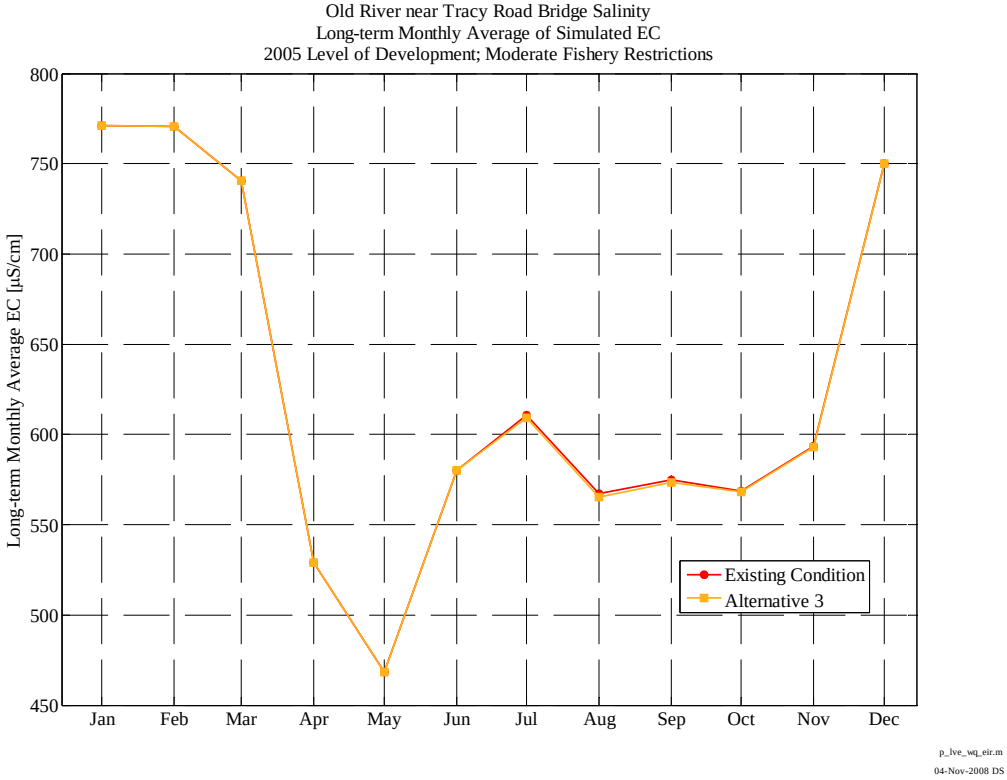
Alternative 3

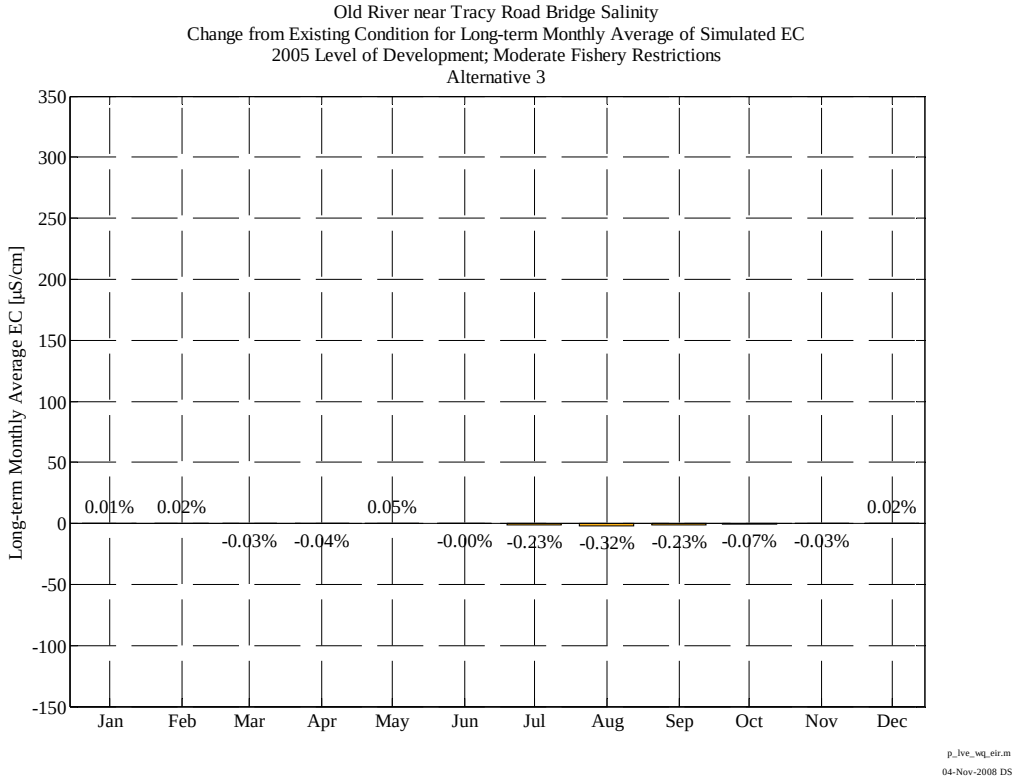
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

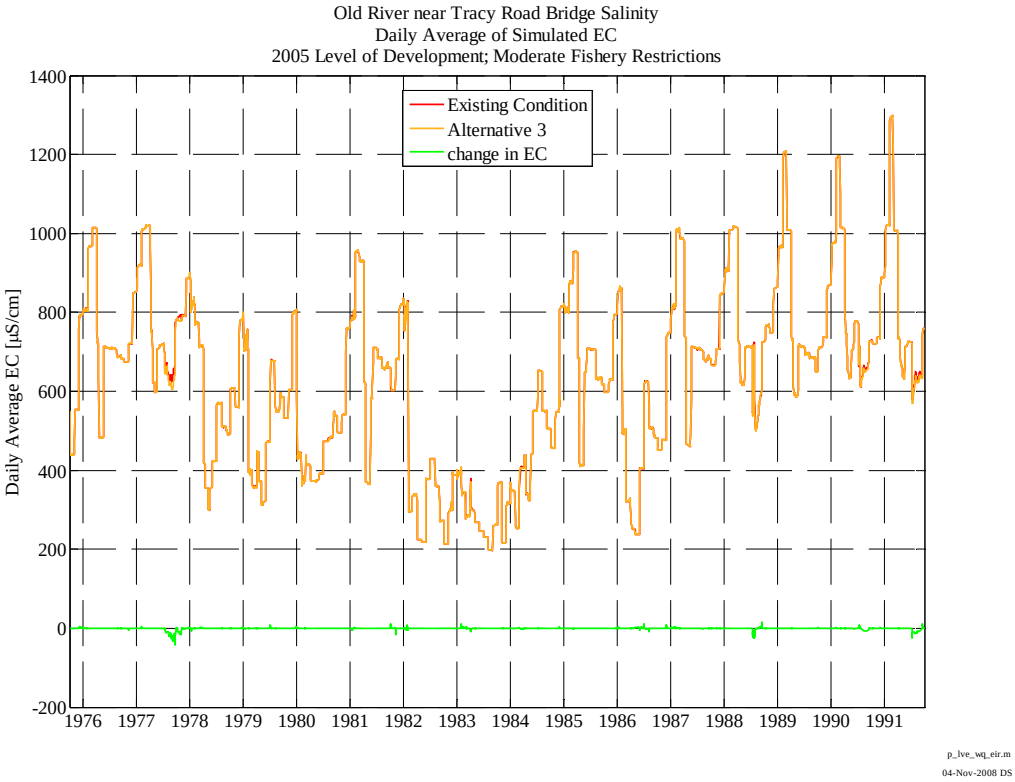
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	950	1,010	650	577	711	709	698	685
1977	676	713	837	913	999	1,019	746	641	717	674	620	671
1978	780	788	876	827	775	718	398	328	421	563	519	497
1979	593	567	765	725	413	358	406	318	464	656	576	581
1980	538	595	787	455	374	415	375	374	391	471	481	531
1981	500	537	744	786	940	932	533	461	693	689	664	664
1982	612	670	808	800	317	337	228	218	374	428	364	276
1983	217	297	386	393	345	285	304	270	246	232	200	258
1984	359	224	314	349	259	399	389	379	542	640	567	511
1985	461	542	796	806	868	946	587	514	700	706	646	627
1986	600	626	780	853	513	326	258	238	399	613	520	489
1987	455	475	728	807	988	989	646	562	711	708	688	684
1988	669	700	835	904	997	1,016	720	653	714	646	532	654
1989	755	752	850	955	1,173	1,029	713	635	714	698	687	670
1990	700	733	854	965	1,168	1,035	762	662	761	683	650	689
1991	723	733	869	1,001	1,250	1,034	744	666	723	632	630	686
Avg	568	593	750	771	771	741	529	469	580	609	565	573
W/AN/BN	529	538	674	629	428	406	337	304	405	515	461	449
D/C	599	636	810	882	1,037	1,001	678	597	716	683	646	670

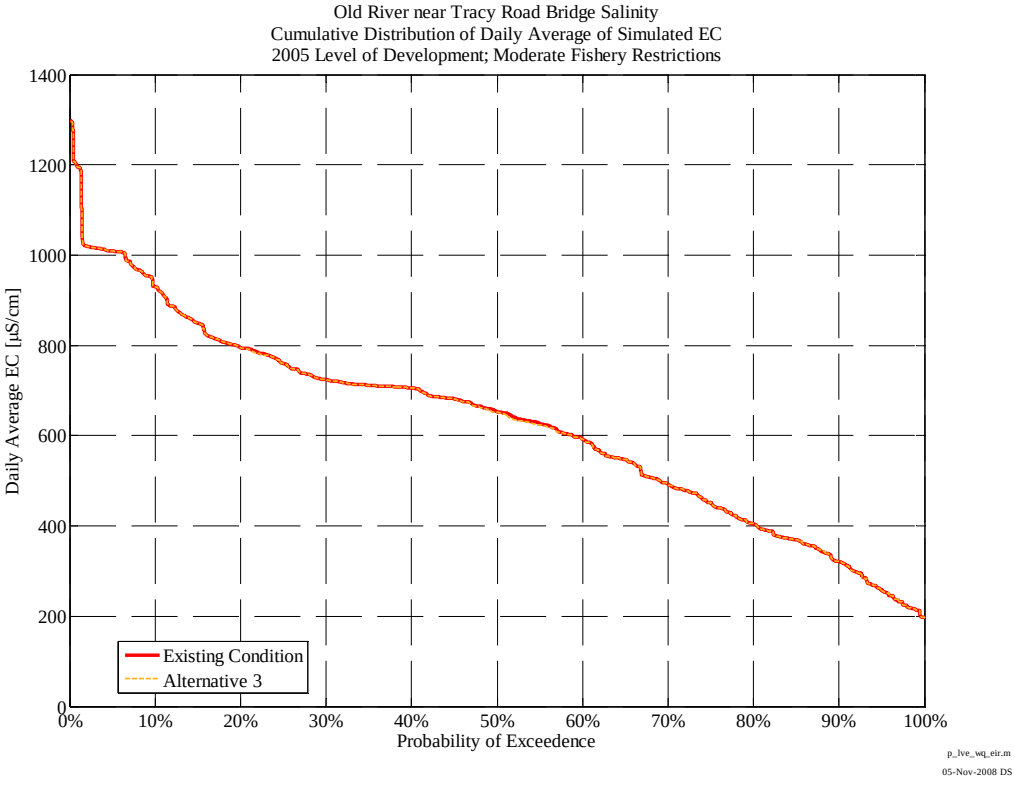
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-2.5%	-3.2%
1978	-1.0%	-0.3%	0.0%	-0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.1%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.1%	0.4%	-0.2%	-0.6%	0.2%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.5%	0.1%	-0.1%	-0.1%	0.0%
1987	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.4%	-0.1%	0.3%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.1%	-0.8%	-0.5%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.5%	-1.4%	-0.2%
Avg	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.3%	-0.2%
W/AN/BN	-0.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.5%	-0.4%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.01%
0.02%
-0.03%
-0.04%
0.05%
-0.00%
-0.23%
-0.32%
-0.23%
-0.07%
-0.03%
0.02%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

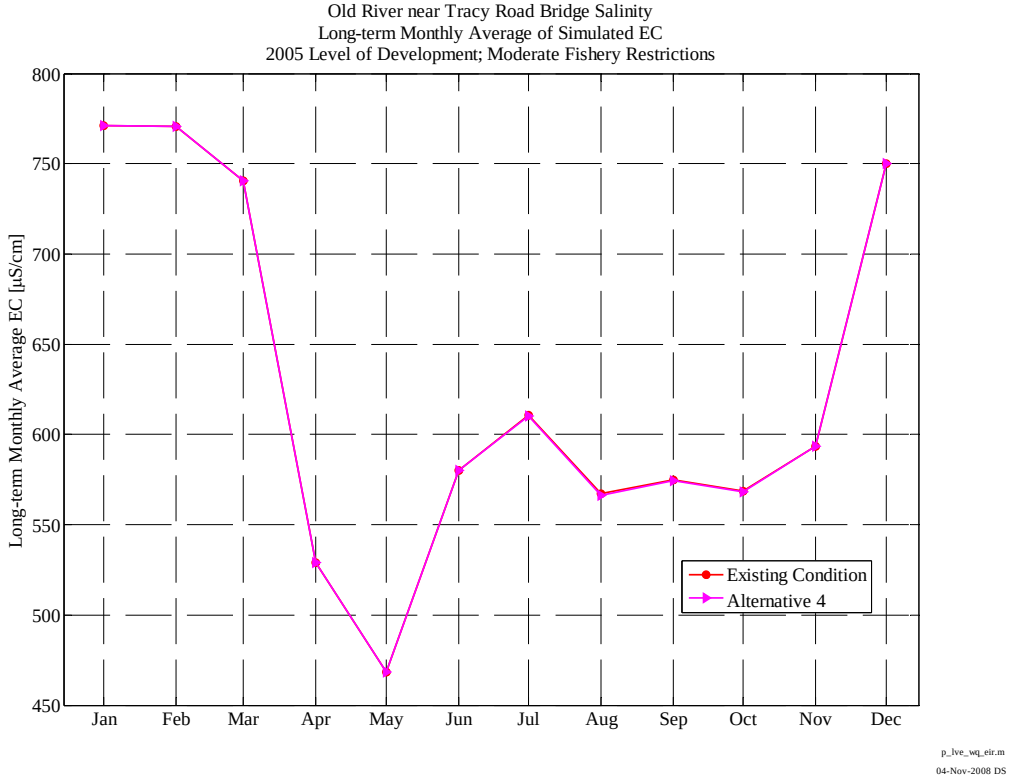
Alternative 4

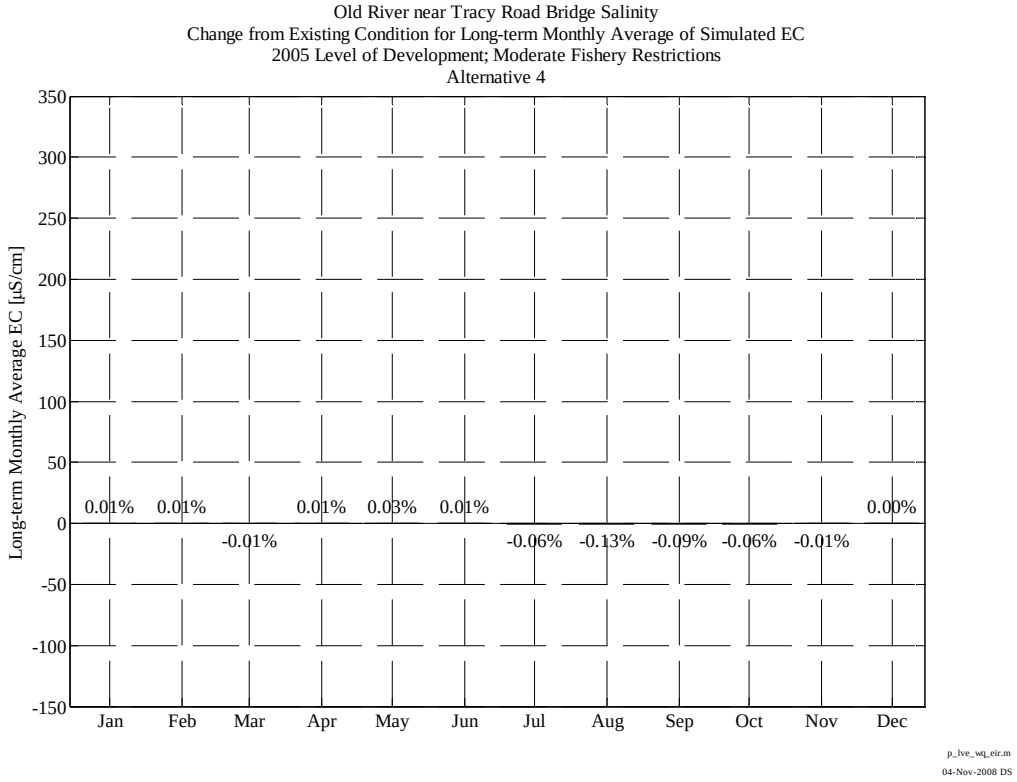
Old River near Tracy Road Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

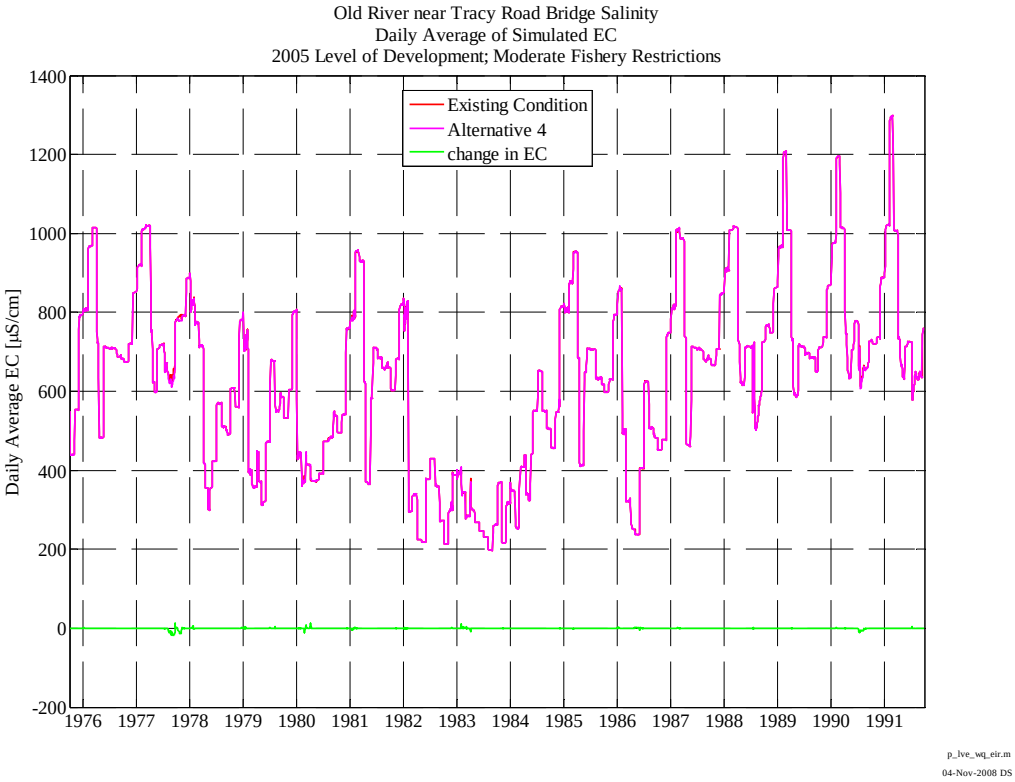
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	450	540	776	804	951	1,010	650	577	711	709	699	685
1977	676	713	837	913	999	1,019	746	641	717	679	627	684
1978	781	788	876	828	775	718	398	328	421	563	519	497
1979	593	567	765	726	413	359	407	318	464	656	577	581
1980	539	595	786	454	373	415	377	374	391	471	481	531
1981	500	537	744	785	940	932	533	461	693	689	664	664
1982	611	671	808	800	317	337	228	218	374	428	364	276
1983	217	297	386	393	345	285	305	269	246	232	200	258
1984	359	224	314	349	259	400	389	379	542	640	567	511
1985	461	542	796	806	868	946	587	514	700	706	646	627
1986	600	626	780	853	513	326	258	238	399	613	521	489
1987	455	475	727	806	988	989	646	562	711	708	689	684
1988	669	700	835	904	997	1,016	720	653	713	655	533	652
1989	755	752	850	955	1,173	1,029	713	635	714	698	688	670
1990	700	733	854	965	1,168	1,035	762	662	762	676	652	692
1991	723	733	869	1,001	1,250	1,034	744	666	723	641	638	688
Avg	568	593	750	771	770	741	529	469	580	610	567	574
W/AN/BN	529	538	674	629	428	406	337	304	405	515	461	449
D/C	599	636	810	882	1,037	1,001	678	597	716	685	648	672

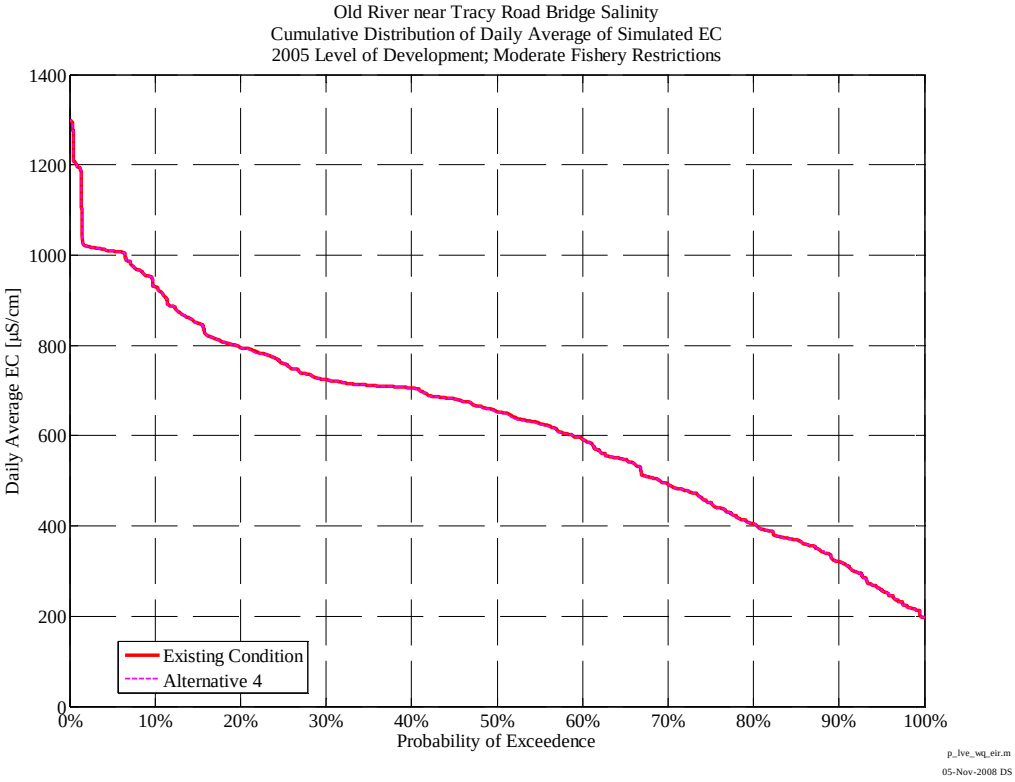
Percent (%) Change from Existing Condition for Old River near Tracy Road Bridge
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-1.5%	-1.3%
1978	-0.9%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	-0.3%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.1%	0.4%	-0.2%	-0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-0.5%	-0.1%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	0.0%
Avg	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%
W/AN/BN	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%


Old River near Tracy Road Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.01%
0.01%
-0.01%
0.01%
0.03%
0.01%
-0.06%
-0.13%
-0.09%
-0.06%
-0.01%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Tracy Road Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

Old River near Middle River

Existing Condition

Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	705	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	729	777
1978	774	784	878	778	756	699	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	544	578
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	463	698	681	653	656
1982	601	674	810	738	301	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	518	701	702	626	614
1986	593	623	786	838	469	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	691	679	649
1990	704	733	861	960	1,181	1,015	700	663	773	722	701	722
1991	715	729	881	1,003	1,281	1,015	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	623	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

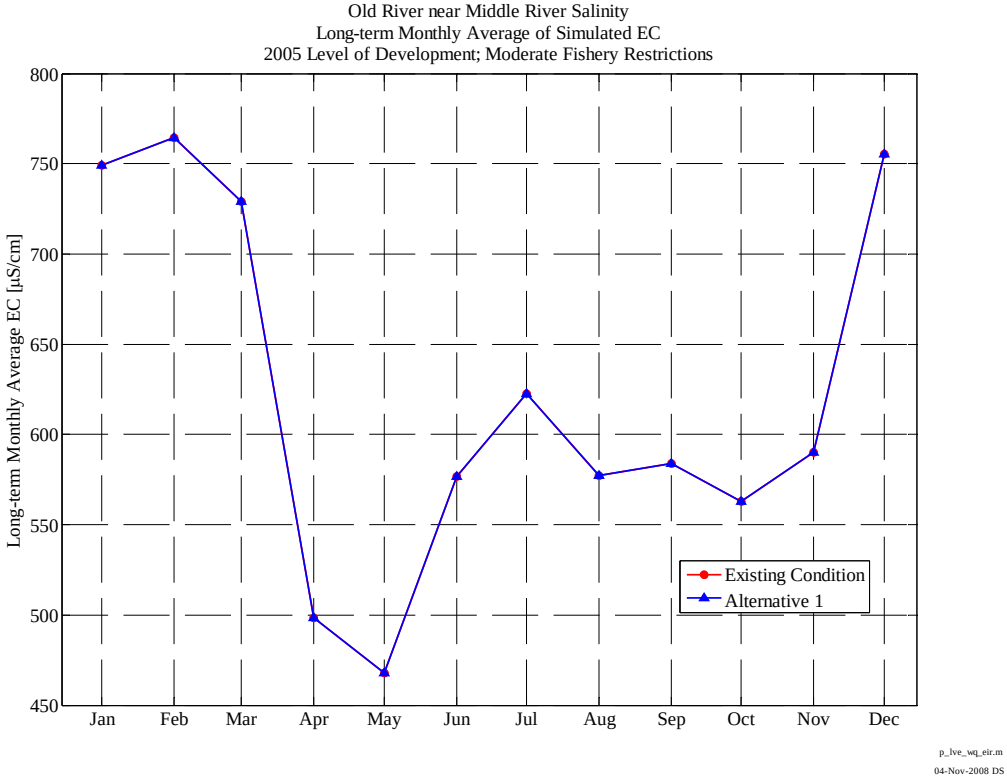
Alternative 1

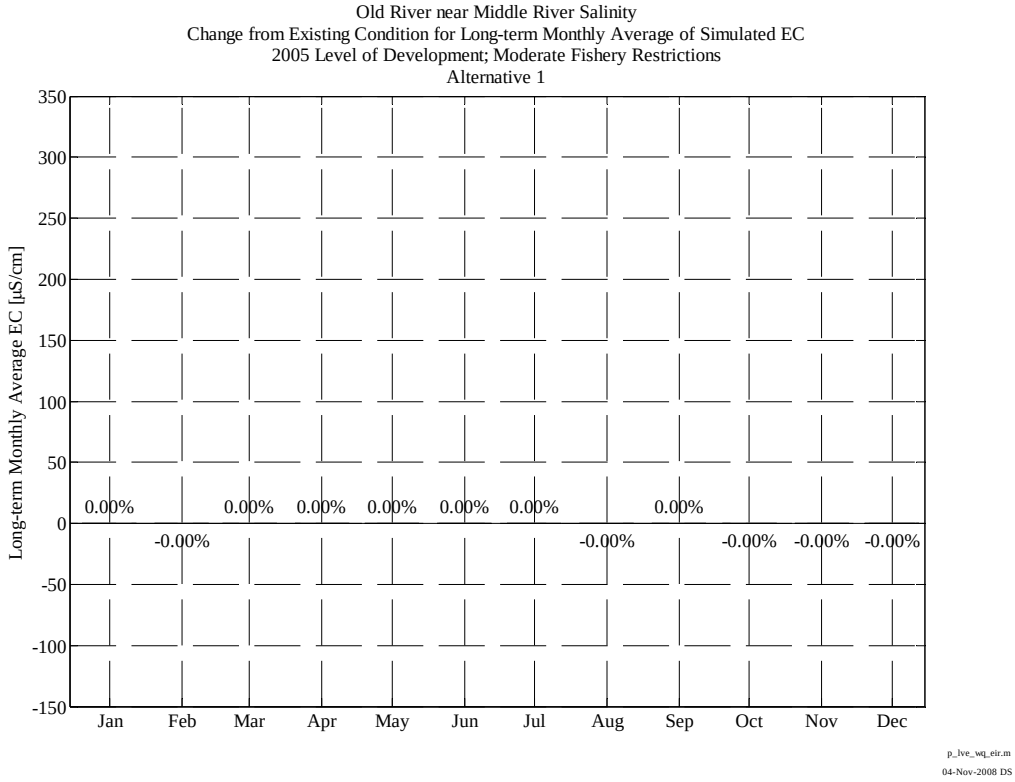
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

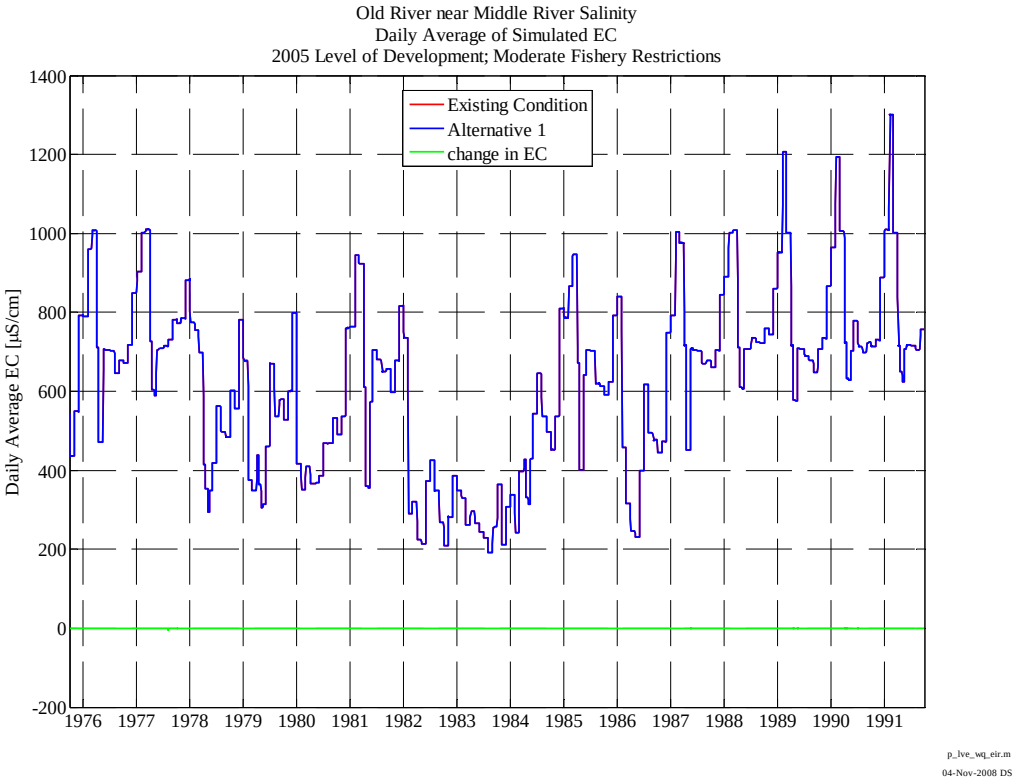
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	705	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	699	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	544	578
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	463	698	681	653	656
1982	601	674	810	738	301	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	518	701	702	626	614
1986	593	623	786	838	469	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	691	679	649
1990	704	733	861	960	1,181	1,015	700	663	773	722	701	722
1991	715	729	881	1,003	1,281	1,015	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	623	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

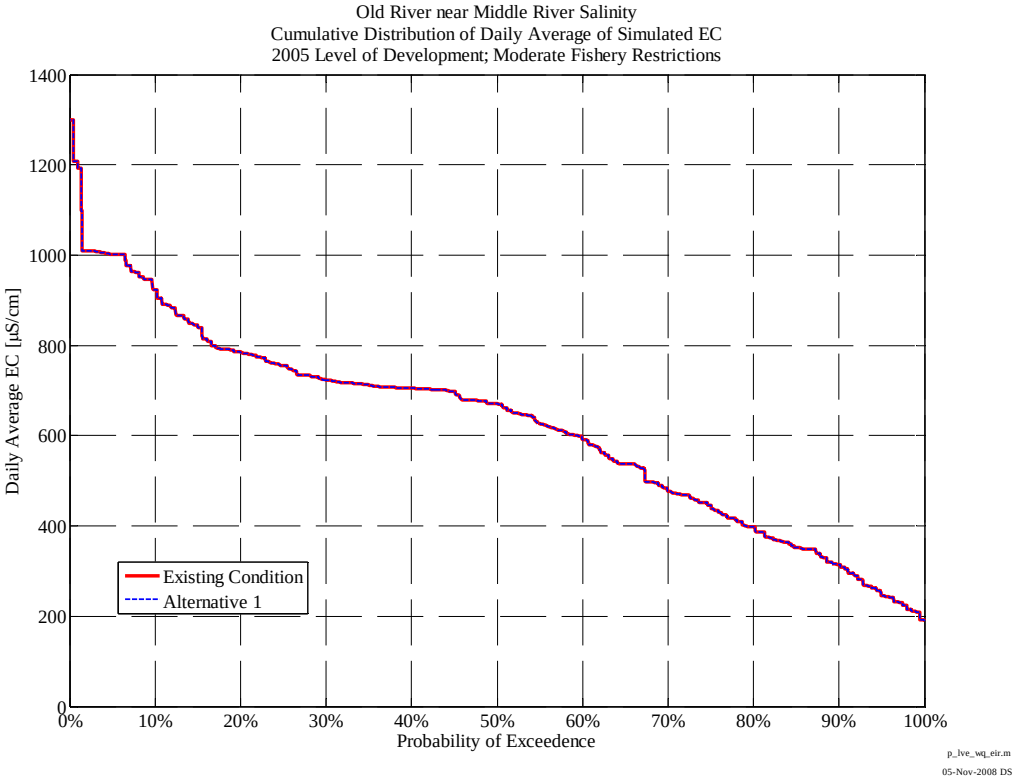
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

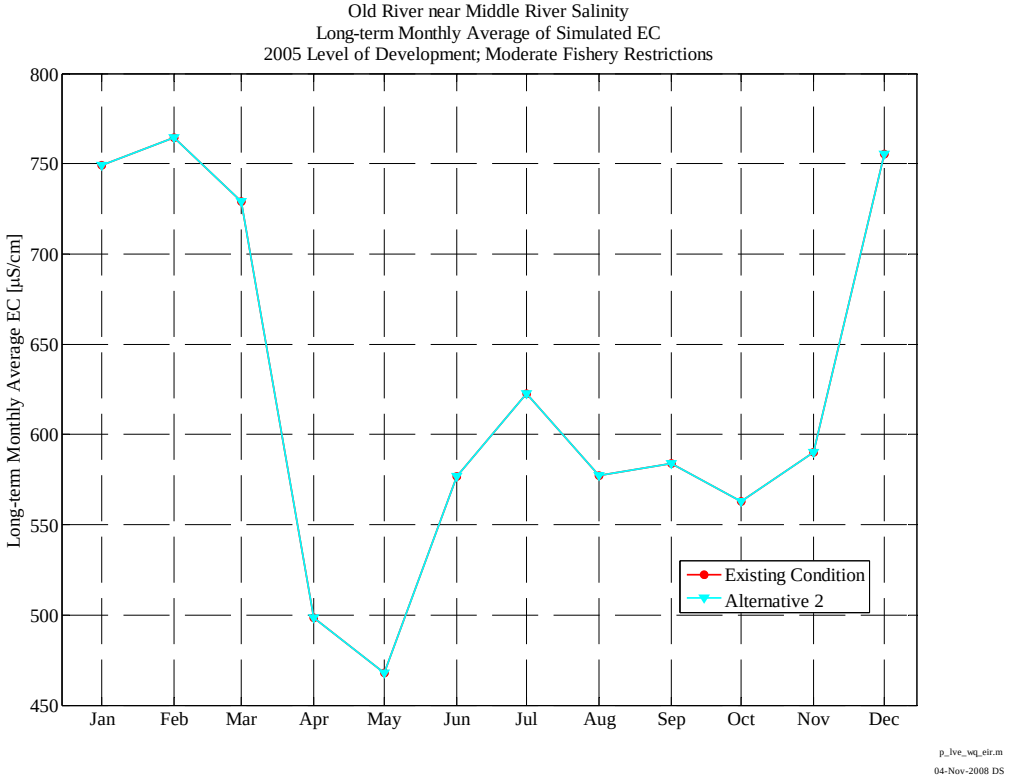
Alternative 2

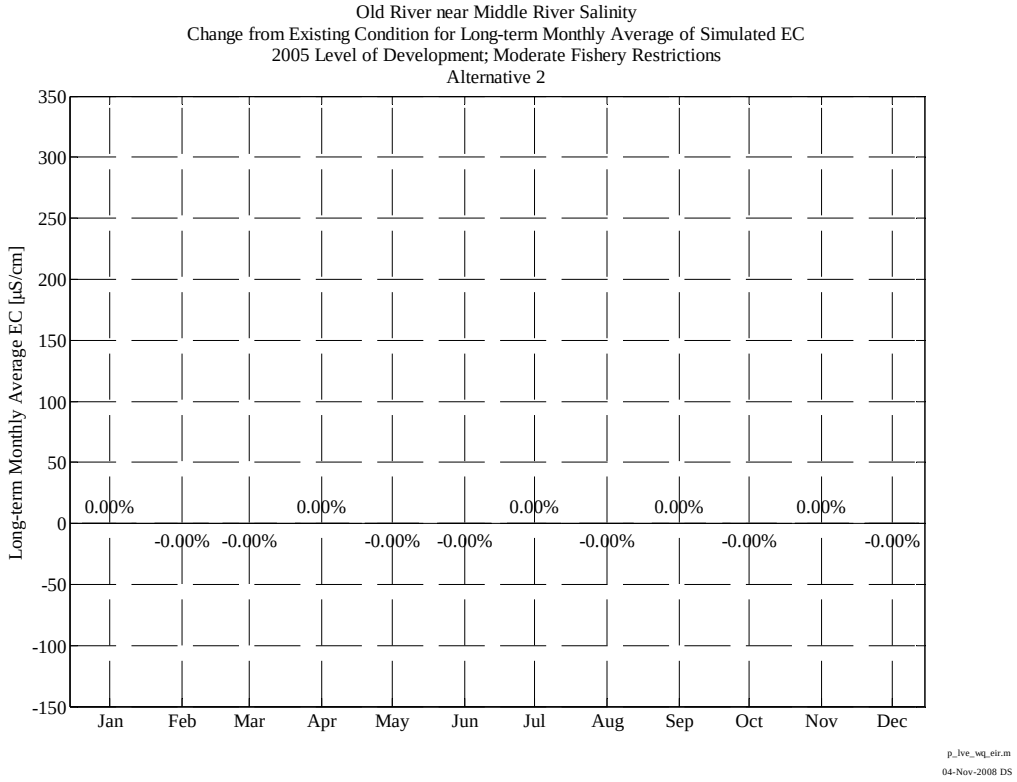
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

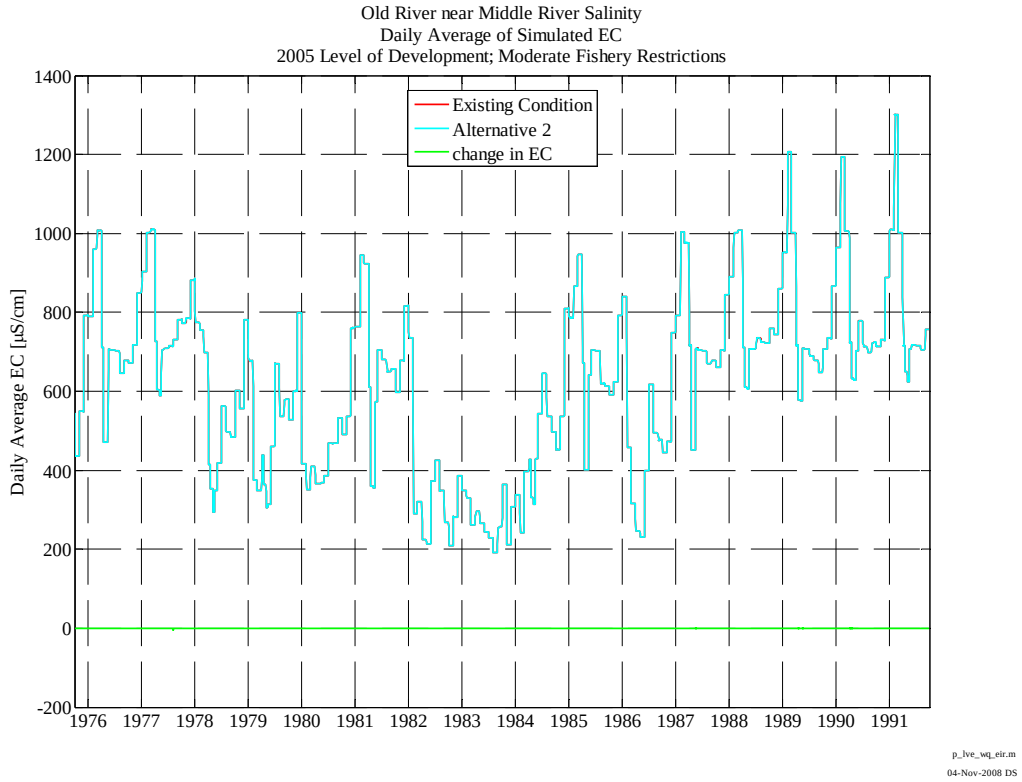
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	705	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	699	388	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	544	578
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	463	698	681	653	656
1982	601	674	810	738	301	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	518	701	702	626	614
1986	593	623	786	838	469	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	691	679	649
1990	704	733	861	960	1,181	1,015	700	663	773	722	701	722
1991	715	729	881	1,003	1,281	1,015	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	623	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

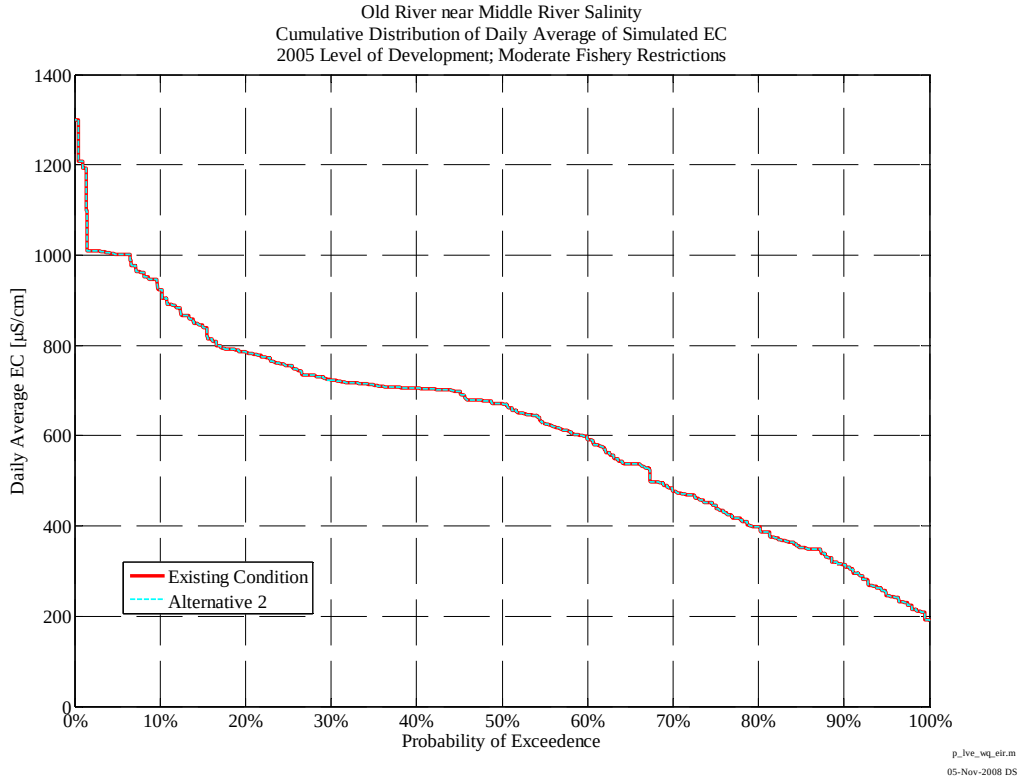
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

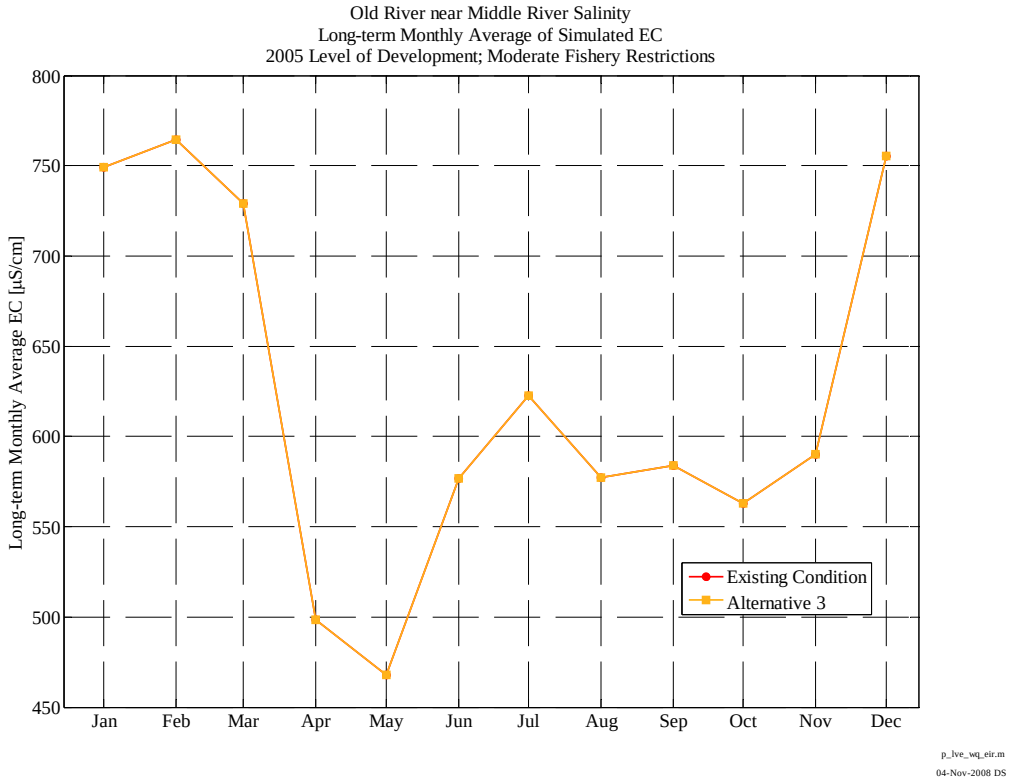
Alternative 3

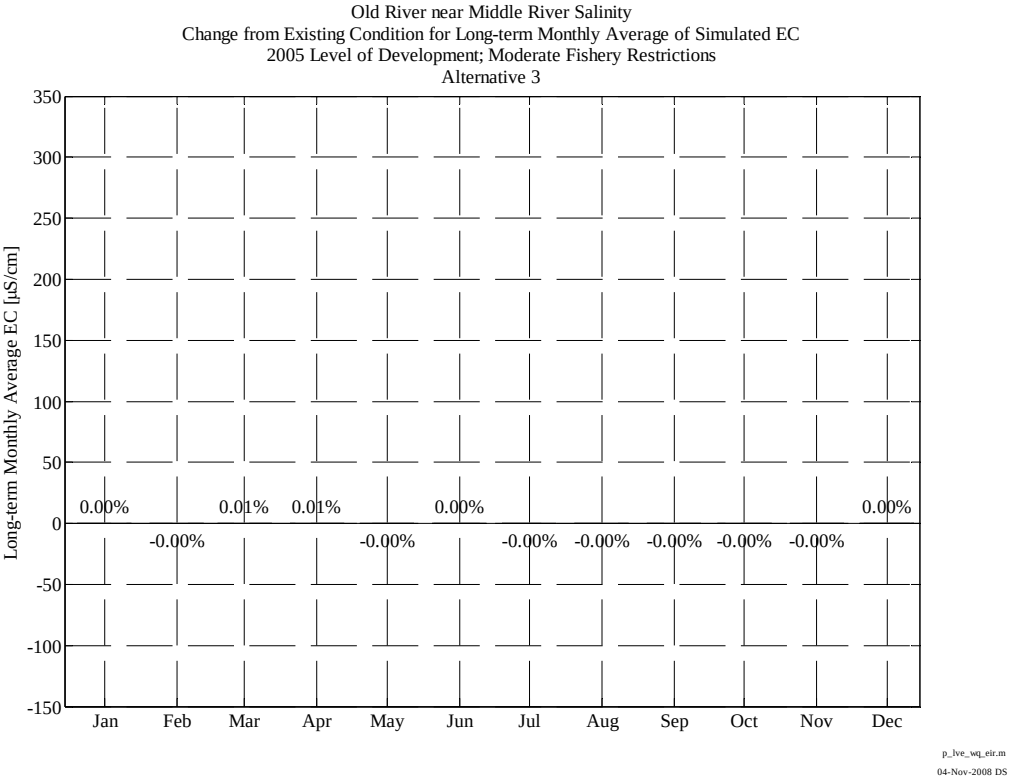
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

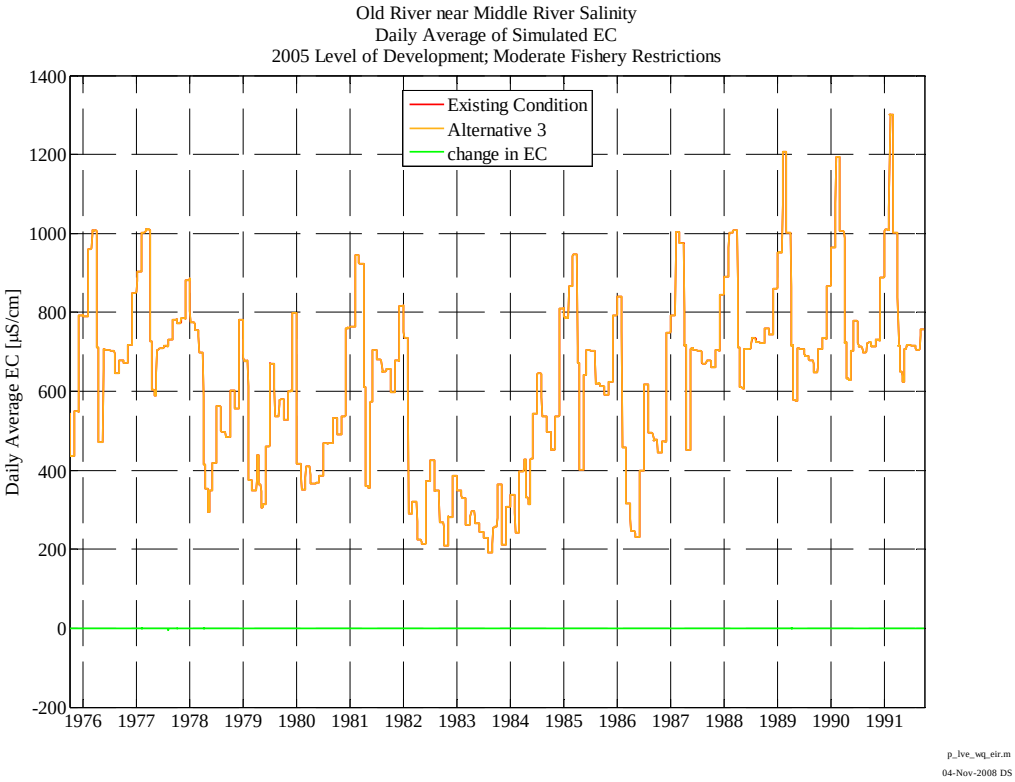
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	705	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	700	389	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	544	578
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	463	698	681	653	656
1982	601	674	810	738	301	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	518	701	702	626	614
1986	593	623	786	838	469	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	662	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	691	679	649
1990	704	733	861	960	1,181	1,015	700	663	773	722	701	722
1991	715	729	881	1,003	1,281	1,015	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	623	577	584
W/AN/BN	524	533	676	593	405	394	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

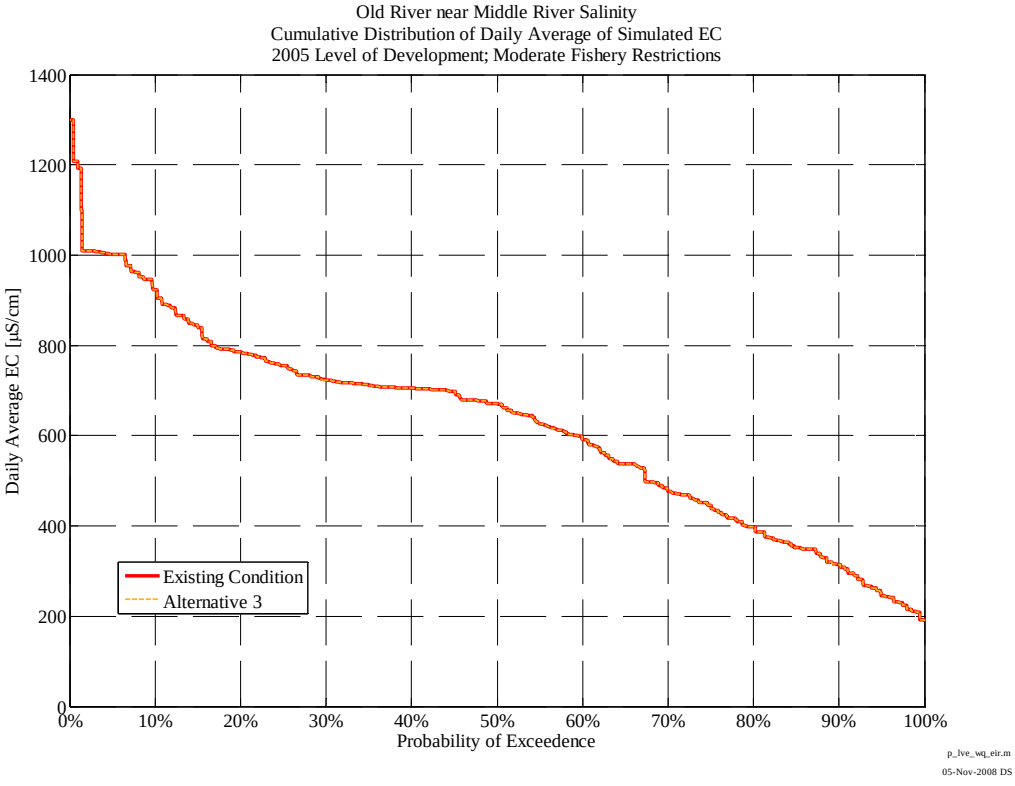
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
0.01%
0.01%
-0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

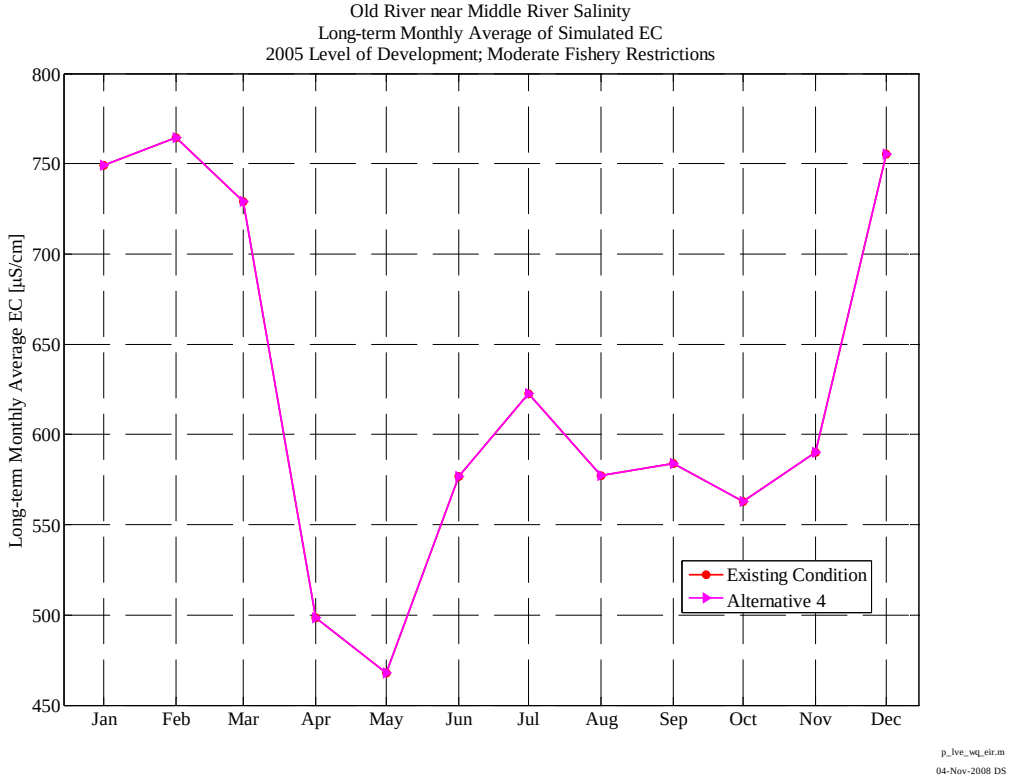
Alternative 4

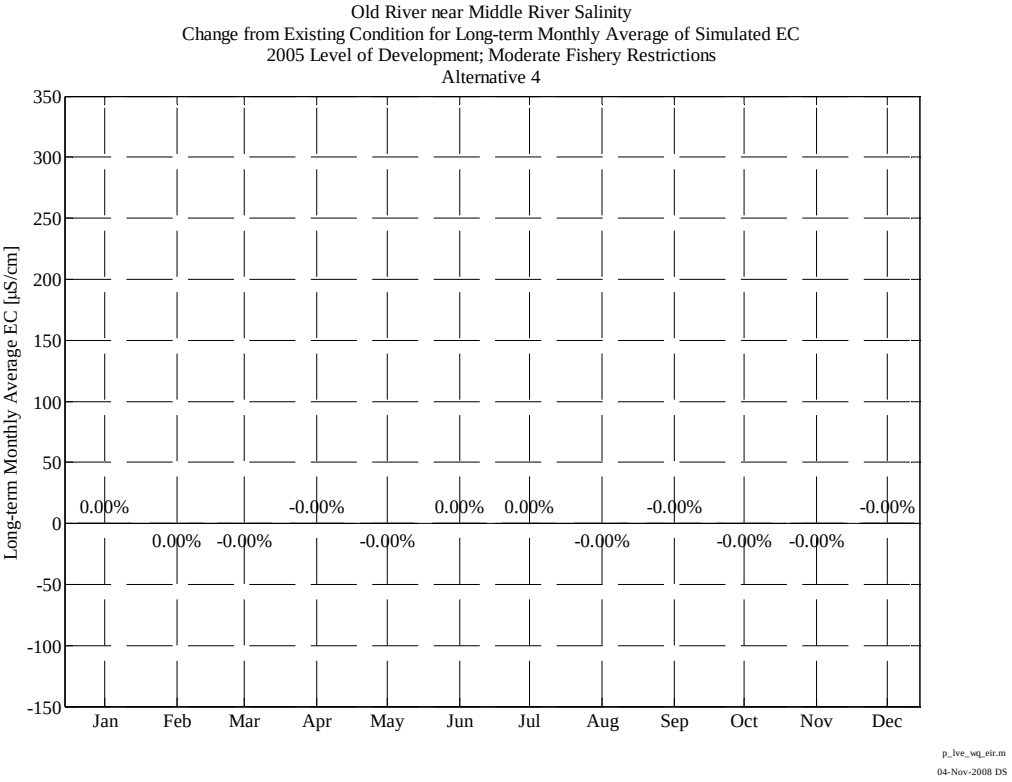
Old River near Middle River Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

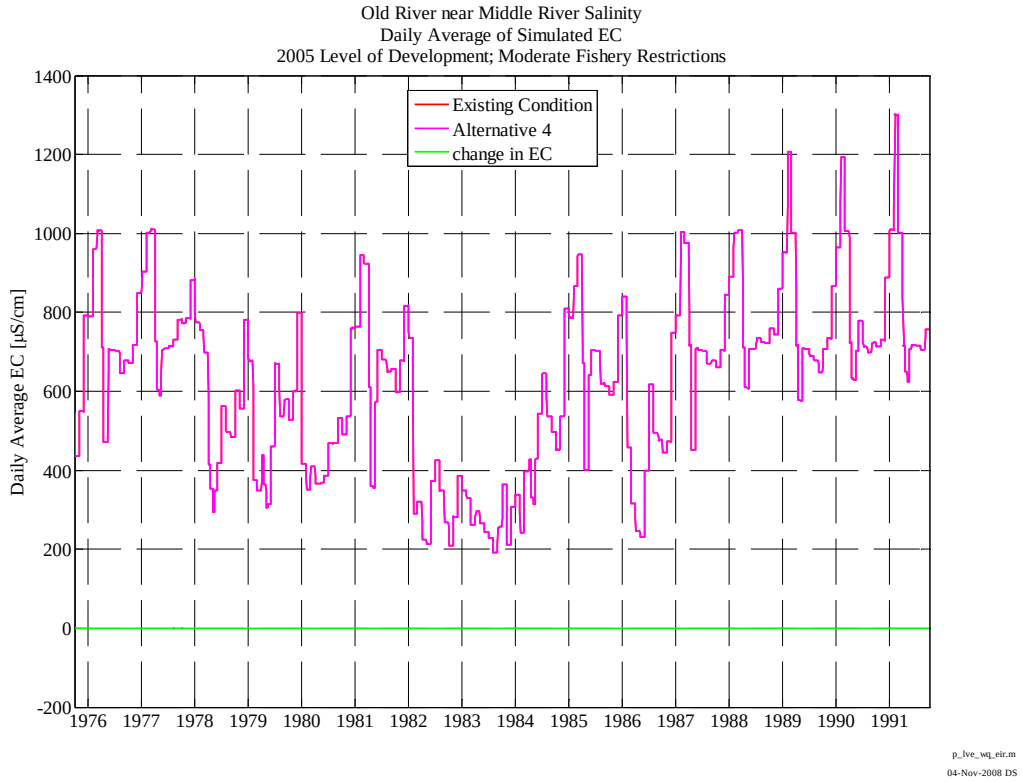
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	440	545	784	790	954	1,005	607	584	705	703	650	677
1977	672	715	844	902	998	1,009	686	644	709	714	728	777
1978	773	784	878	778	756	699	388	323	417	560	500	485
1979	597	558	772	681	384	350	399	310	457	663	544	578
1980	530	598	792	427	353	409	368	367	386	467	469	530
1981	492	536	753	764	938	924	497	463	698	681	653	656
1982	601	674	810	738	301	319	226	214	371	424	350	271
1983	211	281	384	349	329	263	295	267	244	230	192	255
1984	361	216	307	339	243	395	378	372	540	641	542	499
1985	454	534	800	788	863	944	547	518	701	702	626	614
1986	593	623	786	838	469	319	247	232	396	612	499	477
1987	447	472	738	791	993	978	599	573	706	702	672	678
1988	663	702	839	889	997	1,009	679	654	707	732	725	722
1989	757	746	854	948	1,194	1,012	665	637	707	691	679	649
1990	704	733	861	960	1,181	1,015	700	663	773	722	701	722
1991	715	729	881	1,003	1,281	1,015	698	664	718	717	707	752
Avg	563	590	755	749	765	729	499	468	577	623	577	584
W/AN/BN	524	533	676	593	405	393	329	298	401	514	442	442
D/C	594	635	817	870	1,044	990	631	600	714	707	682	694

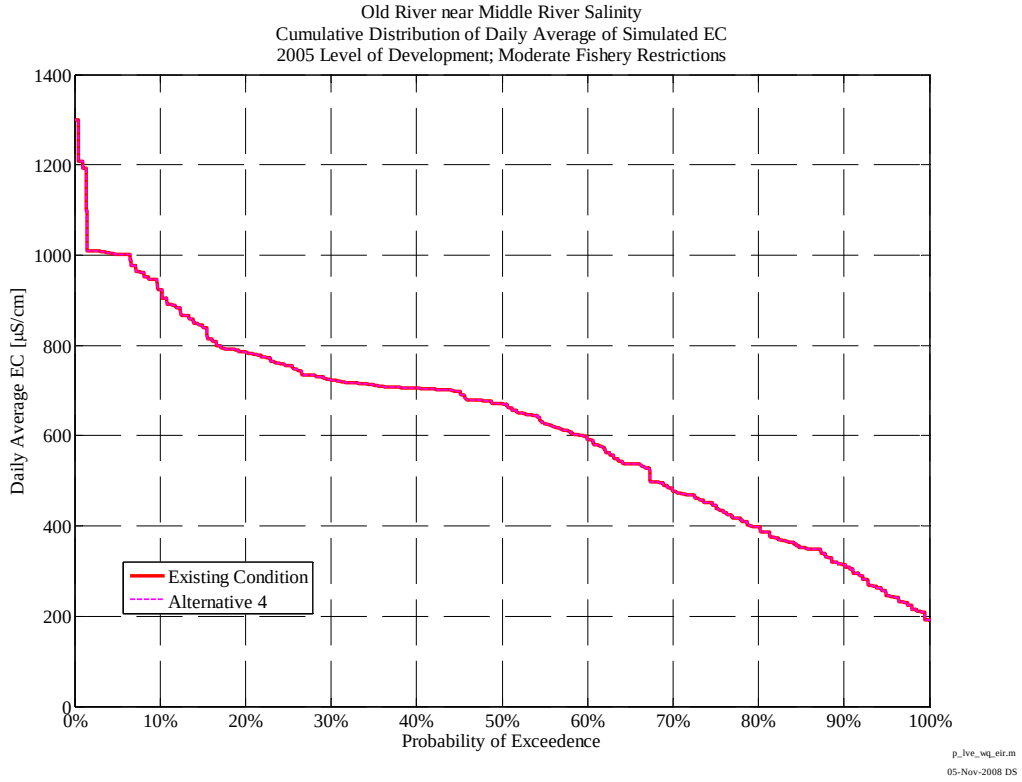
Percent (%) Change from Existing Condition for Old River near Middle River Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


Old River near Middle River Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
-0.00%
-0.00%
-0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


Old River near Middle River Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

San Joaquin River at Brandt Bridge

Existing Condition

San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	616	579	707	703	651	677
1977	670	714	839	900	995	1,009	705	642	717	715	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	353	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	502	461	694	683	653	655
1982	600	673	809	737	301	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	516	699	702	626	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	609	565	707	703	673	677
1988	661	700	832	887	994	1,008	688	652	708	732	725	721
1989	756	744	852	944	1,189	1,016	677	633	714	700	680	649
1990	703	732	856	958	1,176	1,020	722	662	753	726	701	721
1991	713	728	876	998	1,276	1,021	710	663	718	717	707	752
Avg	562	589	752	748	762	729	505	466	576	623	577	583
W/AN/BN	523	532	674	592	405	393	328	298	400	512	442	441
D/C	592	633	813	868	1,041	991	642	597	713	709	683	694

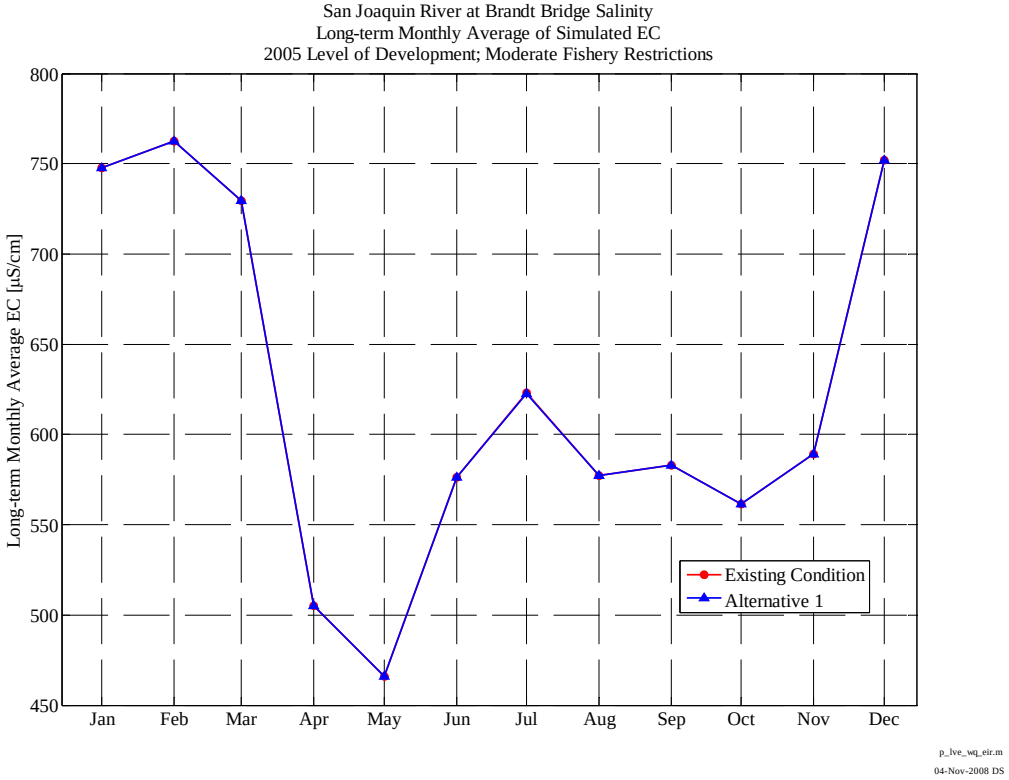
Alternative 1

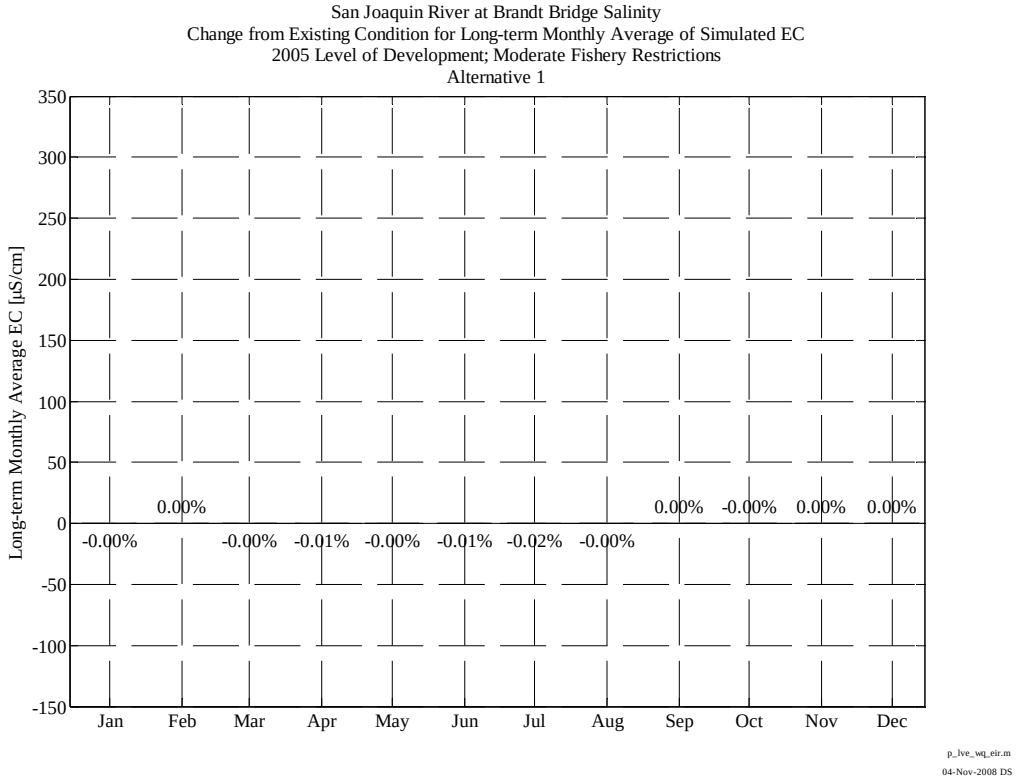
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

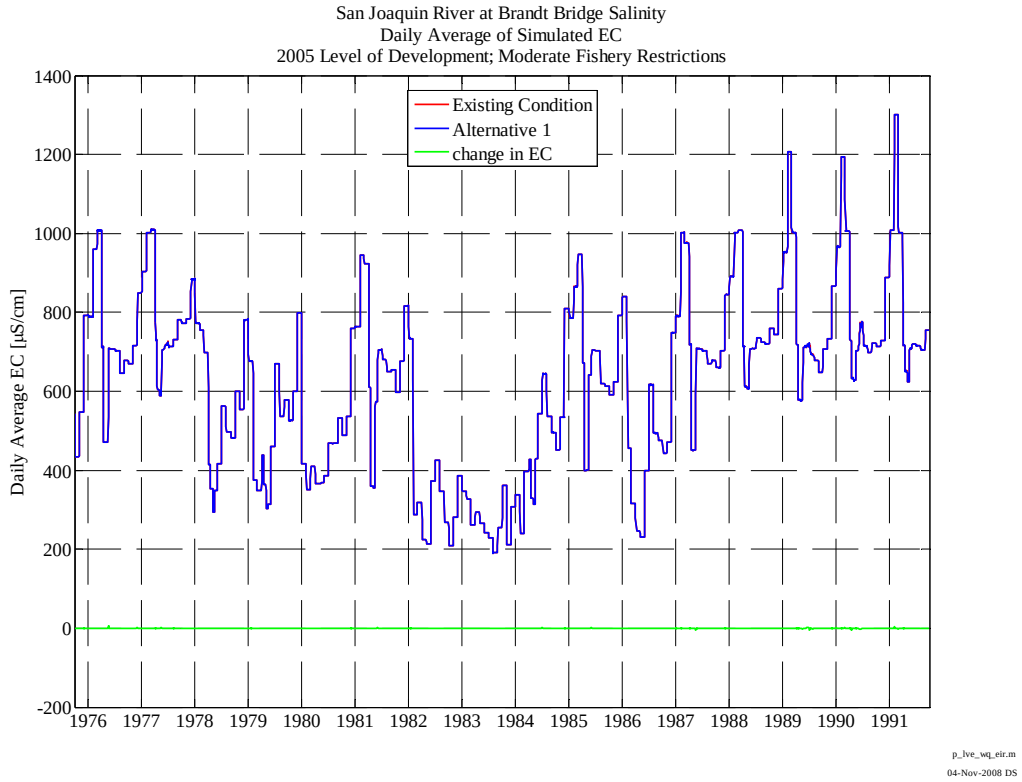
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	616	579	707	703	651	677
1977	670	714	839	900	995	1,009	704	642	716	715	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	353	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	502	461	694	683	653	655
1982	600	673	809	737	301	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	516	699	702	626	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	609	565	707	703	673	677
1988	661	700	832	887	994	1,008	688	652	708	732	725	721
1989	756	744	852	944	1,189	1,016	677	632	715	699	680	649
1990	703	732	856	958	1,176	1,021	721	662	751	725	701	721
1991	713	728	876	998	1,276	1,021	709	663	718	716	707	752
Avg	562	589	752	748	762	729	505	466	576	623	577	583
W/AN/BN	523	532	674	592	405	393	328	298	401	512	442	441
D/C	592	633	813	868	1,041	991	642	597	713	709	683	694

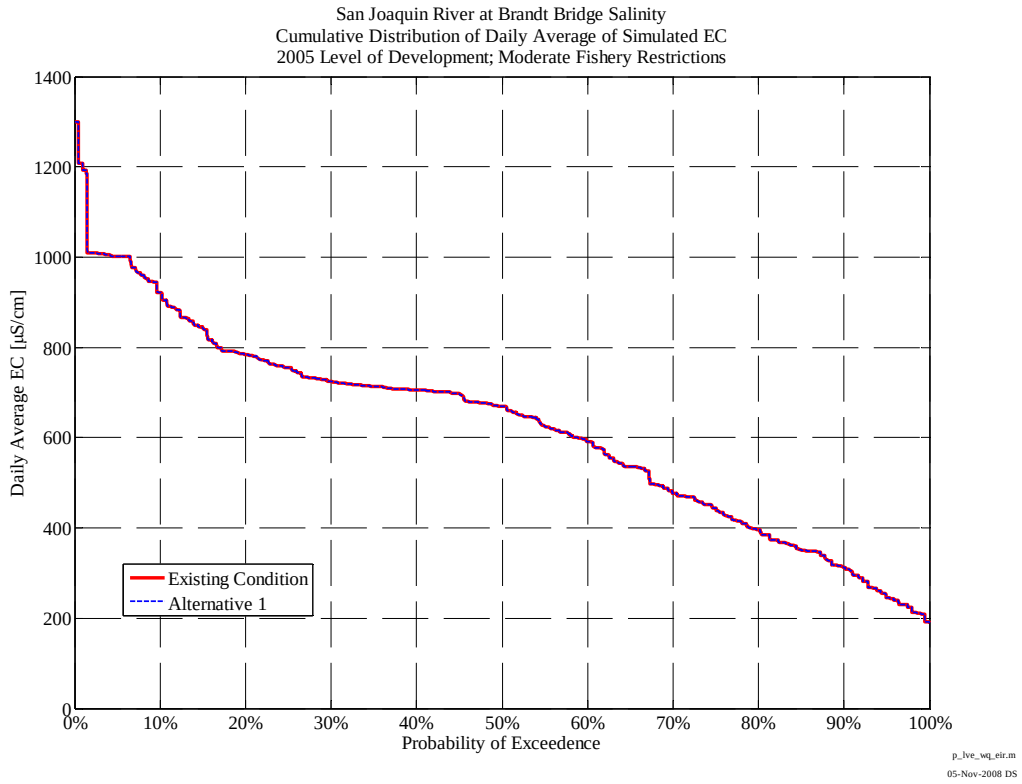
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.2%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.2%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
-0.00%
-0.01%
-0.00%
-0.01%
-0.02%
-0.00%
0.00%
-0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

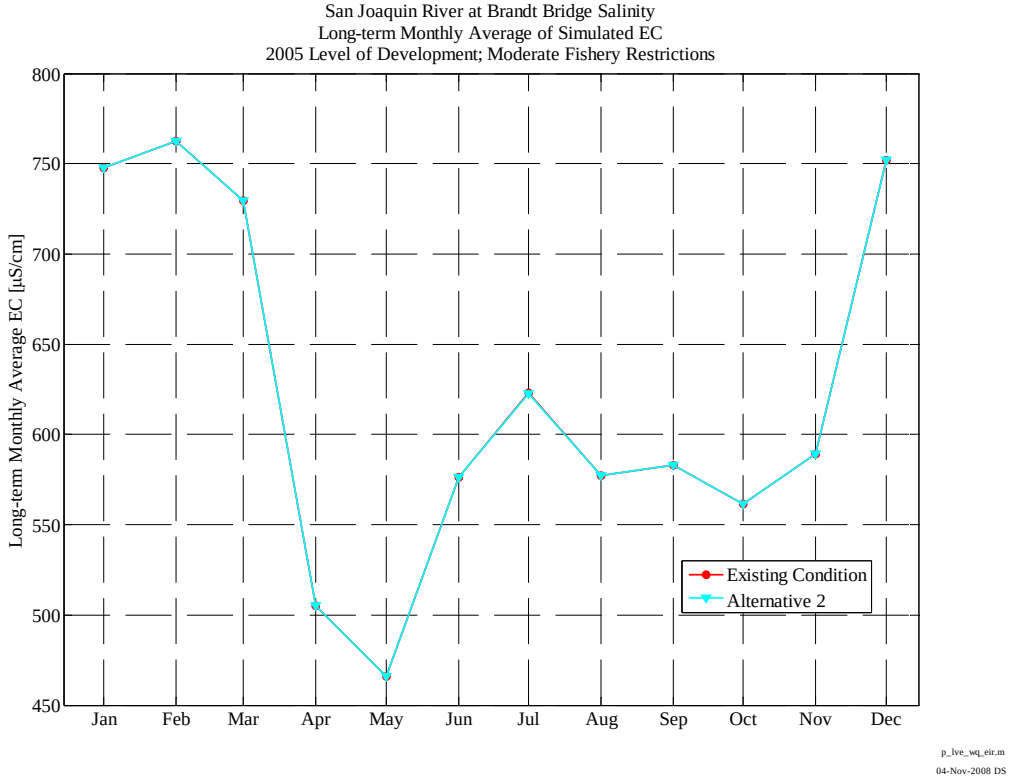
Alternative 2

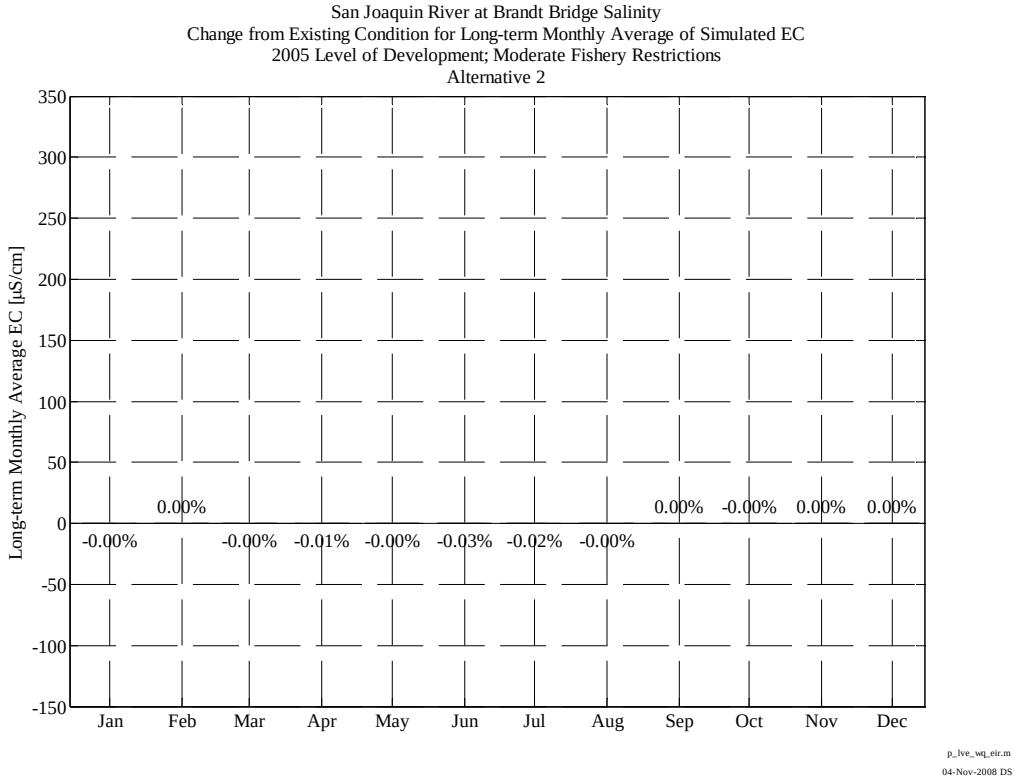
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

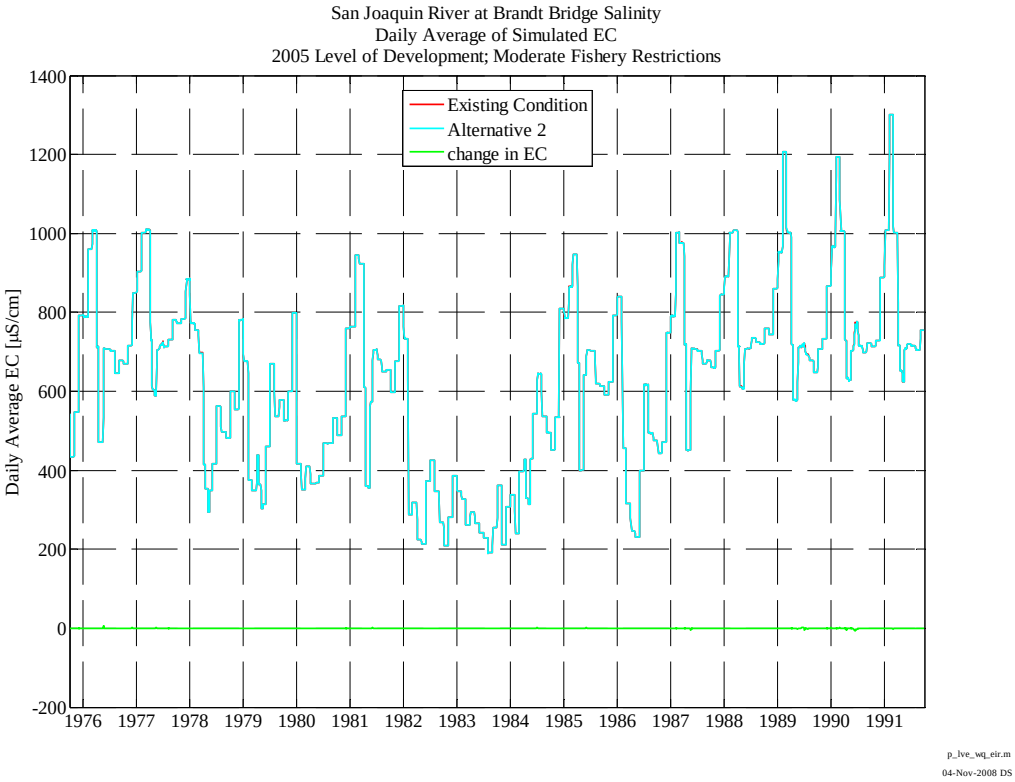
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	616	579	707	703	651	677
1977	670	714	839	900	995	1,009	704	642	716	715	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	597	788	427	353	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	502	461	694	683	653	655
1982	600	673	809	737	301	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	516	699	702	626	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	609	565	707	703	673	677
1988	661	700	832	887	994	1,008	688	652	708	732	725	721
1989	756	744	852	944	1,189	1,016	677	632	715	699	680	649
1990	703	732	856	958	1,176	1,021	721	662	749	725	701	721
1991	713	728	876	998	1,276	1,021	710	663	718	716	707	752
Avg	562	589	752	748	762	729	505	466	576	623	577	583
W/AN/BN	523	532	674	592	405	393	328	298	401	512	442	441
D/C	592	633	813	868	1,041	991	642	597	713	709	683	694

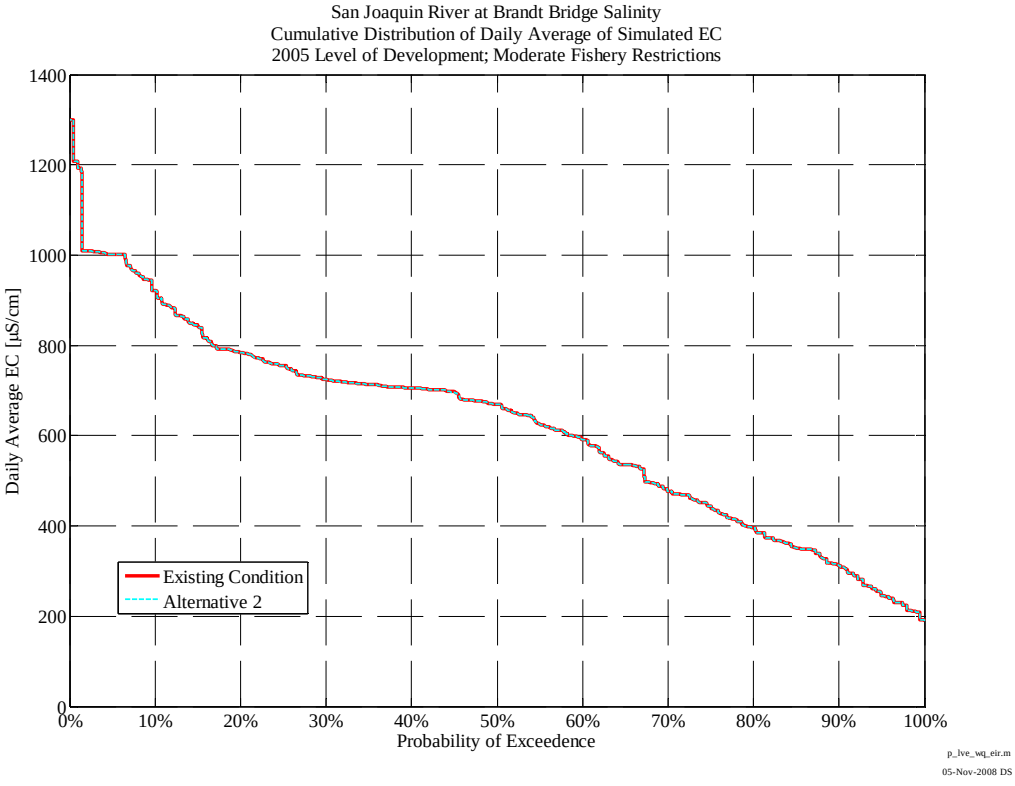
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.2%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	-0.4%	-0.1%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
-0.00%
-0.01%
-0.00%
-0.03%
-0.02%
-0.00%
0.00%
-0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

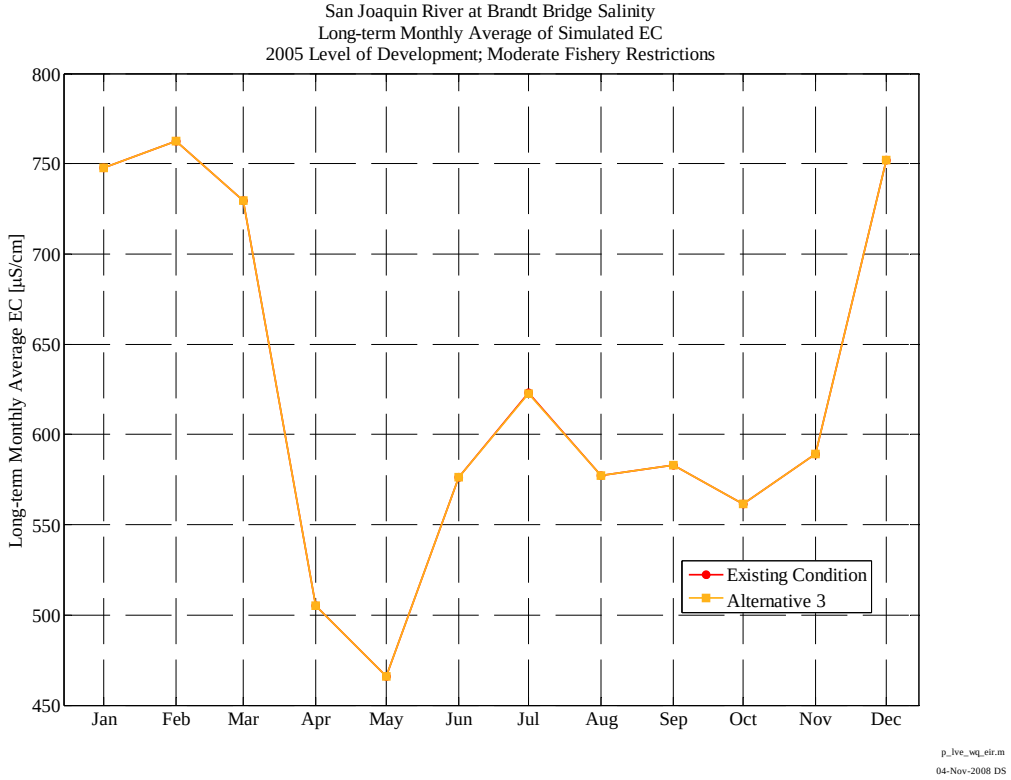
Alternative 3

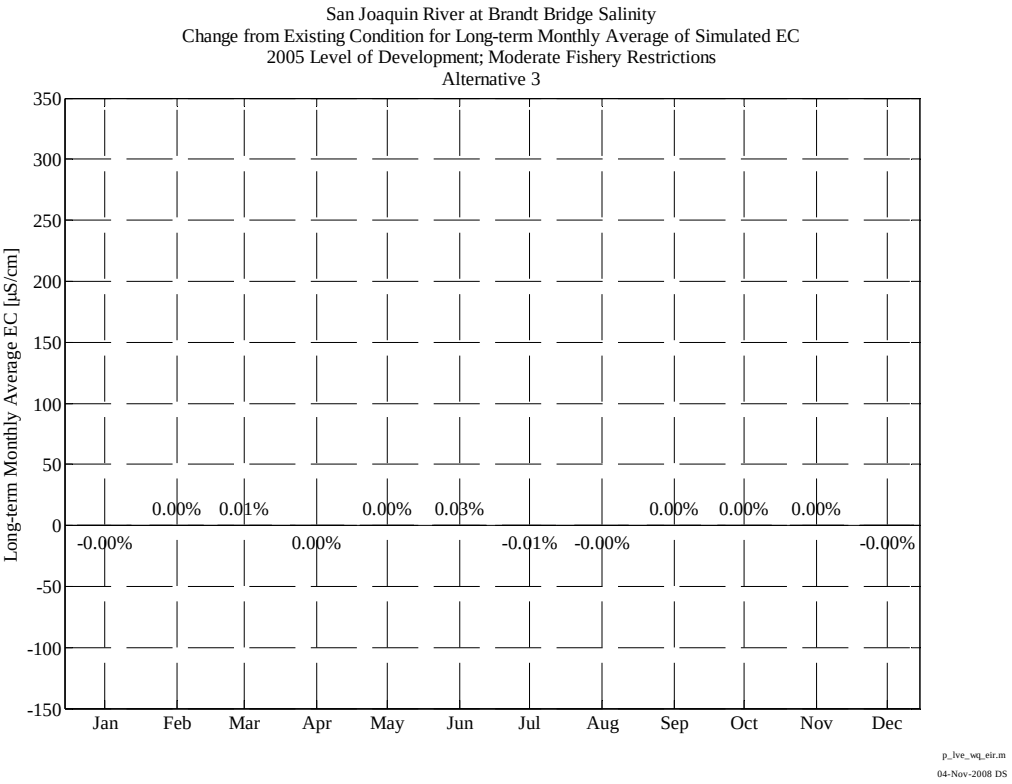
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

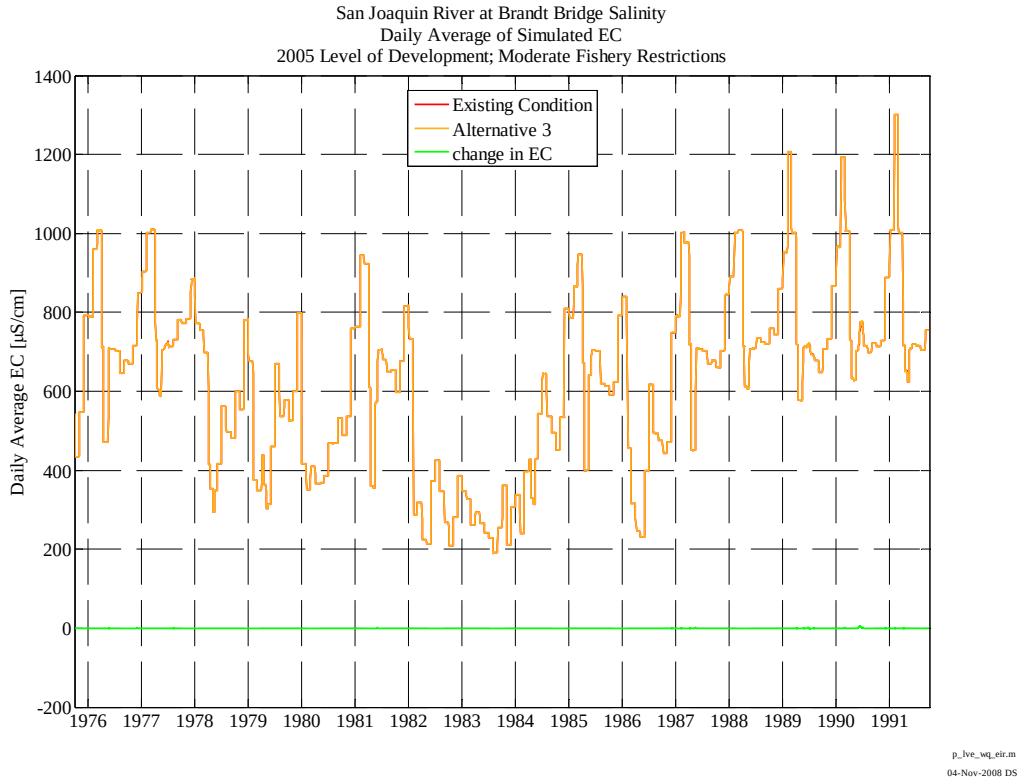
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	616	579	707	703	651	677
1977	670	714	839	900	995	1,009	705	642	716	715	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	353	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	502	461	694	683	653	655
1982	600	673	809	737	301	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	516	699	702	626	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	609	565	707	703	673	677
1988	661	700	832	887	994	1,008	688	652	708	731	725	721
1989	756	744	852	944	1,189	1,016	677	633	715	700	680	649
1990	703	732	856	958	1,176	1,020	721	662	756	726	701	721
1991	713	728	876	998	1,276	1,021	709	663	718	717	707	752
Avg	562	589	752	748	762	730	505	466	576	623	577	583
W/AN/BN	523	532	674	592	405	393	329	298	400	512	442	441
D/C	592	633	813	868	1,041	991	642	597	713	709	683	694

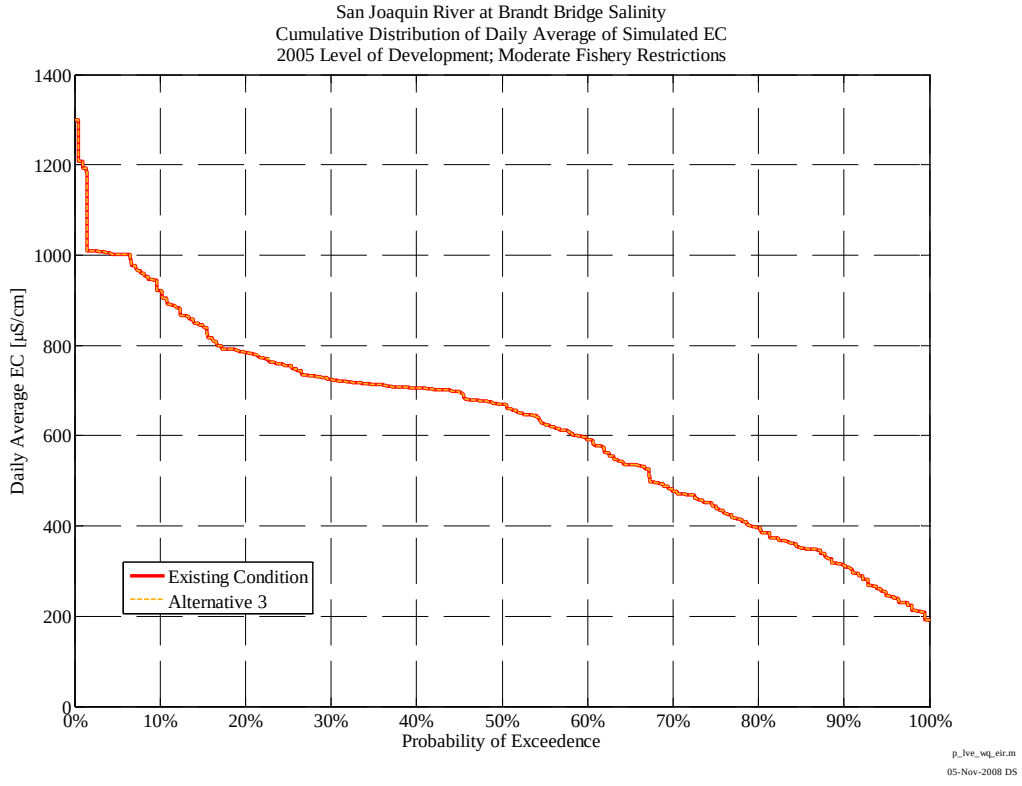
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
-0.00%
0.00%
0.01%
0.00%
0.03%
-0.01%
-0.00%
0.00%
0.00%
0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

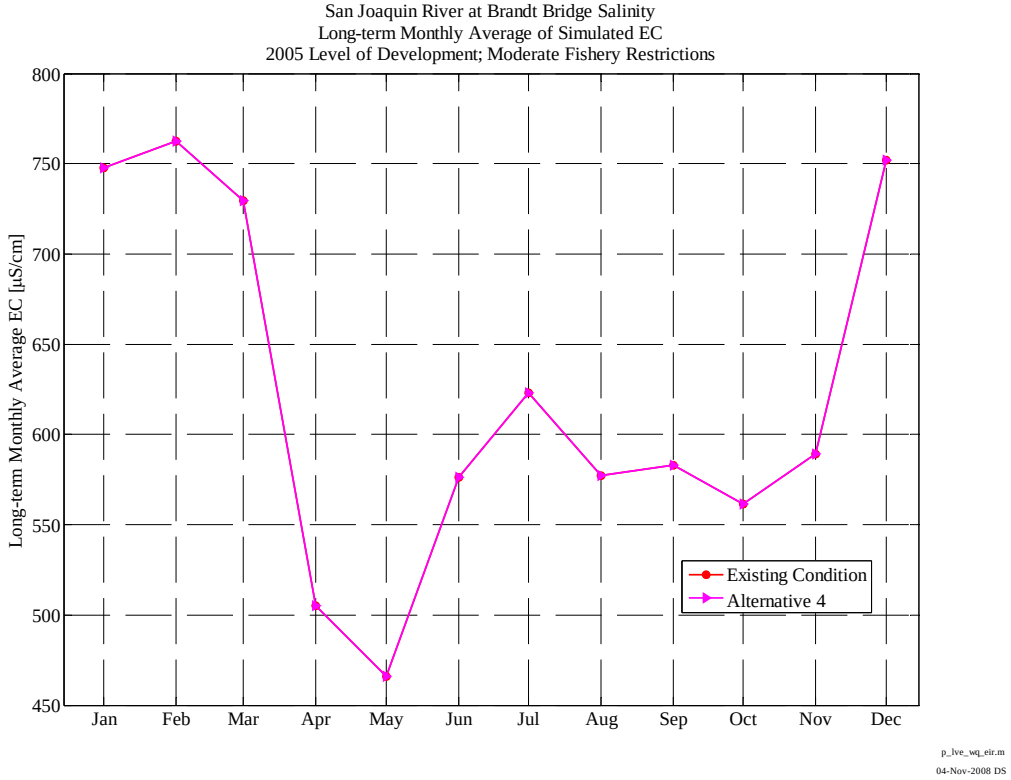
Alternative 4

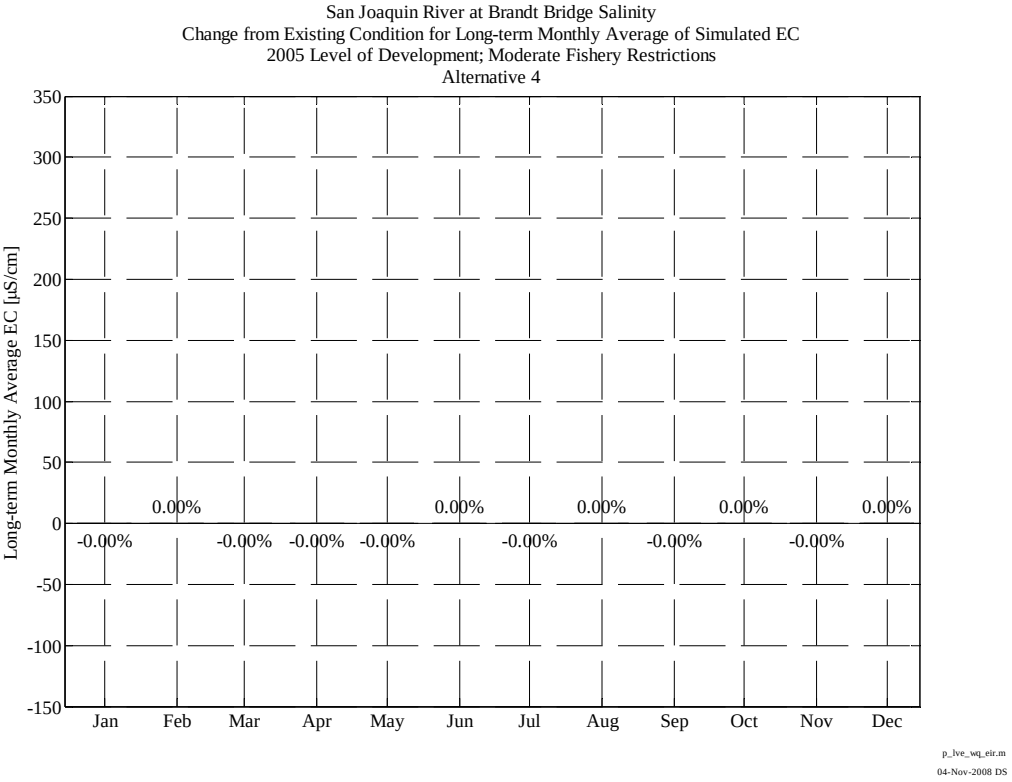
San Joaquin River at Brandt Bridge Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

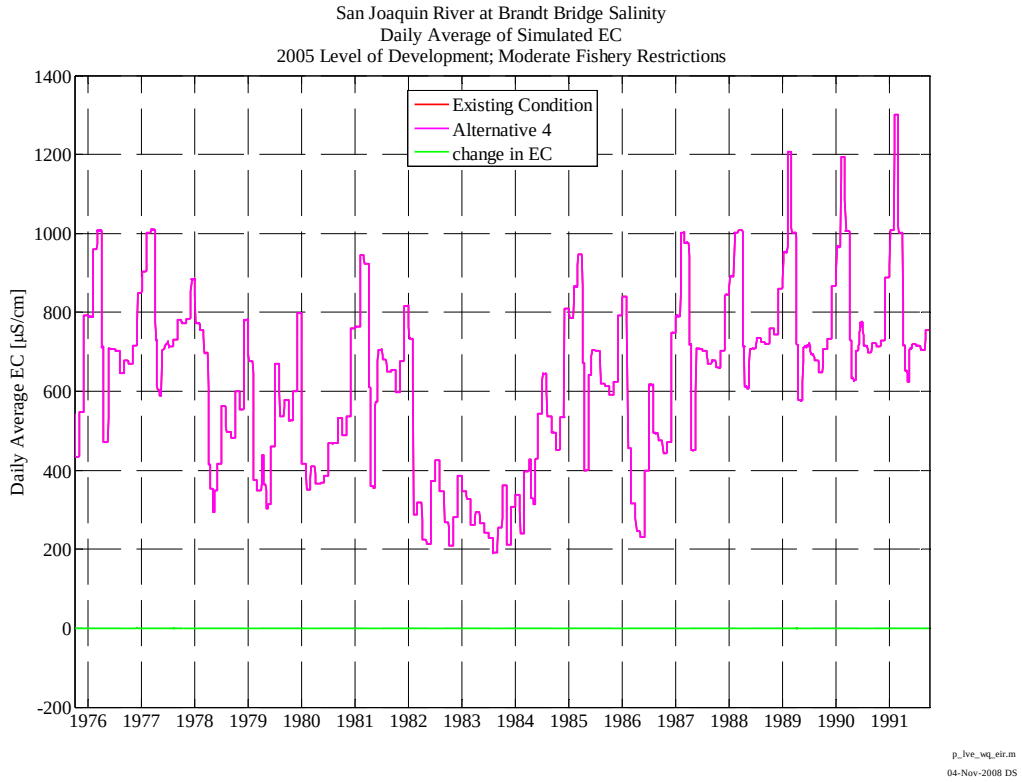
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	438	544	781	789	951	1,004	616	579	707	703	651	677
1977	670	714	839	900	995	1,009	705	642	717	715	729	777
1978	772	783	876	779	755	699	389	323	416	559	500	484
1979	596	557	771	680	384	349	398	310	456	658	543	576
1980	529	596	788	427	353	409	368	367	385	467	468	529
1981	490	534	750	763	935	923	502	461	694	683	653	655
1982	600	673	809	737	301	318	226	214	370	423	349	271
1983	210	280	384	348	328	263	295	267	243	230	192	254
1984	359	215	307	338	243	393	378	371	538	638	542	498
1985	453	532	797	787	861	943	554	516	699	702	626	613
1986	591	622	782	837	468	318	247	231	395	611	500	477
1987	445	470	736	789	989	978	609	565	707	703	673	677
1988	661	700	832	887	994	1,008	688	652	708	732	725	721
1989	756	744	852	944	1,189	1,016	677	633	714	700	680	649
1990	703	732	856	958	1,176	1,020	721	662	753	726	701	721
1991	713	728	876	998	1,276	1,021	710	663	718	717	707	752
Avg	562	589	752	748	762	729	505	466	576	623	577	583
W/AN/BN	523	532	674	592	405	393	328	298	400	512	442	441
D/C	592	633	813	868	1,041	991	642	597	713	709	683	694

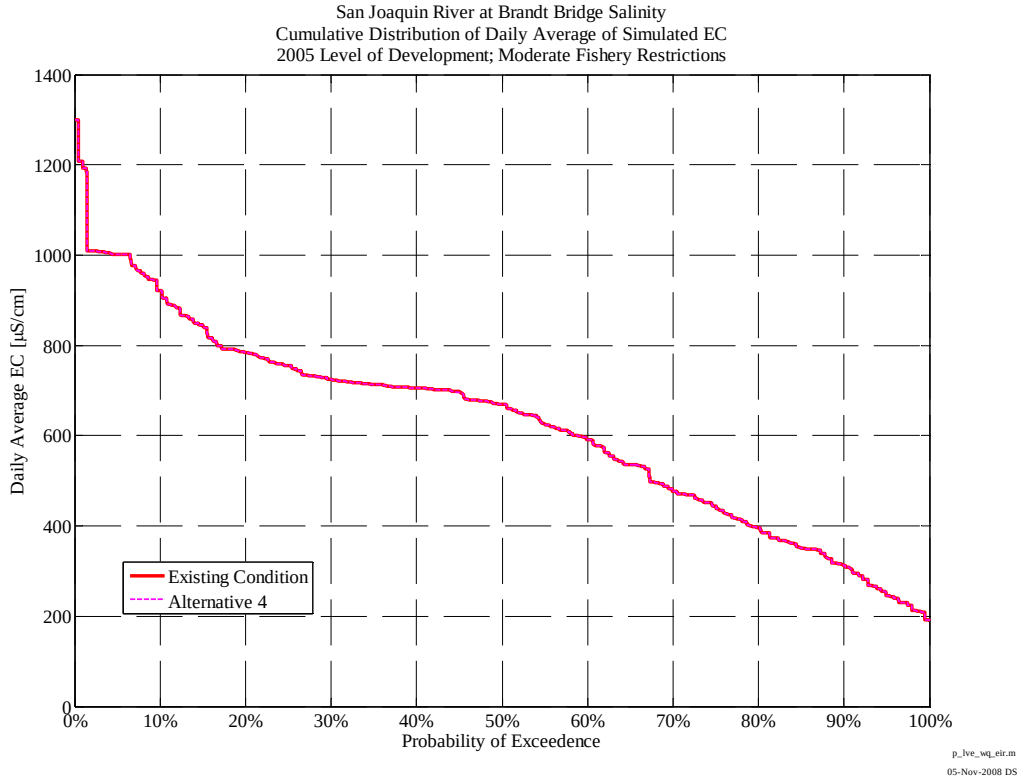
Percent (%) Change from Existing Condition for San Joaquin River at Brandt Bridge
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Brandt Bridge Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Brandt Bridge Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

San Joaquin River at Vernalis

Existing Condition

San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	448	666	532	575
1980	526	598	797	414	349	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	675	647	653
1982	597	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	534	639	531	492
1985	451	532	805	783	864	944	519	516	698	699	616	610
1986	589	622	790	834	452	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	573	699	698	667	675
1988	659	701	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	682	675	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	465	572	619	571	582
W/AN/BN	521	532	678	584	397	389	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

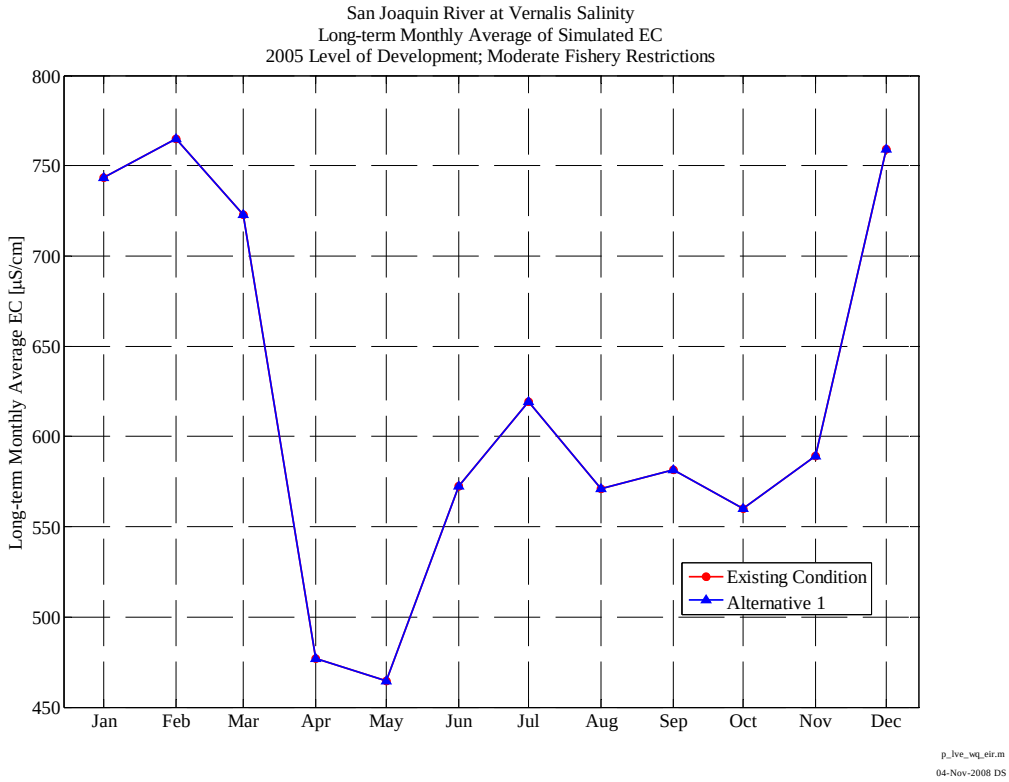
Alternative 1

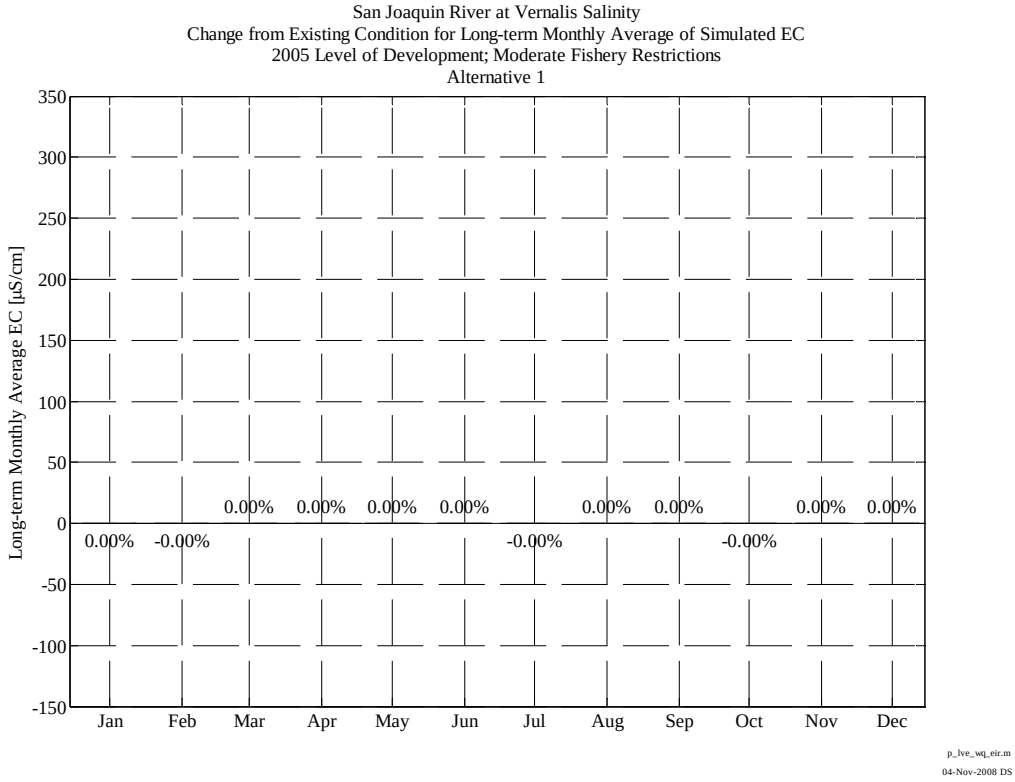
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 1
2005 Level of Development; Moderate Fishery Restrictions

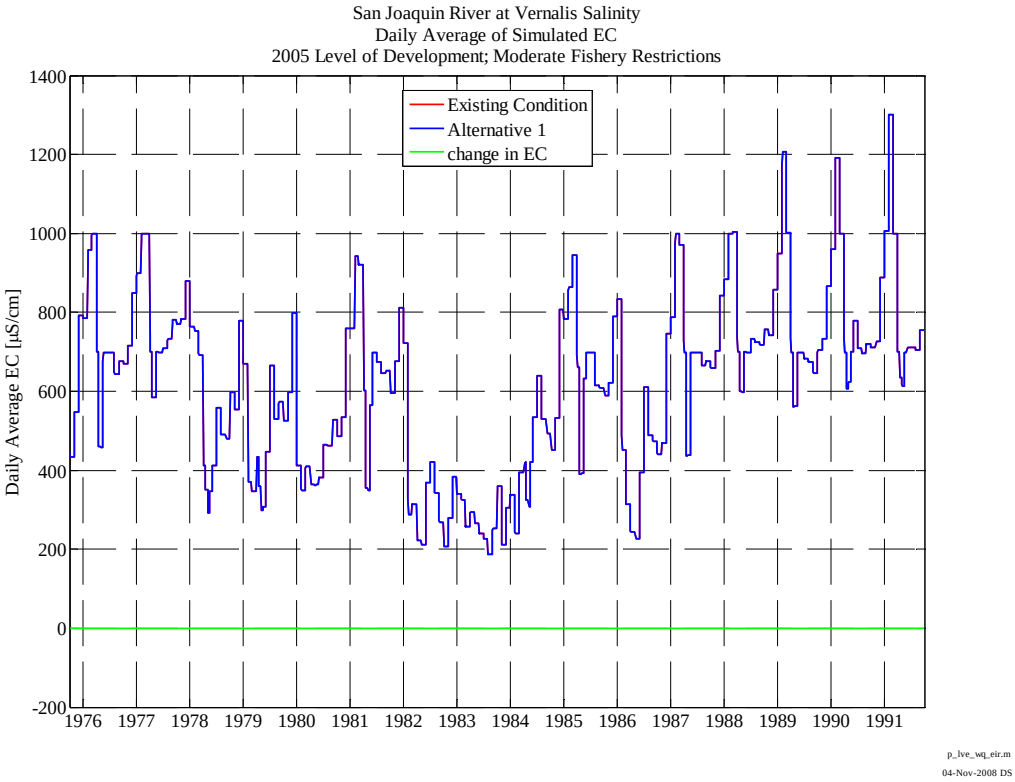
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	448	666	532	575
1980	526	598	797	414	349	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	675	647	653
1982	597	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	534	639	531	492
1985	451	532	805	783	864	944	519	516	698	699	616	610
1986	589	622	790	834	452	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	573	699	698	667	675
1988	659	701	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	682	675	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	465	572	619	571	582
W/AN/BN	521	532	678	584	397	389	325	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

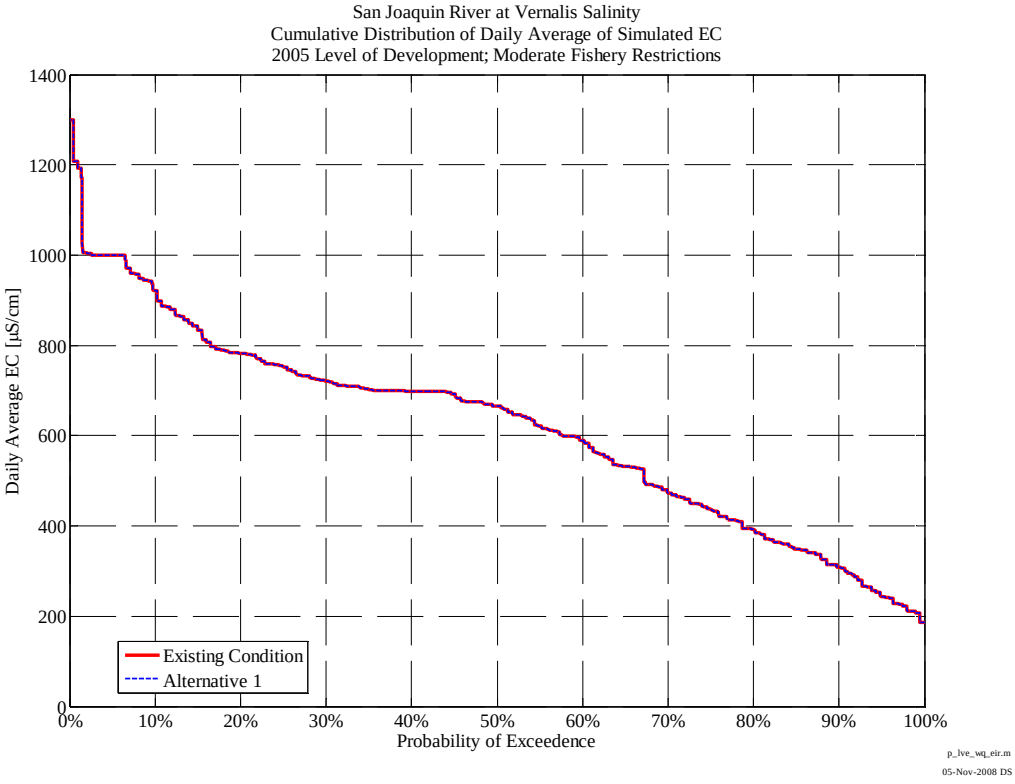
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 1 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 1
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 1
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
0.00%
0.00%
0.00%
0.00%
-0.00%
0.00%
0.00%
-0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 1
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

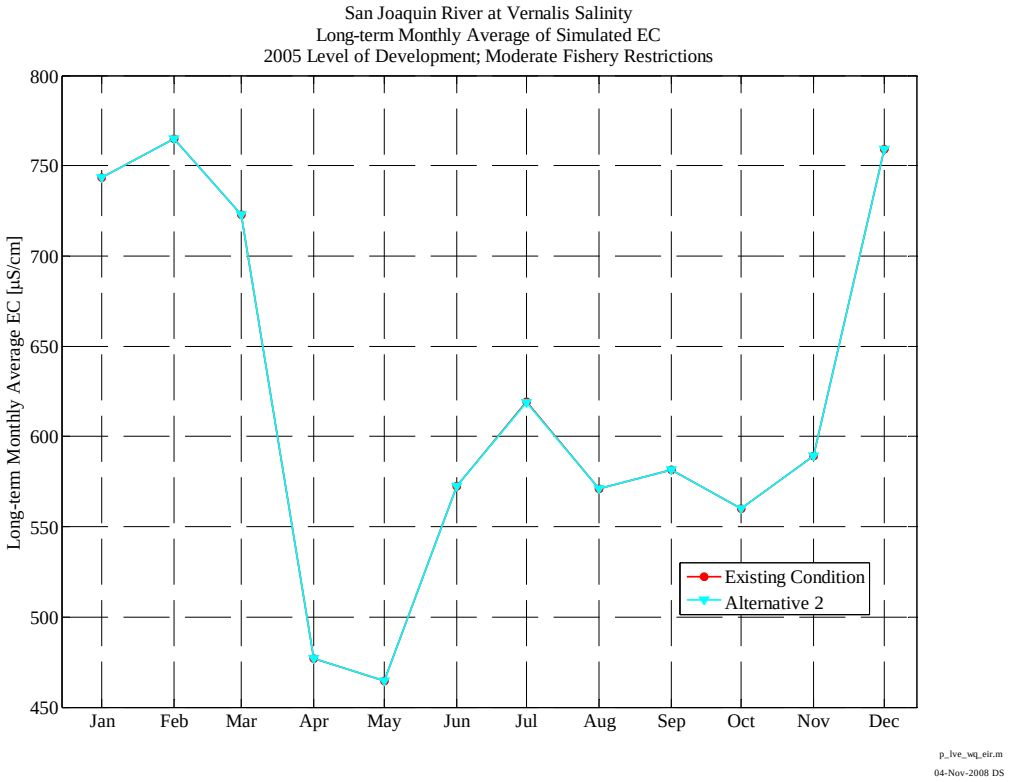
Alternative 2

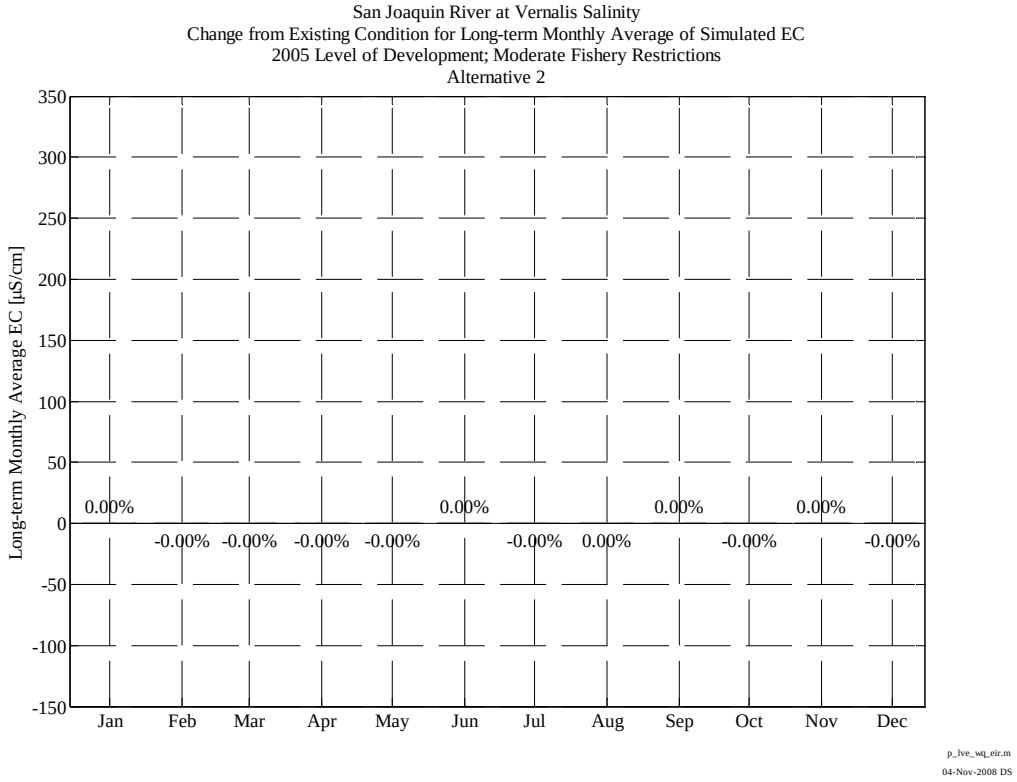
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 2
2005 Level of Development; Moderate Fishery Restrictions

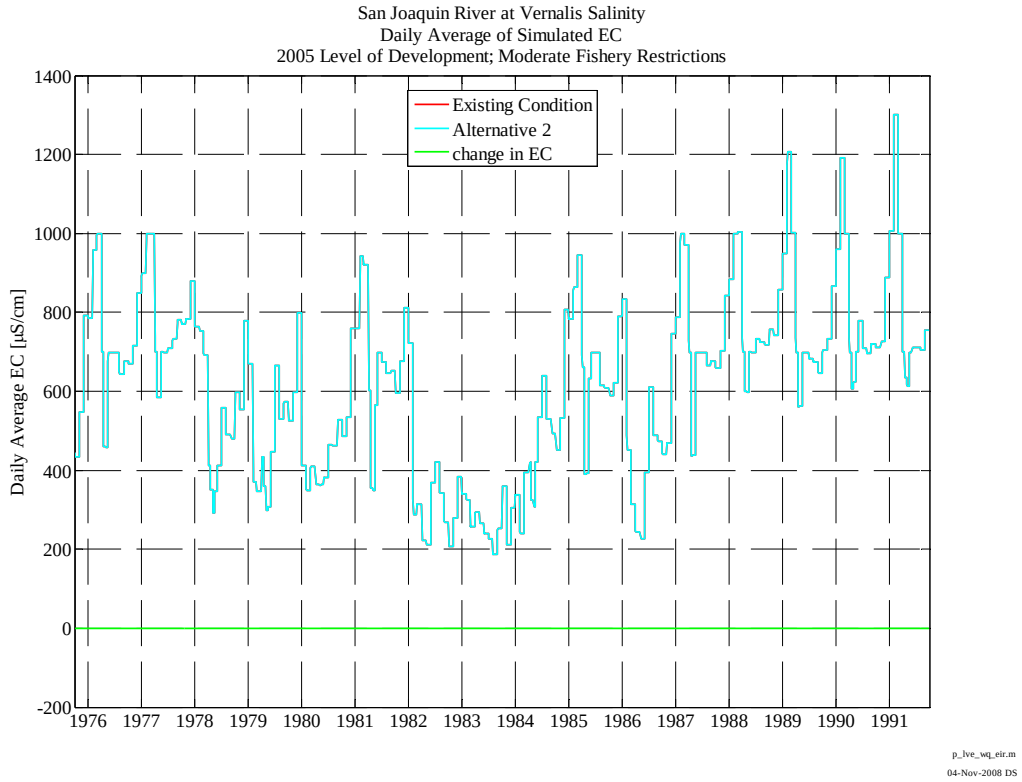
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	448	666	532	575
1980	526	598	797	414	349	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	675	647	653
1982	597	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	534	639	531	492
1985	451	532	805	783	864	944	519	516	698	699	616	610
1986	589	622	790	834	452	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	573	699	698	667	675
1988	659	701	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	682	675	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	465	572	619	571	582
W/AN/BN	521	532	678	584	397	389	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

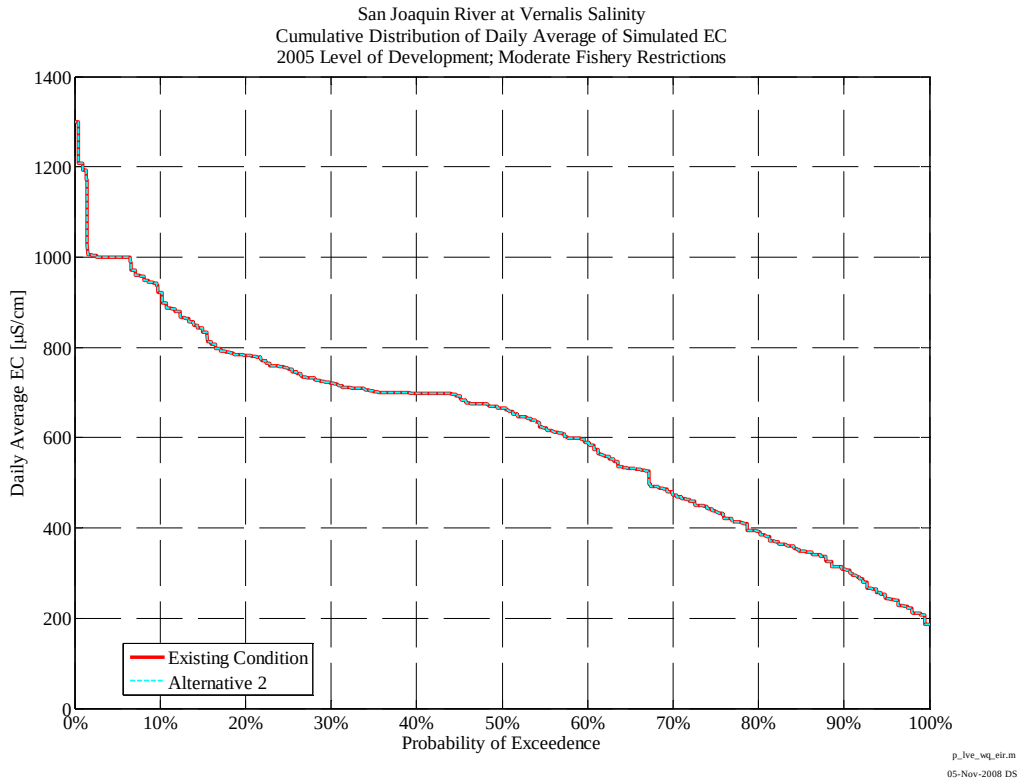
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 2 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 2
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 2
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
0.00%
-0.00%
0.00%
0.00%
-0.00%
0.00%
-0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 2
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

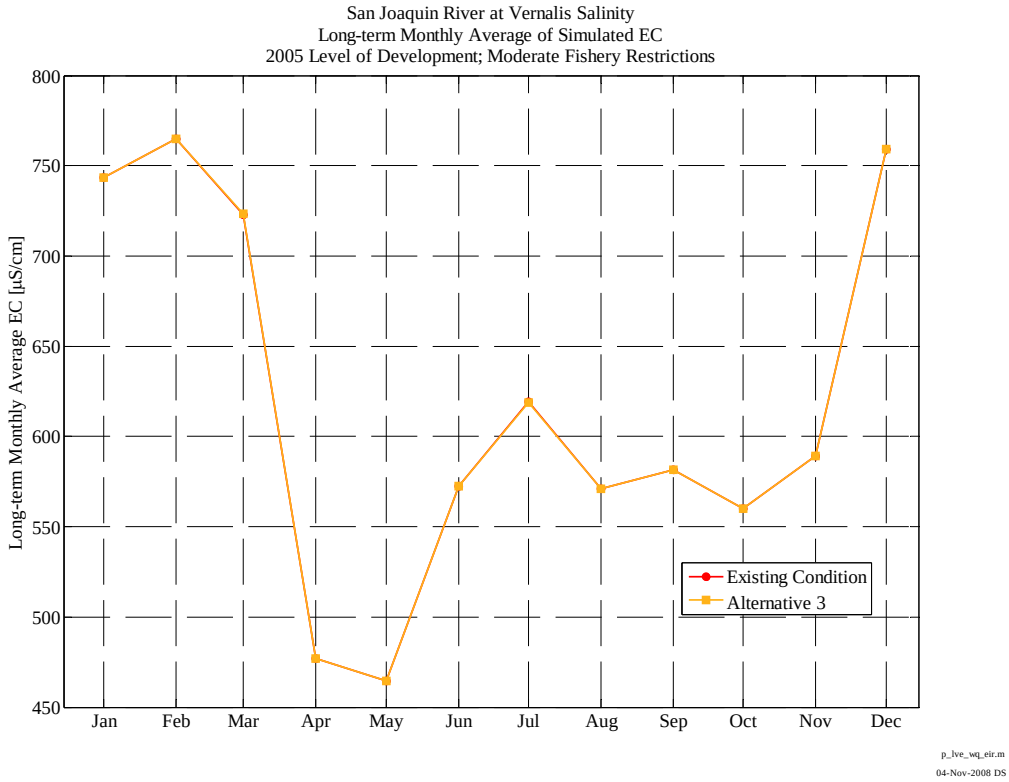
Alternative 3

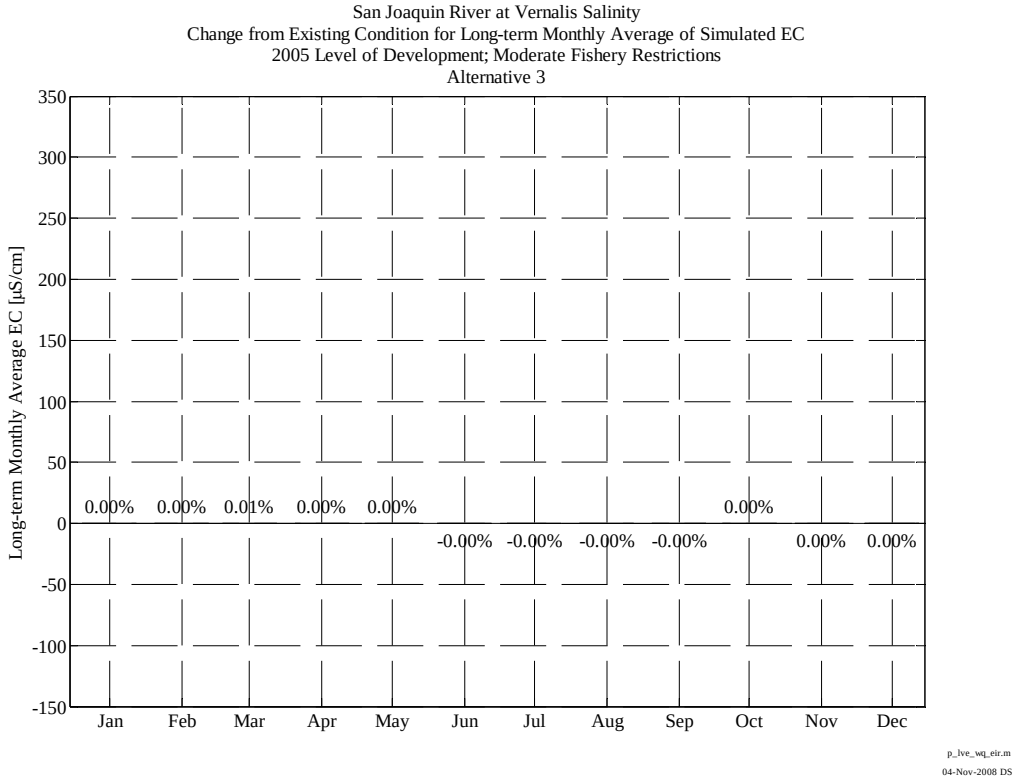
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 3
2005 Level of Development; Moderate Fishery Restrictions

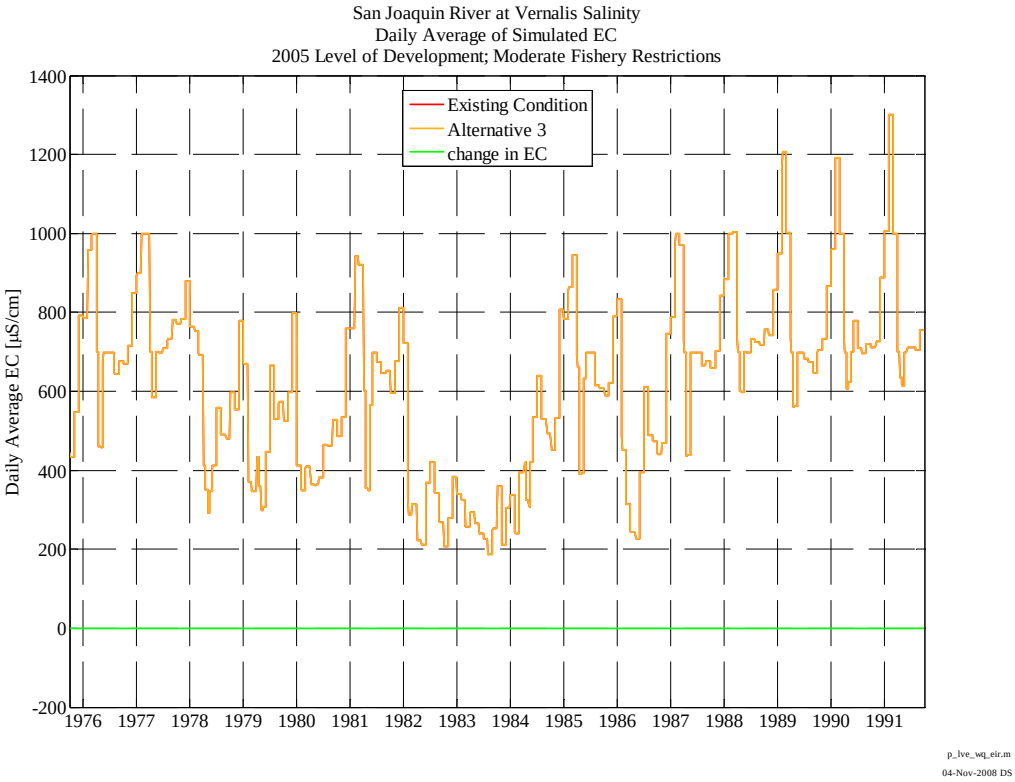
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	693	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	448	666	532	575
1980	526	598	797	414	349	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	675	647	653
1982	597	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	534	639	531	492
1985	451	532	805	783	864	944	519	516	698	699	616	610
1986	589	622	790	834	452	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	573	699	698	667	675
1988	659	701	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	682	675	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	465	572	619	571	582
W/AN/BN	521	532	678	584	397	390	325	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

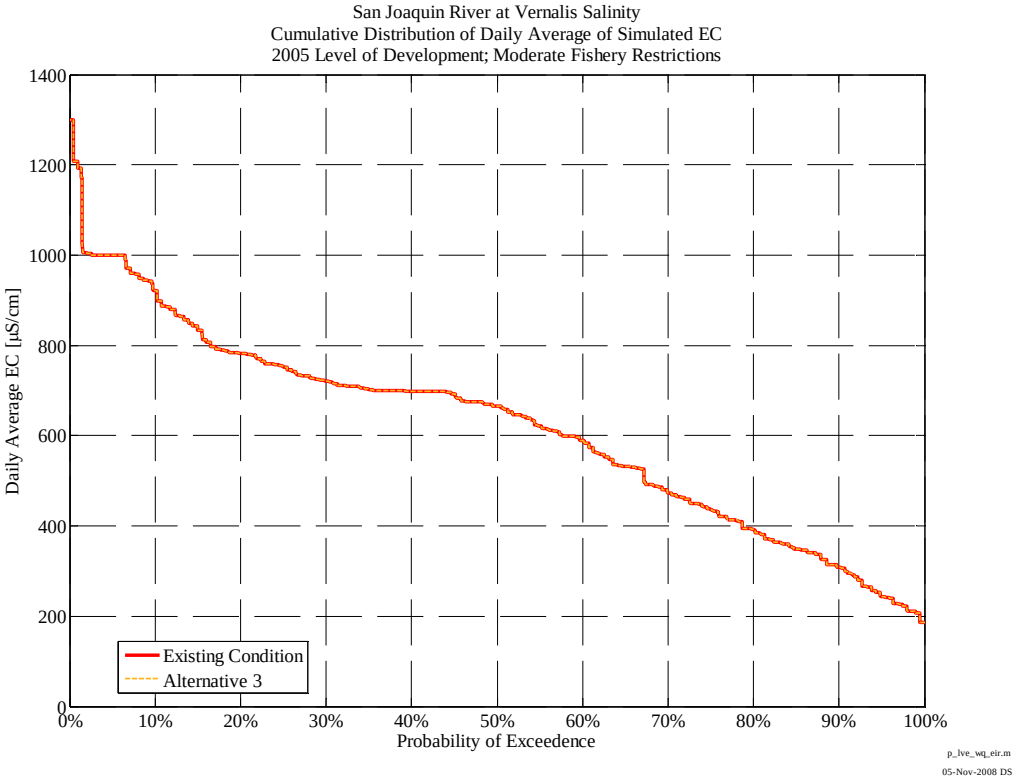
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 3 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 3
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 3
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
0.01%
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 3
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS

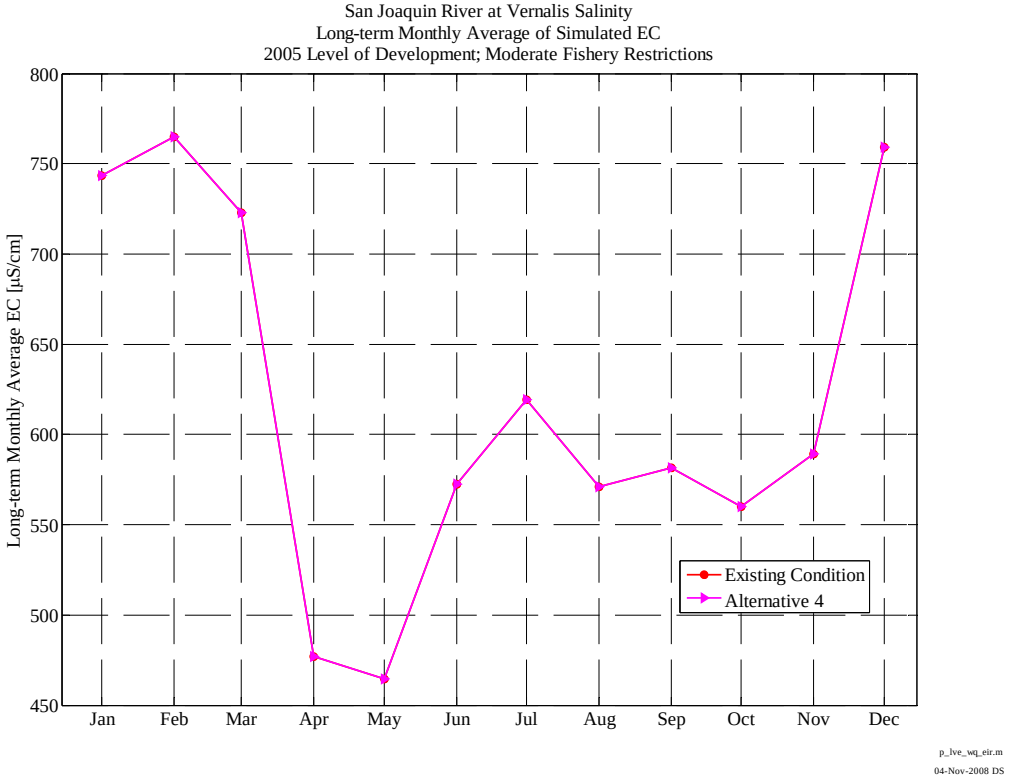
Alternative 4

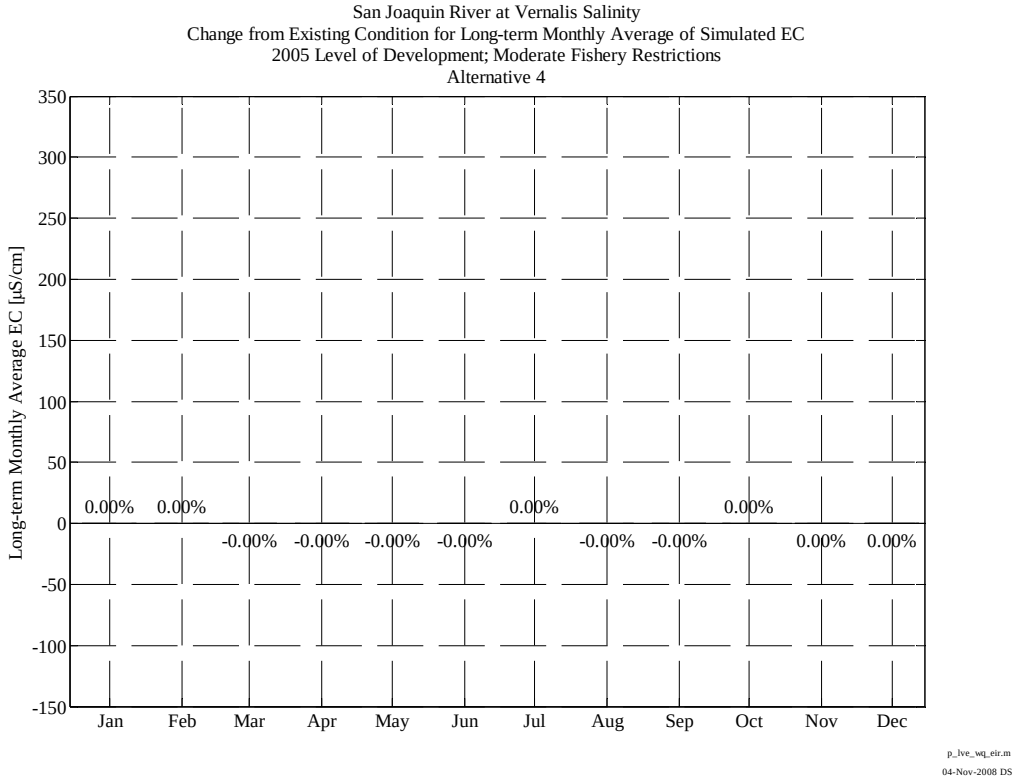
San Joaquin River at Vernalis Salinity
Monthly Average of Simulated Values (EC, µS/cm)
Alternative 4
2005 Level of Development; Moderate Fishery Restrictions

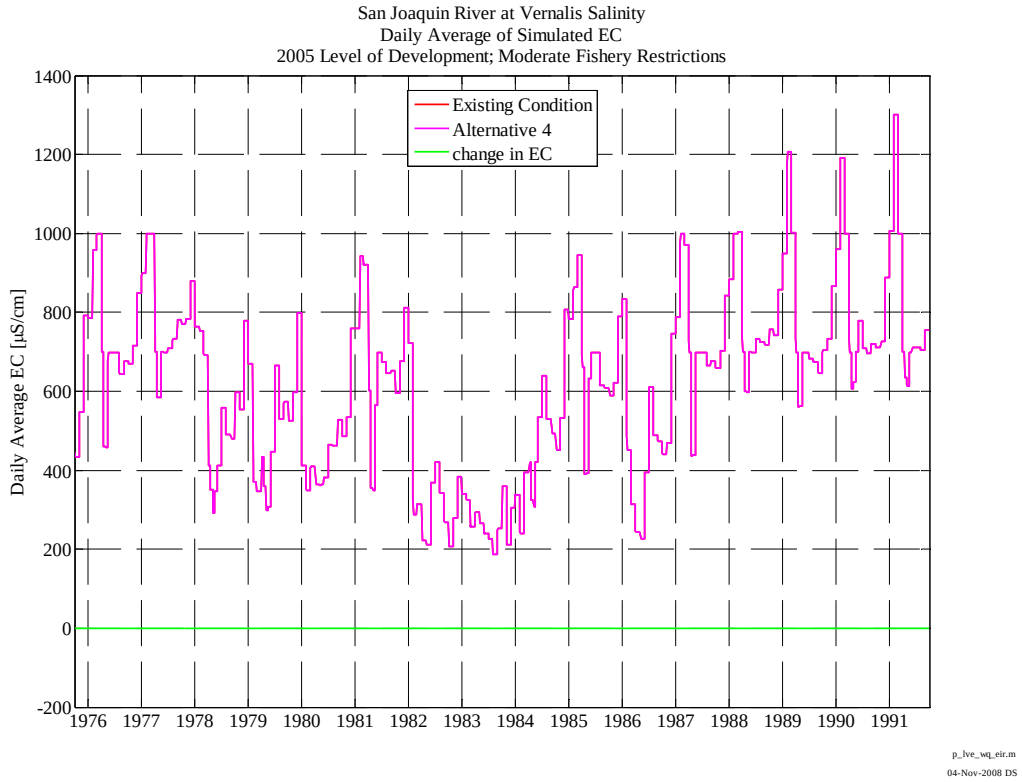
Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	434	547	790	785	957	999	574	582	699	699	644	677
1977	669	715	848	899	1,000	1,000	640	643	699	709	732	781
1978	770	783	879	765	752	692	381	320	413	557	491	480
1979	598	554	779	671	373	346	395	304	448	666	532	575
1980	526	598	797	414	349	409	363	363	382	465	463	528
1981	486	535	758	759	943	921	472	459	698	675	647	653
1982	597	675	812	723	289	313	223	212	369	421	342	267
1983	208	279	385	341	326	257	295	265	241	227	187	253
1984	361	211	306	338	240	395	370	366	534	639	531	492
1985	451	532	805	783	864	944	519	516	698	699	616	610
1986	589	622	790	834	452	314	244	228	394	611	488	473
1987	442	470	746	788	999	972	561	573	699	698	667	675
1988	659	701	842	885	999	1,004	648	650	699	734	724	719
1989	757	742	857	948	1,206	1,002	627	632	698	682	675	646
1990	705	732	865	960	1,191	1,001	652	662	778	710	697	721
1991	710	727	886	1,005	1,299	1,001	667	658	711	712	704	754
Avg	560	589	759	744	765	723	477	465	572	619	571	582
W/AN/BN	521	532	678	584	397	389	324	294	397	512	433	438
D/C	590	634	822	868	1,051	983	595	597	709	702	678	693

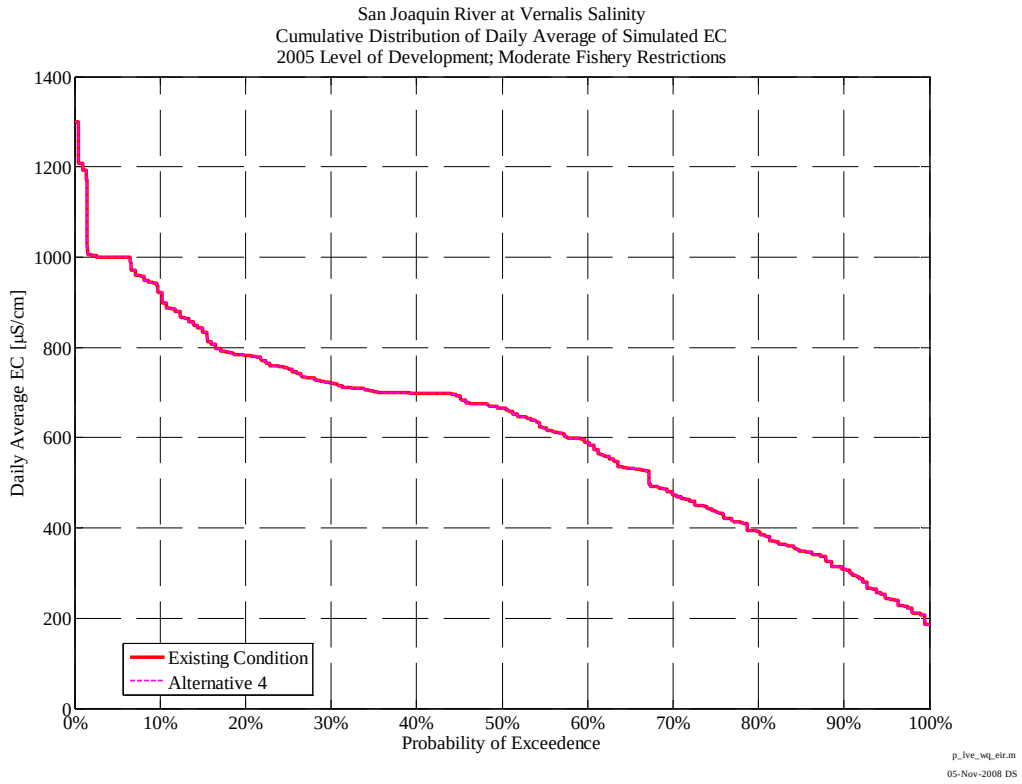
Percent (%) Change from Existing Condition for San Joaquin River at Vernalis Salinity
(Alternative 4 - Existing Condition) / Existing Condition
2005 Level of Development; Moderate Fishery Restrictions

Water Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1976	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1977	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1978	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1979	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1980	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1981	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1982	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1985	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1986	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1987	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1988	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1989	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1990	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Avg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
W/AN/BN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D/C	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%


San Joaquin River at Vernalis Salinity
Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Long-term Monthly Average EC [µS/cm]
800
750
700
650
600
550
500
450
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Existing Condition
Alternative 4
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Change from Existing Condition for Long-term Monthly Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Alternative 4
Long-term Monthly Average EC [µS/cm]
350
300
250
200
150
100
50
0
-50
-100
-150
0.00%
0.00%
-0.00%
-0.00%
-0.00%
-0.00%
0.00%
-0.00%
-0.00%
0.00%
0.00%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
change in EC
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
-200
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991
p_lve_wq_eir.m
04-Nov-2008 DS


San Joaquin River at Vernalis Salinity
Cumulative Distribution of Daily Average of Simulated EC
2005 Level of Development; Moderate Fishery Restrictions
Existing Condition
Alternative 4
Daily Average EC [µS/cm]
1400
1200
1000
800
600
400
200
0
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Probability of Exceedence
p_lve_wq_eir.m
05-Nov-2008 DS