

RECLAMATION

Managing Water in the West

Mid-Pacific Region

Central Valley Project Water Plan 2012



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

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TABLE OF CONTENTS

INTRODUCTION	3
CHAPTER 1: ALLOCATION PROCESS	5
CHAPTER 2: WATER MANAGEMENT ACTIONS TO SUPPORT WATER ALLOCATION	7
Operations for a Full San Luis Reservoir	7
Delta-Mendota Canal/California Aqueduct Intertie Operations	8
Joint Point of Diversion	9
Exchange Contractor Transfers	10
State Water Project Source Shifting	11
Level 2 Refuge Water Diversification.....	12
CHAPTER 3: ACTIONS TO FACILITATE WATER MANAGEMENT	13
Interim Flows Exchange/Transfers	13
North-of-Delta Operational Flexibility	14
Warren Act Contracts.....	15
CHAPTER 4: PLANNING FOR LONG-TERM ACTIONS	17
East-West Conveyance	17
Increasing Water Storage	17
Conveyance.....	18
Basin Study Program	19
Water Reuse and Water Use Efficiency.....	19
ACRONYMS	21

Mission Statement

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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INTRODUCTION

The Bureau of Reclamation has developed the “Central Valley Project Water Plan 2012” to document various programs and projects that are under consideration, or are already being implemented, to improve water availability throughout the Mid-Pacific Region.

An agency of the U.S. Department of the Interior (Interior), Reclamation manages the Central Valley Project (CVP), a complex network of reservoirs and canals across northern and central California that serve the Central Valley and portions of the San Francisco Bay Area and Central Coast of California.

Much of the CVP supply comes from rain and melting snow in the Sierra Nevada mountain range. Releases from reservoirs flow through rivers and canals to the Central Valley and enter the Sacramento-San Joaquin Delta (Delta), where the water helps sustain fish, wildlife and water quality. At the Delta’s southern end, the C.W. “Bill” Jones Pumping Plant moves varying amounts of CVP water supplies to South-of-Delta (SOD) contractors and wildlife refuges.

Reclamation balances allocation of CVP water supplies for agricultural, environmental, and municipal and industrial (M&I) uses. The complex process is driven by numerous factors, including hydrology, water rights, biological opinions, capacity of CVP facilities, and various federal laws such as the Central Valley Project Improvement Act (CVPIA).

In 2012, California again faces many water supply challenges. Even though 2011 was a

wet water year that allowed reservoirs to fill and provided abundant flows in the Sacramento and San Joaquin river systems, the current extremely dry conditions pose risks to threatened and endangered fish species, as well as to the water supplies of the CVP and the State Water Project (SWP). The supplies for agricultural water service contractors throughout the CVP present a particular challenge. Interior, Reclamation, state and local agencies, and other interested parties are working together to identify and secure additional water supplies and create opportunities that will aid water management in the Region.

A workgroup of Reclamation and California Department of Water Resources (DWR) agency representatives and water users was organized to explore opportunities and establish partnerships that could equitably maximize the use of available water resources given current and future hydrologic conditions and operational requirements. The workgroup is taking a proactive approach to identifying strategies, tools and agreements that can be implemented, at the appropriate time, to achieve the desired benefits.

Proposed actions described in this document would provide additional water at the most critical times for the agricultural business cycle, within the physical, regulatory and legal constraints guiding federal and state agencies that manage the CVP and SWP.

This plan describes actions that support CVP water supply allocations, facilitate current water management, and improve water management in the long term.

Water Allocation Workgroup Team

Bureau of Reclamation

Department of Water Resources

Friant Water Authority

Metropolitan Water District

San Joaquin Exchange Contractors

San Luis and Delta-Mendota Water Authority

Westlands Water District



Left: SWP California Aqueduct; Right: CVP Delta-Mendota Canal

CHAPTER 1: ALLOCATION PROCESS

Reclamation is the largest wholesaler of raw water supplies in the United States and provides water under contracts to water districts, wildlife refuges and other entities. These long-term contracts commit Reclamation to provide a maximum quantity of water, subject to availability and shortage criteria. The purpose of the water allocation process is to determine the amount to deliver to each contractor each year. Reclamation must determine how water can be delivered under contract, based on meteorological and hydrological conditions, and other operational and institutional factors. Allocations are usually expressed as a percentage of the maximum contract volumes of water.

Early in the calendar year, California's agricultural water users plan their projected cropping patterns and water needs for the upcoming growing seasons. These projections are critical because farmers consider a multitude of financial issues. Planning their farming operations is dependent upon knowing how much CVP water Reclamation will be able to deliver. The ability to identify water supplies is also critical for municipalities, especially under water shortage conditions.

Currently, technical and operational staffs of the Region's Central Valley Operations (CVO) Office and DWR, coordinate operations of the CVP and SWP at the Joint Operations Center in Sacramento, California.

The water allocation process begins in the fall when CVO staff prepare preliminary forecasts of potential water deliveries based on a number of variables. These variables are included in a forecast computer model for CVP allocations and deliveries. Variables include the amount of CVP water supplies in the reservoirs on October 1 of each year, historical meteorological and hydrologic data, CVP and SWP facility capacities, and historic operational requirements.

Generally, settlement, exchange, and refuge contracts are allocated 100 percent of contract

amounts, if the forecasted inflow to Shasta Reservoir is above 3.2 million acre-feet (MAF). If the forecasted inflow is below 3.2 MAF in early February, these contractors are allocated 75 percent of their contract amount and are notified no later than February 15.

The first allocation of the year for all CVP water contract types is announced about February 20, prior to the beginning of the new water contract year on March 1, and following the release of the official National Weather Service meteorological and DWR runoff forecasts. The forecast model is updated to reflect reservoir levels as of February 1 and estimates of regulatory and environmental requirements based upon conditions. The official allocation uses a set of hydrological conditions that have a 90-percent chance of being wetter (and a 10-percent chance of being drier).

An additional projection of potential deliveries, based upon a set of hydrological conditions which has a 50-percent chance of being wetter (or drier) is also developed. The process is designed such that Reclamation does not over-commit the available water supply or lead farm operators to believe there is more water available than can be delivered.

Existing policy and contract terms define Municipal and Industrial (M&I) shortage provisions during severe or continuing droughts in order to protect public health and safety. For example, when allocation of irrigation water is reduced below 25 percent of contractual entitlements, Reclamation reassesses both the availability of CVP water supplies and CVP water demand. During times of drought and limited water supplies, M&I water allocations to contractors may be reduced below 75 percent of adjusted historical use.

Water Year (WY) 2011 was classified as "wet" and the CVP reservoir storage carryover into WY 2012 was above the historical average. Although California received slightly better than average

Chapter 1: Allocation Process

precipitation for October, conditions turned dry and the Northern Sierra (8-Station) Precipitation Index was only 43 percent of average for November, 4 percent of average for December, and 84 percent of average for January. As of February 1, the total seasonal precipitation in Northern California was about 54 percent of the historical average. Through February 1, the San Joaquin (5-Station) Precipitation Index was about 49 percent of the seasonal average. Runoff into the CVP reservoirs is about half of the volume seen on average for the past 15 years. On February 1, 2012, the DWR Sacramento Valley Water Year Type Index was classified as “critical” for the 90-percent exceedence forecast and “dry” for the

50-percent exceedence forecast. The February 1, 2012, San Joaquin Valley Index is classified as “critical” and “dry” for the 90-percent and 50-percent exceedence forecasts, respectively.

Chapter 2 of this report is focused on how Reclamation could potentially increase allocations to CVP contractors earlier in the season without overestimating the allocation.

For the most current information on Reclamation’s water allocation for WY 2012, visit the Mid-Pacific Regional Office website at <http://www.usbr.gov/mp/PA/water/index.html>.



C.W. "Bill" Jones Pumping Plant

CHAPTER 2: WATER MANAGEMENT ACTIONS TO SUPPORT WATER ALLOCATION

In order to see an improvement in the variables that factor into the allocation, one or more of the following must occur:

1. An increase in CVP facility capacities and/or availability to reduce effects related to regulatory and environmental requirements.
2. Identification of a new potential source of water supply that can be delivered under current conditions.
3. Increased precipitation.
4. Reduction in water demands.

Actions to support the 2012 water allocation include: Operations for a Full San Luis Reservoir; Delta-Mendota Canal/California Aqueduct (DMC/CA) Intertie Operations; Joint Point of Diversion; Exchange Contractor Transfers; SWP Source Shifting; and Level 2 Refuge Water Diversification. The action description, action plans, authorization, project costs, and Reclamation contracts are as follows:

Action Plan

Action	Responsible Parties	2012 Due Date
- Complete Section 215 contracts	Reclamation	Completed
- Deliver Section 215 water as hydrologic conditions allow	Reclamation	Completed

Authorization	Section 215 of Reclamation Reform Act of 1982
Project Costs	No known additional costs
Contacts	Liz Kiteck, Central Valley Operations, 916-979-2684

Operations for a Full San Luis Reservoir

The following actions are intended to increase the quantity of water south of the Delta and improve San Luis Reservoir storage for the 2012 contract year (March 1, 2012 to February 28, 2013). These actions will help maximize earlier allocations and provide greater certainty in later allocations:

- Make maximum availability of Section 215 water as soon as the federal share of San Luis Reservoir is nearly full and excess water is available via Jones Pumping Plant.
- Establish a manageable rescheduled water quantity that can reasonably be used by the end of March 2012 and provide more certainty about 2012 supplies.

Next Steps

- Enter into agreements with districts for Section 215 water.

Delta-Mendota Canal/California Aqueduct Intertie Operations

The purpose of the project is to connect the SWP and CVP conveyance facilities to alleviate capacity constraints in the Delta-Mendota Canal (DMC) and provide water supply reliability and flexibility in the CVP and SWP conveyance facilities.

The project consists of a pumping station and pipeline to convey water to the California Aqueduct (CA) from Mile Post 7.2 of the DMC. Power is provided from the Western Area Power Administration substation near the Jones Pumping Plant. The DMC/CA Intertie pumping station will have an initial capacity of 467 cubic feet per second provided by four 1,000 horsepower vertical turbine pumps. The capacity of the pumping station can be expanded to 700 cubic feet per second by adding two additional pumps. The water will be conveyed via two 108-inch diameter pipelines. The water will flow under pressure from

the DMC to the CA and by gravity from the CA to the DMC.

The DMC/CA Intertie will improve operations in three ways: (1) improve water supply reliability; (2) support maintenance and repair of CVP and SWP Delta export and conveyance facilities; and (3) provide operational flexibility to respond to emergencies related to both the CVP and SWP.

These are the project milestones leading to completion of the Intertie:

- December 2009 - Record of Decision
- February 2010 - Design completed
- May 2010 - Agreement with DWR on construction, operation and maintenance
- July 2010 - Construction contract awarded
- October 2010 - Mobilization and groundbreaking
- April 2012 - Construction completion

Action Plan

Action	Responsible Parties	2012 Due Date
- Develop annual DMC/CA Intertie operation schedule	Reclamation, SLDMWA, DWR	March
- DMC/CA Intertie Operational	Reclamation	April
- Coordinate with DWR to assess the potential for available capacity in the Aqueduct	Reclamation, DWR	Ongoing
- Ongoing capacity monitoring	Reclamation, DWR	Ongoing
Authorization	CALFED Bay-Delta Authorization Act of 2004	
Project Costs	Costs of project use energy are allocated to contractors	
Contacts	Liz Kiteck, CVO, 916-979-2684	

Joint Point of Diversion

State Water Resources Control Board (SWRCB) Water Rights Decision 1641 (D-1641) authorized the Joint Point of Diversion (JPOD), which allows Reclamation and the DWR to each make their Delta pumping facilities available to the other agency for pumping and conveyance of water by written agreement. Reclamation is contemplating a JPOD Stage 1 action at DWR’s Harvey O. Banks Pumping Plant (Banks) that would increase allocations by increasing pumping at Banks when capacity is available. Stage 1 diversions or re-diversions at Banks have historically been used to recover export reductions taken to benefit fish.

According to D-1641, use of JPOD is subject to an operations plan that protects fish and wildlife and other legal users of water. JPOD pumping occurs only under certain conditions, including acceptable salinity levels as determined by X2 locations. X2 is a measurement of the distance from the Golden Gate Bridge to the locations in the Delta where average near-bottom salinity measures 2 parts per thousand.

In addition, exports to recover water due to fishery actions are subject to the following provisions:

- Total exports may not increase above that which would have been exported without the use of Banks:

- Recovery of export reductions must occur within 12 months of the time the exports are reduced.
- Reclamation must consult with Department of Fish and Game (DFG), Fish and Wildlife Service (FWS), and National Marine Fisheries Service (NMFS) before using JPOD. Consultation with the CALFED Operations group satisfies this requirement. Coordination with the SWRCB is also required.

Dedicated capacity at Banks would increase allocations at times where capacity is available to increase pumping. This action would not be borrowing against the water supply for the subsequent water year.

Next Steps

- DWR to determine available capacity at Banks for JPOD.
- Reclamation consults with DFG, FWS and NMFS.
- Reclamation submits coordinated operations to the SWRCB for approval.

Action Plan

Action	Responsible Parties	2012 Due Date
- Coordinate monthly with DWR to assess the potential for available capacity at Banks	Reclamation, DWR	Ongoing
- Ongoing capacity monitoring	Reclamation, DWR	Ongoing

Authorization	SWRCB Water Rights Decision 1641
Project Costs	Conveyance costs to move water in the California Aqueduct from Banks to O’Neill Forebay
Contacts	Liz Kiteck, CVO, 916-979-2684

Exchange Contractor Transfers

This action includes the Exchange Contractors using alternative sources of water supply to delay use of CVP Delta water supplies. This provides more Delta water supplies for delivery to farmers on the west side of the San Joaquin Valley during the irrigation season. Delta water supplies are either purchased from the Exchange Contractors or returned in the fall and winter. Reclamation approves an operational modification of scheduled deliveries of substitute water made available to the Exchange Contractors under the terms and conditions provided in the Cooperative Agreement between the United States of America and the Central California Irrigation District for the Conveyance of Wildlife Water Supplies (98-FC-20-116770), with the additional condition that any unused water in January through March

may be rescheduled for delivery in April through December.

Exchange Contractor transfers are intended to maximize the operation of San Luis Reservoir for mutual benefit for both Reclamation and the Exchange Contractors by allowing Reclamation to temporarily store additional quantities of CVP water that are dedicated to meet Exchange Contractors' demands, and by allowing the Exchange Contractors the benefit of excess water deliveries during those periods that normally exceed their monthly allocation.

Next Steps

- Reclamation to prepare and approve the letter requesting the rescheduling of water.
- National Environmental Policy Act (NEPA) compliance, if federal funding is used.

Action Plan

Action	Responsible Parties	2012 Due Date
- Issue approval letter and new schedule to Exchange Contractors	Reclamation	January
- Develop a purchase agreement to be used in the event additional water becomes available for purchase	Reclamation, Exchange Contractors	August
- Finalize Environmental Assessment for the purchase agreement, if necessary	Reclamation	August

Authorization	Reclamation Act of 1939
Project Costs	Purchase agreement costs, if necessary
Contacts	Sheri Looper, Resources Management, 916-978-5556

State Water Project Source Shifting

The Metropolitan Water District (MWD) will use alternative water supplies while all or a portion of their SWP supplies remain in storage in San Luis Reservoir to augment early CVP allocations, allowing full use of the CVP storage in the reservoir. MWD will take delivery of their supplies after Low Point has been reached and prior to the end of the calendar year. The amount of water that will be called upon will be dependent on MWD’s SWP allocation and CVP allocations. The trigger point for MWD participation occurs when its SWP allocation reaches approximately 30 percent.

This action could help to bolster an earlier, higher allocation by allowing Reclamation to support a lower federal storage in San Luis Reservoir. This

action will not increase the available water to allocate since it will be returned to MWD after Low Point although it will allow the delivery of water earlier in the irrigation season.

Next Steps

- Once the SWP allocation reaches 30 percent or better, MWD will enter into a source shifting agreement with the San Luis and Delta Mendota Water Authority (SLDMWA).
- Reclamation to help facilitate source shifting agreement.
- As CVP allocation increases, the amount of source shifting will be reevaluated.
- NEPA compliance.
- Temporary Consolidated Place of Use.

Action Plan

Action	Responsible Parties	2012 Due Date
- Complete a term sheet for action item	MWD, DWR, Reclamation	Completed
- Determine costs associated with action and repayment responsibilities	MWD, Reclamation, SLDMWA	Completed
- Submission by MWD of revised water schedules for DWR review and approval	MWD, DWR	March
- Facilitate completion of any necessary environmental compliance	Reclamation	March
- Secure temporary consolidated place of use	Reclamation	March
- Complete Source Shifting Agreement between SLDMWA and MWD	MWD, SLDMWA	March
- Contract signing and fee deposit required	MWD, SLDMWA	March
- Begin adjusting operations to access alternative water supplies	MWD	March or April
- Water delivery occurs	MWD	April through December
Authorization	CALFED Bay-Delta Authorization Act of 2004	
Project Costs	If unbalanced exchange, water and power costs will be incurred	
Contacts	Paul Fujitani, CVO, 916-979-2197	

Chapter 2: Water Management Actions to Support Allocation

Level 2 Refuge Water Diversification

Beginning in 2012, up to 10 groundwater wells in the Grasslands Resource Conservation District and the Grassland Water District (GWD) will be available to produce additional water annually. Half of the water will be used to meet refuge Level 2 water demands in lieu of using CVP water with a like amount of water going back into the CVP yield and allocated to meet demands on the west side of the San Joaquin Valley. The remaining half will be purchased and used to meet refuge Incremental Level 4 water needs in the San Joaquin Valley.

The quantity of water that can be pumped will be determined by yield and water quality tests, performed prior to completing the well projects. The water will be discharged into the GWD's water conveyance system and directly into the DFG's China Island Unit of the North Grasslands

Wildlife Management Area. Well operation, water quality monitoring, and associated mitigation measures would be implemented to insure that all Central Valley Regional Water Quality Control Board water quality standards are met. To limit any groundwater or water quality related impacts, use of these wells could be increased in dry years and decreased in wet years when CVP agricultural water allocations are higher.

This action would increase the available CVP water supply. This water will be "new" water available to allocate.

Next Steps

- Completion of well refurbishment and construction.
- Monitoring for water quality and water availability for use.

Action Plan

Action	Responsible Parties	2012 Due Date
- Finish determining pumping rates and water quality	Reclamation	June
- Develop Operations & Maintenance (O&M) and purchase agreements	Reclamation	June
- Develop water quality monitoring plan	Reclamation	June
- Complete construction of new and refurbished wells	Reclamation	July
Authorization	Central Valley Project Improvement Act of 1992 and Emergency Drought Relief Act of 1991	
Project Costs	O&M costs once wells are constructed	
Contacts	Tim Rust, Resources Management, 916-978-5516	

CHAPTER 3: ACTIONS TO FACILITATE WATER MANAGEMENT

Actions to facilitate water management in the 2012 water year include: Interim Flows Exchange/Transfers; North-of-Delta (NOD) Operational Flexibility; and Warren Act Contracts. The action descriptions, action plans, authorizations, project costs, and contacts are as follows:

Interim Flows Exchange/Transfers

Interim San Joaquin River flows recaptured and made available for recirculation to the Friant Division Contractors from San Luis Reservoir will be used to augment the water supplies of the west side CVP contractors during the peak irrigation season. After the peak irrigation season, a like amount of water will be returned to the Friant Contractors from San Luis Reservoir for delivery, transfer, sale, or exchange.

Recirculation water available in San Luis Reservoir could be used to bolster an earlier and higher allocation, but is not a “new” source of

water. In addition, any transfer, sale, or exchange between the Friant Contractors and the west side CVP contractors is considered to be a third party transfer, sale, or exchange and does not affect the west side contractors CVP allocation.

Next Steps

- 2012 Recapture and Recirculation Plan submitted by Reclamation to SWRCB pursuant to San Joaquin River Restoration Program (SJRRP) 2011-2012 water rights decision.
- Agreement among Friant Contractors, west side CVP contractors, and Reclamation on the terms and conditions for using recirculation water to augment west side CVP contractors’ supplies.
- Finalization of Water Year 2012 Recirculation environmental compliance.
- Return of water in San Luis Reservoir to the Friant Contractors.

Action Plan

Action	Responsible Parties	2012 Due Date
- Agreement among parties on terms and conditions	Friant Contractors, SLDMWA, Reclamation	March
- Determine and make available quantities of water for use by west side CVP contractors	Reclamation	March through August
- Ongoing water accounting	DWR, Reclamation	March through February
- Environmental Assessment	Reclamation	March
- Return water to Friant Contractors via San Luis Reservoir	Reclamation	August through February
Authorization	San Joaquin River Restoration Settlement Act of 2008	
Project Costs	No known additional costs	
Contacts	Mario Manzo, San Joaquin River Restoration Program, 916-978-5462	

Chapter 3: Actions to Facilitate Water Management

North-of-Delta Operational Flexibility

The NOD water contractors have sought to reduce the large variability in their project water allocations through the precipitation season. Reclamation is seeking to develop operational flexibility options to improve the early season water supply for the NOD water contractors to reduce the differences between the initial water supply allocations and the final allocations.

Options may include supplemental water supply actions such as offering Section 215 water or

Article 3f water pursuant to Reclamation long-term water service contracts, which is water that can be made available in addition to contract amounts. Opportunities may develop to add operational flexibility in scheduling and delivery of water to NOD water contractors.

Next Steps

- Continue to monitor and respond to hydrologic conditions in the Sacramento Valley.

Action Plan

Action	Responsible Parties	2012 Due Date
- Evaluate hydrology and CVP water supply	Reclamation	June
- Develop process to improve NOD allocations in the early season water supply	Reclamation	June

Authorization	Reclamation Reform Act of 1982
Project Costs	No known additional costs
Contacts	Paul Fujitani, CVO, 916-979-2197



Delevan Wildlife Refuge

Warren Act Contracts

Reclamation is authorized to enter into contracts with municipalities, public water districts and agencies, other federal agencies, and private entities pursuant to the Warren Act of 1911 for the

use of excess capacity in the CVP facilities for the impoundment, storage, and conveyance of non-CVP water for agricultural, domestic, municipal, industrial, fish and wildlife, and other beneficial purposes.

Action Plan

Action	Responsible Parties	2012 Due Date
- Complete Warren Act contracts	Reclamation	Ongoing as requested
- Facilitate completion of any necessary environmental compliance	Reclamation	Ongoing as requested

Authorization	Warren Act of 1911
Project Costs	Incurred storage, conveyance and power costs reimbursable by water CVP contractors
Contacts	Angela Slaughter, Resource Management, 916-978-5250



Folsom Dam



Central Valley Project map

CHAPTER 4: PLANNING FOR LONG-TERM ACTIONS

Reclamation, DWR, and partner agencies are studying long-term actions to improve available water supplies throughout most of California.

East-West Conveyance

Depending on funding availability, Reclamation could assist local districts in preparing appraisal studies, which may ultimately result in the construction of additional conveyance infrastructure. If studies indicate a federal interest and Congress provides authorization, federal funding could be appropriated for construction and/or use of new conveyance facilities that extend to the DMC. Such facilities could be used to convey water from the San Joaquin River to the DMC before it reaches the Delta. The following districts have indicated an interest in expanding their conveyance facilities:

- Banta-Carbona operates a 200 cfs pumping plant with a 60 cfs conveyance facility that extends into the CVP service area. Future plans include expanding the conveyance facility to 200 cfs.
- Patterson Irrigation District has proposed two pipelines: 100 cfs and 200 cfs capacity. The larger pipeline is estimated to cost approximately \$25 million and would convey up to 95 thousand acre-feet (TAF) of water from east side water purveyors for agriculture on the west side.
- West Stanislaus Irrigation District envisions constructing a pipeline estimated to cost about \$4.25 million.

Increasing Water Storage

Surface Storage

The CALFED Bay-Delta Authorization Act of 2004 (Public Law 108-361) directed Reclamation to study four of the five surface storage investigations recommended in the CALFED

Record of Decision. These storage investigations include the expansion of Shasta and Los Vaqueros dams and reservoirs; and upper San Joaquin River Basin storage investigation and NOD Offstream Storage Investigation. These planning studies are ongoing. Project purposes include water supply reliability for M&I, agricultural and environmental uses. Other purposes include water quality improvement, flood damage reduction, recreation, emergency water supply and the integration of hydroelectric power with renewable energy

Contra Costa Water District is scheduled to complete construction of a 60 TAF expansion of Los Vaqueros Dam and Reservoir in May 2012. This expansion was done as a local project which provides dry-year water supply reliability and emergency water storage.



Los Vaqueros Reservoir in Contra Costa County.

Groundwater Storage

Madera Groundwater Bank

An appraisal report to determine federal interest in the Madera Groundwater Bank was completed in 2007. The report concluded an alternative plan to be in the federal interest and, therefore, it was submitted to Congress for further action. Congress authorized construction of the Madera Groundwater Bank in the SECURE Water Act of

Chapter 4: Planning for Long-Term Actions

2009 (Public Law 111-11) which included cost sharing provisions and a construction cost ceiling of \$90 million. The federal share is not to exceed 25 percent or \$22.5 million; to date approximately \$2 million has been committed.

Conveyance

Bay Delta Conservation Plan (BDCP)

Reclamation and DWR export water from the Delta via the Jones Pumping Plant and the Banks Pumping Plant, respectively. These exports are critical to the supply of water to SOD M&I contractors, agricultural contractors, and for environmental uses. Exports are currently constrained by the need to avoid entrainment of fish species of concern in the pumps as well as actions to maintain Delta fish habitat conditions, water quality and water levels. Reclamation and DWR coordinate the operations of the CVP and SWP pursuant to the Coordinated Operations Agreement of 1986 (Public Law 99-546), which specifies a 45 percent/55 percent state/federal sharing of Delta inflows under balanced water conditions when water for export is available.

The BDCP is being developed for the recovery of endangered, threatened and sensitive fish and wildlife species and their habitats in the Delta. The BDCP is intended to support critical environmental permitting processes to restore habitat for Delta fisheries in a way that allows for reliable delivery of water supplies to 25 million Californians and agriculture.

Part of the BDCP includes considering a “dual conveyance” water delivery system to meet both ecosystem and water supply goals by improving the existing water export system using existing points of diversion in the southern Delta and adding a new point(s) of diversion in the northern Delta with conveyance through or around the Delta. The current working assumptions include water being delivered south of the Delta both through the existing delivery system and through a new isolated facility.

San Luis Low Point Improvement Project

Reclamation is investigating alternatives to convey water from San Luis Reservoir to Santa

Clara Valley Water District to prevent water service interruptions during Low Point conditions. Feasibility study authority was granted in the CALFED Bay-Delta Authorization Act of 2004 (Public Law 108-361). Non-federal sponsors include SCVWD and DWR.

Friant-Kern and Madera Canals Capacity Restoration

The SECURE Water Act of 2009 (Public Law 111-11) authorizes Reclamation to conduct a feasibility study to investigate restoring the capacity of the Friant-Kern and Madera Canals to a capacity previously designed and constructed by Reclamation. Upon completion of, and consistent with that feasibility study, Reclamation is authorized to construct the improvements, not to exceed \$35 million from the San Joaquin River Restoration Fund.

Franks Tract

Franks Tract is an investigation of alternatives to convey water entering the Delta, protect fish habitat for threatened and endangered fish species, and improve water quality in the southern Delta. Feasibility study authority was granted in the CALFED Bay-Delta Authorization Act of 2004 (Public Law 108-361). The non-federal sponsor is DWR.

DMC/CA Expanded Intertie

The Phase 1 construction of the DMC/CA Intertie is scheduled for completion in March 2012. Phase 1 consists of a pipeline and pumping plant that connects the CVP Delta-Mendota Canal and the SWP California Aqueduct. It was designed such that the pipelines and pumping plant would provide for the possible expansion from 467 cfs to



Chinook salmon

700 cfs when Delta conveyance conditions permit additional pumping.

The DMC/CA Expanded Intertie feasibility study was authorized in the CALFED Bay-Delta Authorization Act of 2004 to evaluate expanding the pumping capacity of the DMC/CA Intertie. The Jones Pumping Plant and the DMC are the primary federal water delivery facilities that provide water to CVP contractors south of the Delta. Enlarging the existing Intertie could further improve system flexibility to respond to CVP and SWP emergencies and increase CVP water supply reliability.

The feasibility study for further expansion of the DMC/CA Intertie is on hold and unfunded pending completion of the Phase 1 construction activities.

Basin Study Program

Congress recognized climate change and related impacts on water supplies with the passage of the SECURE Water Act of 2009, which authorizes federal water and science agencies to work together with state and local water managers to plan for climate change and other water supply challenges.

With WaterSMART, all agencies of the Department work with states, tribes, local governments, and non-governmental organizations to pursue a sustainable water supply for the Nation. Reclamation plays a key role in the WaterSMART program as the Department's water management agency. Focused on improving water conservation and helping water and resource managers make wise decisions about water use, Reclamation's portion of the WaterSMART program is achieved through administration of grants, scientific studies, technical assistance and scientific expertise for the Basin studies.

Sacramento-San Joaquin Basin Study

In 2011, a Draft Plan of Study was completed in cooperation with three major non-federal sponsors including DWR, California Partnership for the San Joaquin Valley, and Stockton East Water District. Funding for this Basin Study will be submitted as part of the Mid-Pacific Region's fiscal year 2012 WaterSMART Program requests. If funding is appropriated, this Basin Study is expected to

commence in November 2012. Since preparation of the Draft Plan of Study, other non-federal cost share partners have been identified including Madera County Water Agency, El Dorado County Water Agency, Sites Joint Powers Authority, and the Northern California Water Association.

Water Reuse and Water Use Efficiency

Water Reuse

Water reuse is an essential action in stretching the limited water supplies in the Western United States.

The Bureau of Reclamation's Title XVI Water Reclamation and Reuse Program (Title XVI) is an important part of WaterSMART. For purposes of the Title XVI program, a water reuse project is a project that reclaims and reuses municipal, industrial, domestic, or agricultural wastewater and naturally impaired groundwater and/or surface waters. Reclaimed water can be used for a variety of purposes, such as environmental restoration, fish and wildlife, groundwater recharge, municipal, domestic, industrial, agricultural, power generation, or recreation.

In the Mid-Pacific Region, there are 10 projects authorized for construction (with a combined total project cost of almost \$725 million) and approximately 16 projects seeking authorization. Over the past few years there has been increasing interest in recycled water outside of the San Francisco Bay Area and the Monterey Peninsula, including Sacramento County, the Sierra Foothills region southeast of Sacramento, the Central Valley, and Washoe County, Nevada.

For fiscal years 2011 and 2012, the majority of federal funds for Title XVI projects have come from WaterSMART Funding Opportunity Announcements.

Water Use Efficiency

The Water Use Efficiency Program was authorized by the SECURE Water Act of 2009 (Public Law 111-11) and the CALFED Bay-Delta Authorization Act of 2004 (Public Law 108-361). In fiscal year 2012, there is \$5 million from CALFED funding available to the Region. There is also \$18 million available on a regionwide basis

Chapter 4: Planning for Long-Term Actions

for water use efficiency and water conservation grants. The goal of the Program is to accelerate the implementation of cost-effective actions that provide state-wide benefits through water

conservation. Water use efficiency implementation by water purveyors, both federal and non-federal, are intrinsically linked to benefits to water quality, water supply reliability, and in stream flows.

As the Water Year 2012 Advances

Reclamation is committed to identifying and securing additional water supplies and creating opportunities to aid in water management in the Central Valley. The workgroup, formed to explore strategies, tools and agreements, helped outline proactive measures that can provide additional water at the most critical times and within the broad range of constraints. The challenges to be faced as the year develops will be met “head on” by Reclamation and our partners.

ACRONYMS

Banks	Harvey O. Banks Pumping Plant
BDCP	Bay Delta Conservation Plan
CA	California Aqueduct
CVO	Central Valley Operations Office
CVP	Central Valley Project
Delta	Sacramento-San Joaquin Delta (Delta)
DFG	Department of Fish and Game
DMC/CA	Delta-Mendota Canal/California Aqueduct
DWR	Department of Water Resources
ESA	Endangered Species Act
FWS	Fish and Wildlife Service
GWD	Grassland Water District
Jones	C.W. “Bill” Jones Pumping Plant
JPOD	Joint Point of Diversion
MAF	Million acre-feet
MWD	Metropolitan Water District
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOD	North-of-Delta
NWS	National Weather Service
O&M	Operations and Maintenance
SLDMWA	San Luis and Delta Mendota Water Authority
SOD	South-of-Delta
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre-Feet
Title XVI	Title XVI of the Water Reclamation and Reuse Program
WY	Water year

