BUREAU OF RECLAMATION

Feasibility Report
Appendix E – Real Estate

Los Vaqueros Reservoir Expansion Investigation
Final Feasibility Report

U.S. Department of the Interior

February 2020

Mission Statements

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

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.

Feasibility Report
Appendix E – Real Estate

Los Vaqueros Reservoir Expansion Investigation, California
Interior Region 10 • California-Great Basin

prepared for Reclamation by Stantec under Contract No. R12PC20255, GS-00F-0040L

Cover Photo: A full Los Vaqueros Reservoir in the spring (Contra Costa Water District)

Contents

Figures

Tables

Abbreviations and Acronyms

APN	Assessor's Parcel Number
Bay Area	San Francisco Bay Area
CALFED	CALFED Bay-Delta Program
CCWD	Contra Costa Water District
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CVP	Central Valley Project
Delta	Sacramento-San Joaquin Delta
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
Investigation	Los Vaqueros Reservoir Expansion Investigation
Local Agency Partners	Prospective Bay Area partner water agencies including CCWD; Alameda County Water District; Alameda County Flood Control and Water Conservation District, Zone 7; Bay Area Water Supply and Conservation Agency; Byron-Bethany Irrigation District; City of Brentwood; Del Puerto Water District; East Bay Municipal Utility District; East Contra Costa Irrigation District; San Francisco Public Utilities Commission; San Luis Water District; San Luis & Delta-Mendota Water Authority; Santa Clara Valley Water District; and Westlands Water District
NEPA	National Environmental Policy Act
NOD	North-of-Delta
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
Refuges	SOD CVPIA-designated wildlife refuges
ROD	Record of Decision
SOD	South-of-Delta
TAF	thousand acre-feet

Chapter 1 Introduction

This technical appendix to the Feasibility Report for the Los Vaqueros Reservoir Expansion Investigation (Investigation) documents the development of real estate acquisition and easement costs to support plan formulation and evaluation. Details on the requirements for temporary and permanent easements are included in Appendix C - Engineering Designs and Costs. The Investigation is a feasibility study evaluating alternatives to develop environmental water supplies and improve the reliability and quality of San Francisco Bay Area (Bay Area) water supplies, primarily through the expansion of Los Vaqueros Reservoir in Contra Costa County, California.

Background

Los Vaqueros Reservoir is located in the coastal foothills west of the Sacramento-San Joaquin Delta (Delta) in the eastern Bay Area. Contra Costa Water District (CCWD), owner and operator of the reservoir, provides water for 500,000 customers throughout central and eastern Contra Costa County as one of the largest urban water districts in California (CCWD 2017). CCWD completed construction of the original 100-thousand-acre-foot (TAF) Los Vaqueros Project in 1997. CCWD stores water in Los Vaqueros Reservoir that is diverted from the Delta when water quality is favorable, for later release and blending when Delta water quality is degraded. An initial expansion, Phase 1, to 160 TAF was completed in 2012. The primary purposes of both phases of the project are to address seasonal water quality degradation associated with CCWD's Delta water supplies and CCWD's dry year water supply reliability. The 160 TAF reservoir also provides important emergency water supply storage and, as secondary benefits, recreation and flood management.

Expansion of Los Vaqueros was one of five potential surface water storage projects identified by the CALFED Bay-Delta Program (CALFED) as warranting further study. In 2001, the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), California Department of Water Resources (DWR), and CCWD began appraisal-level studies of the potential to expand Los Vaqueros Reservoir to address regional water quality and supply reliability needs. The appraisal-level studies indicated that expanding the reservoir to as much as 500 TAF capacity was technically feasible and could provide water quality and supply reliability to agencies in the region, as well as providing potential benefits to fisheries sensitive to water management operations in the Delta.

Subsequently, Reclamation was directed in Public Law 108-7 (Omnibus Appropriations Act of 2003) to conduct a feasibility-level investigation of the potential expansion of Los Vaqueros Reservoir. In 2004, voters in CCWD's service area were asked to vote on whether CCWD should consider expanding the reservoir. The advisory ballot measure won approval, and as a result, the proposed expansion project was further developed and refined through environmental documentation in accordance with the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), and extensive public outreach.

After the Draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) was published in 2009 by Reclamation and CCWD, a two-step approach was implemented for expanding Los Vaqueros Reservoir. This was done in order for CCWD to move forward with addressing urgent water supply and quality needs, particularly during dry years, while the feasibility-level investigation was still in process. The initial expansion was completed as a local action by CCWD, without financial assistance from the Federal government. Because it was done without State or Federal assistance, this feasibility-level investigation was put on hold until after completion of the initial expansion. To implement the initial expansion, the CCWD Board of Directors certified the EIS/EIR (Reclamation 2010) and approved an expansion from 100 TAF to 160 TAF on March 31, 2010. Reclamation issued a Record of Decision (ROD) in February 2011 to enter into an Integrated Operations Agreement with CCWD based on the 2010 EIS/EIR. Construction on the initial expansion began in early 2011 and was completed in 2012.

Reclamation, DWR, and CCWD continue to investigate the feasibility of larger expansion alternatives, as documented in this appendix, because earlier appraisal-level studies indicated that an additional expansion of Los Vaqueros Reservoir beyond the initial 60 TAF would provide additional regional water supply reliability and statewide environmental benefits. This feasibility-level investigation includes updates to the project plans and studies previously performed to account for significant changes to existing conditions that have occurred since the 2010 EIS/EIR was released, as well as to account for changes that are anticipated to take place within the coming years. These changes include CCWD's initial expansion of Los Vaqueros Reservoir to 160 TAF and the operation of this expanded storage space, other local infrastructure changes (e.g., Contra Costa Canal Replacement Project), likely water management constraints resulting from regulatory actions in the Delta and large programs such as the Bay Delta Conservation Plan, and new project beneficiaries participating in the Investigation.

Study Location

Los Vaqueros Reservoir is located in the Kellogg Creek watershed of Contra Costa County, California in the central and south Delta. The reservoir lies in the foothills west of the Delta in the eastern Bay Area. The study area for the Investigation includes the Los Vaqueros Reservoir watershed and associated facilities, central and south Delta, and service areas of potential local partner water agencies. The central and south Delta is roughly bound by the San Joaquin River on the north and the boundaries of the legal Delta to the south (as established in Section 12220 of the California Water Code).

Prospective Bay Area partner water agencies include CCWDAlameda County Water District; Alameda County Flood Control and Water Conservation District, Zone 7; Bay Area Water Supply and Conservation Agency; Byron-Bethany Irrigation District; City of Brentwood; Del Puerto Water District; East Bay Municipal Utility District; East Contra Costa Irrigation District; San Francisco

Public Utilities Commission; San Luis Water District; San Luis & Delta-Mendota Water Authority[1]; Santa Clara Valley Water District; and Westlands Water District. These are collectively referred to herein as Local Agency Partners.

Other potential partners include the managing agencies of South-of-Delta (SOD) Central Valley Project Improvement Act (CVPIA)-designated wildlife refuges (Refuges): California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and Grassland Water District, in cooperation with Reclamation.

Due to the potential influence on other programs and projects, an extended study area was identified for the Investigation. The extended study area includes the Refuges, operational areas of the Central Valley Project (CVP) and State Water Project (SWP), and the service areas of other Bay Area water agencies that may be indirectly affected by project operations.

Project Objectives

The Investigation focuses on using an expanded Los Vaqueros Project to accomplish the following primary and secondary planning objectives:

Primary Planning Objectives

- Develop water supplies for environmental water management that supports fish protection, habitat management, and other environmental water needs.

- Increase water supply reliability for water providers within the Bay Area to help meet municipal and industrial water demands during drought periods and emergencies or to address shortages due to regulatory and environmental restrictions.

Secondary Planning Objective

- Improve the quality of water deliveries to municipal and industrial customers in the Bay Area, without impairing the project's ability to meet the environmental and water supply reliability objectives stated above.

Final Alternatives Considered in the Feasibility Report

The No Action Alternative and four Action Alternatives are evaluated in this Feasibility Report. The physical features of the alternatives are summarized in Table 1-1. The Action Alternatives are refined

[1] The SLDMWA includes Banta-Carbona Irrigation District, Broadview Irrigation District, Byron-Bethany Irrigation District, Central California Irrigation District, the City of Tracy, Columbia Cana Company, Del Puerto Water District, Eagle Field Water District, Firebaugh Canal Water District, Fresno Slough Water District, Grassland Water District, Henry Miller Reclamation District #2131, James Irrigation District, Laguna Water District, Mercy Springs Water District, Oro Loma Water District, Pacheco Water District, Panoche Water District, Patterson Water District, Pleasant Valley Water District, Reclamation District #1606, San Benito County Water District, San Luis Water District, Santa Clara Valley Water District, Tranquility Water District, Turner Island Water District, West Side Irrigation District, West Stanislaus Irrigation District, and Westlands Water District.

versions of the alternatives evaluated in the 2010 Final EIS/EIR with the exception of Alternative 3, which was rejected in the 2010 Final EIS/EIR and was not further refined or evaluated herein. These alternatives account for changes to existing conditions that have occurred since the 2010 EIS/EIR was released (e.g., expansion of Los Vaqueros Reservoir to 160 TAF, completion of other local projects). These alternatives are operated to provide varying levels of emphasis to the above project objectives.

Physical Features

Alternatives 1A, 1B, and 2A would expand Los Vaqueros Reservoir storage from 160 TAF to 275 TAF, build a new Delta-Transfer Pipeline, and relocate the existing Marina Complex and Los Vaqueros Watershed trails and access roads that would be inundated by the reservoir expansion. None of these would occur under Alternative 4A. All the action alternatives would upgrade the existing Transfer Facility, build a new Transfer-Bethany Pipeline, increase Pumping Plant #1 capacity, and add facilities to deliver water to the Transfer Facility from the Rock Slough Intake, which entails building a new Neroly High Lift Pump Station.

A list of the major components for all the alternatives is provided in Table 1-1 below. Alternatives 1A, 1B, and 2A differ from one another only in the proposed operational priorities of the facilities. Figure 1-1 shows the facilities associated with Alternatives 1A, 1B, and 2A. Figure 1-2 shows the facilities associated with Alternative 4A.

Table 1-1. Summary of Facilities and Operations for the Final Alternatives

	No Action	Alternatives 1A, 1B, 2A[1]	Alternative 4A
Existing Facilities (no change)			
Old River Intake	250 cfs	250 cfs	250 cfs
Middle River Intake	250 cfs	250 cfs	250 cfs
Old River Pipeline	320 cfs	320 cfs	320 cfs
Los Vaqueros Pipeline	400 cfs	400 cfs	400 cfs
Transfer Pipeline (Fill/Release)	200/400 cfs	200/400 cfs	200/400 cfs
EBMUD-CCWD Intertie	155 cfs	155 cfs	155 cfs
Transfer Reservoir	4 million gallons	4 million gallons	4 million gallons
Proposed Modifications to Existing Facilities			
Los Vaqueros Reservoir Capacity	160 TAF	275 TAF	160 TAF
Los Vaqueros Reservoir Maximum Water Surface Elevation	507 feet	560 feet	507 feet
Transfer Facility Pump Station Capacity	150 cfs	200 cfs	200 cfs

Table 1-1. Summary of Facilities and Operations for the Final Alternatives (contd.)

	No Action	Alternatives 1A, 1B, 2A[1]	Alternative 4A
Proposed New Facilities			
Transfer-Bethany Pipeline Capacity	None	300 cfs	300 cfs
Delta-Transfer Pipeline Capacity	None	180 cfs	None
Expanded Transfer Facility Pump Station Capacity	None	300 cfs	300 cfs
Expanded Transfer Facility Storage Reservoir Capacity	None	5 million gallons	5 million gallons
Neroly High Lift Pump Station Capacity	None	350 cfs	350 cfs
Pumping Plant #1 Capacity	200 cfs	350 cfs[2]	350 cfs[2]
Los Vaqueros Watershed Facilities			
Los Vaqueros Marina Complex	No change	Relocated upslope	No change
Los Vaqueros Watershed Trails	None	Expanded	None
Los Vaqueros Interpretive Center	No change	Improved	Improved
Los Vaqueros Watershed Office Barn	No change	Seismically upgraded and improved	Seismically upgraded and improved

Notes:

General: Local Agency Partners plan on constructing several projects related to the proposed Los Vaqueros Reservoir expansion. These include the Brentwood Pipeline, the EBMUD-CCWD Intertie Pump Station, the EBMUD Walnut Creek Pumping Plant Variable Frequency Drives, the EBMUD Mokelumne Aqueduct Relining, and the East Contra Costa Irrigation District Intertie. These associated local projects are not part of the Federal feasibility study but are important related improvements to Local Agency Partners' infrastructure that would be constructed in conjunction with this project.

[1] Alternatives 1A, 1B, and 2A differ from one another only in the proposed operational priorities of the facilities. Alternatives evaluated in the Investigation are refined versions of the alternatives evaluated in the 2010 Final EIS/EIR. Alternative 3 was rejected in the 2010 Final EIS/EIR and was not evaluated further in Phase 2 of the Investigation.

[2] Permitted capacity is 350 cfs as defined in the Supplement to the Final EIS/EIR. 300 cfs is the capacity modeled and designed under the Feasibility Study to reflect the current operation requirements. Capacity requires improvements to the existing Rock Slough Fish Screen's rake cleaning system, included under Pumping Plant #1 improvements in this Feasibility Report.

Key:
CCWD = Contra Costa Water District
cfs = cubic feet per second
EBMUD = East Bay Municipal Utility District
EIS = Environmental Impact Statement
EIR = Environmental Impact Report
Investigation = Los Vaqueros Reservoir Expansion Investigation
TAF = thousand acre-feet

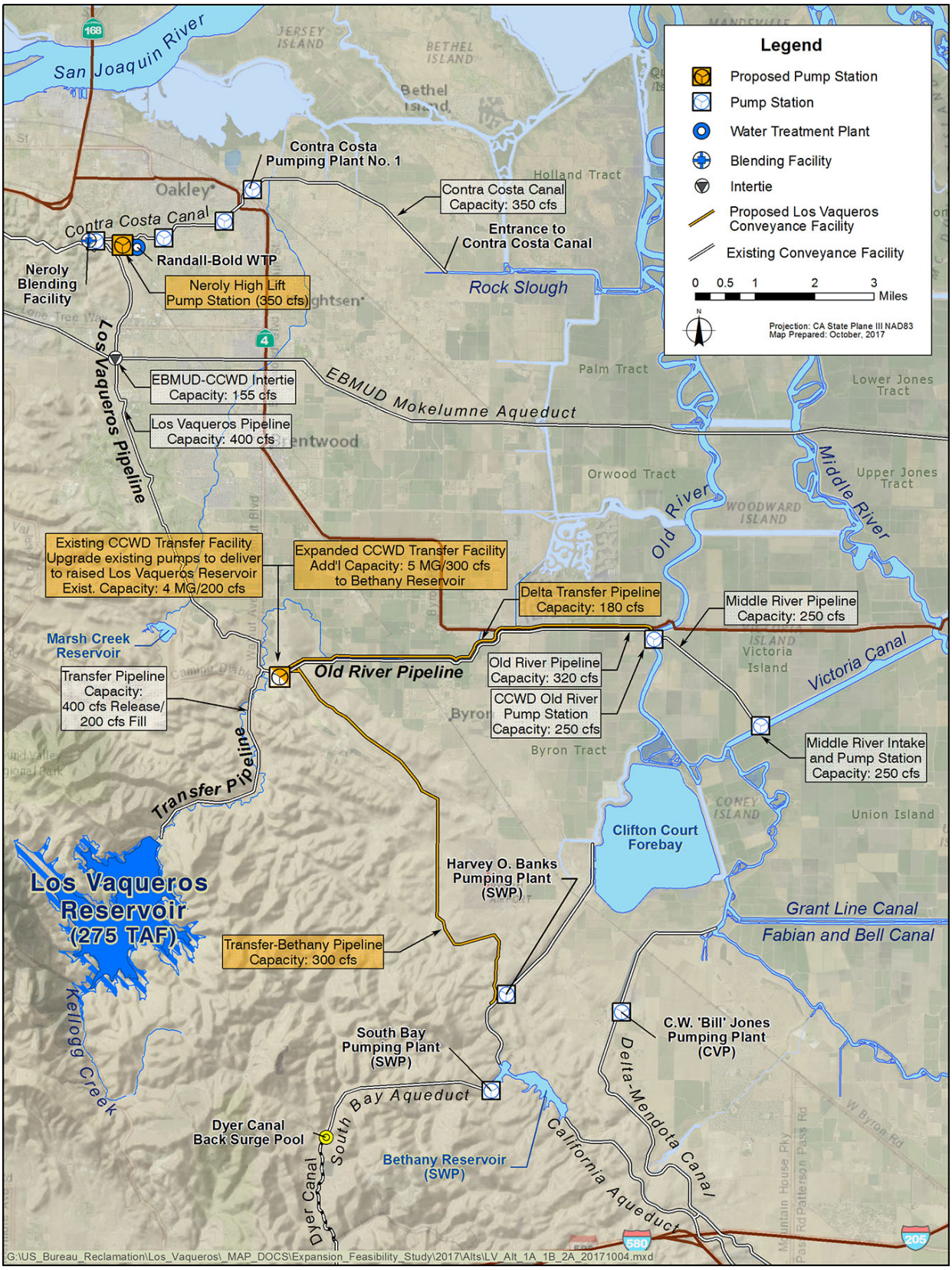

Figure 1-1. Major Components of Alternatives 1A, 1B, and 2A

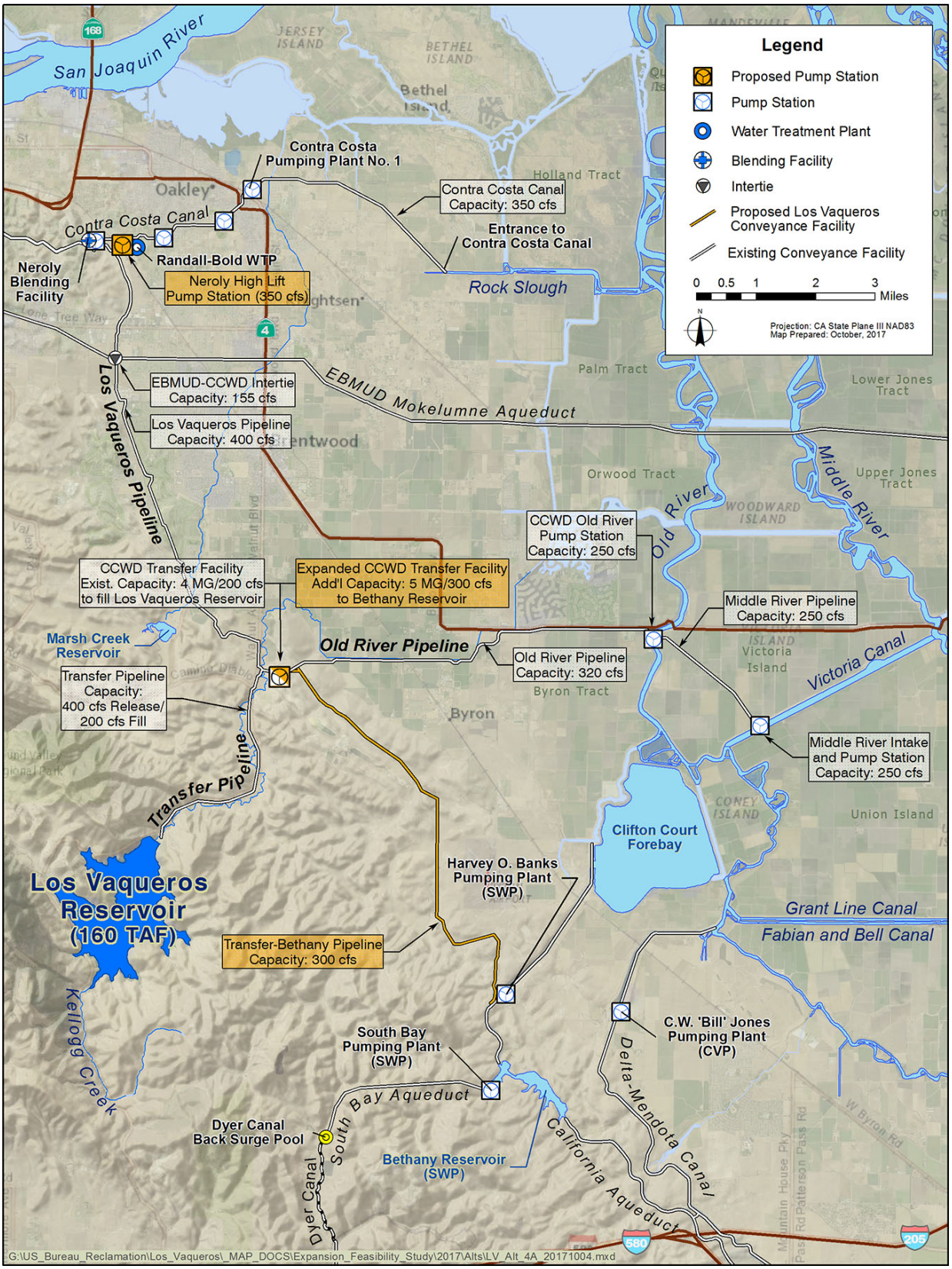

Figure 1-2. Major Components of Alternative 4A

Operational Priorities

All alternative plans would utilize CCWD's existing Delta intakes at Old River, Middle River, and Rock Slough to divert water from the Delta. In addition, CCWD, Local Agency Partners, and the Refuge Water Supply Program might (subject to obtaining the appropriate water rights modifications and other approvals) receive water diverted from the Freeport Intake on the Sacramento River via the EBMUD-CCWD Intertie. Water diverted at these four locations could be directly delivered to beneficiaries or stored in Los Vaqueros Reservoir for later use.

The Refuges would receive water delivered through the Transfer-Bethany Pipeline to the California Aqueduct. The delivered water would be either direct diversions or rediversions from the Delta, or releases from Los Vaqueros Reservoir storage, depending on the alternative plan. The water would be Delta Surplus Water[2] or water otherwise made available from CCWD or a Local Agency Partner or the RWSP. The alternatives would not change the manner in which water is conveyed by the RWSP to the various Refuges.

Similarly, water delivered to Local Agency Partners would be direct diversions or rediversions from the Delta, or releases from Los Vaqueros Reservoir storage. The water would be Delta Surplus Water or water available from Local Agency Partner water rights and contracts. In addition, some alternatives include dedicated storage space in Los Vaqueros Reservoir for Local Agency Partner storage and withdrawal, including reserved drought and/or non-drought emergency storage.

All operations were formulated to meet the project objectives while minimizing impacts and avoiding harm to other water users. The operational differences and priorities for the Action Alternatives is summarized below.

- Alternative 1A is operated to maximize deliveries for water supply reliability to the Local Agency Partners, including drought and emergency supply reliability. The operations first seek to deliver Delta surplus and/or Local Agency Partner's water rights and contract supplies to meet current demands. Any available supplies above current demands are stored in Los Vaquero Reservoir for later use, including dry years. If additional system capacity is available after these operations, CVPIA Level 2 Refuge water is wheeled through CCWD facilities instead of C.W. Jones Pumping Plant, freeing up capacity to increase CVP SOD deliveries at C.W. Jones Pumping Plant. Last, remaining CCWD system capacity is used to deliver water supplies south of the Delta to help meet Incremental Level 4 Refuge contract allocations. These operational priorities result in the highest water deliveries to Local Agency Partners and CVP contractors (via wheeling), and the lowest deliveries to Refuges, compared with the other alternative plans.

- Alternative 1B includes the same physical facilities as Alternative 1A but is operated to provide roughly equal water deliveries (long-term) to both Local Agency Partners and Refuges, thereby balancing the Investigation's two primary objectives. Level 2 Refuge supplies (which result in increased CVP operational flexibility) are only wheeled through CCWD facilities once the operational priorities for Local Agency Partners and Refuges are

[2] "Delta Surplus Water" is water diverted when the Delta is in excess conditions as defined in the SWRCB's Decision 1641.

met. In addition, SOD CVP contractor deliveries that would otherwise by limited by Delta conveyance constraints are rescheduled using Los Vaqueros Reservoir expanded storage, resulting in additional CVP operational flexibility. These operational priorities result in higher benefits to Local Agency Partners (M&I and agricultural water supplies), Refuges, and CVP contractors, compared with the other alternative plans.

- Alternative 2A includes the same facilities as Alternatives 1A and 1B but is operated to maximize potential Incremental Level 4 deliveries to the Refuges. Benefits to Refuges occur from both direct deliveries conveyed via CCWD facilities, as well as water supplies stored in Los Vaqueros Reservoir. No wheeling of Level 2 Refuge supplies is included in Alternative 2A. These operational priorities result in the highest benefits to Refuges, compared with the other alternative plans.

- Alternative 4A uses similar operational priorities as Alternative 1B. Alternative 4A is formulated to maximize potential project deliveries to both the Local Agency Partners and Refuges, but without the benefit of expanded storage in Los Vaqueros Reservoir. These operations result in relatively low benefits to Local Agency Partners, Refuges, and CVP contractors, compared with the other alternative plans.

Organization of This Appendix

This appendix is organized as follows:

Chapter 1, Introduction, provides an overview of the Investigation.

Chapter 2, Property Market Value Analysis, documents the development of budgetary estimates.

Chapter 3, Land Acquisition Costs, documents the land acquisitions costs for the Investigation.

Chapter 4, References, lists the sources used in preparing this technical appendix.

This page left blank intentionally.

Chapter 2 Property Market Value Analysis

This chapter describes the market value analysis for properties that would be impacted by proposed Investigation alternatives. Bender Rosenthal, Inc., developed the property market value analysis for the parcels that would be temporarily or permanently impacted. The following sections summarize the methods, assumptions, and results of this analysis.

Cost Methodology

The valuation and acquisition of property is a complex process to insure all of the elements of the State and Federal Uniform Relocation Assistance and Real Property Acquisition Act as amended are considered. This act requires an appraisal be prepared and no less than the appraised fair market value be offered to the owner. While it is a goal to obtain 100 percent willing seller transactions, as a last resort it may be necessary to initiate eminent domain proceedings to obtain possession. The elements of compensation to the owner are the contributory value of the area to be acquired as part of the Larger Parcel (a legal determination). The contributory value of site improvements located in the acquisition area is also valued. Additionally, legal compensation includes the loss in value to the remainder (portion of ownership not need for the project) measured by its loss in market value and/or restoration costs (both are elements of severance damages) to preserve the utility of the remainder or remainders. If the "construction of the project in the manner proposed" should result in a non-speculative measurable market increase in value to the remainder (benefits), this measure of value increase may offset the measure of severance damages. The appraisal process is considered an "opinion" of value prepared by a knowledgeable and professional individual who will view each property and review the degree of title held by the principle owner and others. State statutes and case law established this valuation process. The above describes the formal appraisal process.

This appendix documents the preparation of a budgetary estimate of the potential right of way costs to acquire the property and rights for the proposed Investigation Alternatives. An estimate is a much abbreviated valuation process but considers the elements of compensation set forth in the appraisal process. The preliminary estimate identifies similar types of properties and employs mass valuation techniques to develop the right of way costs.

To prepare this preliminary estimate for the right of way costs, each parcel was classified, based on observed land use, to establish its potential highest and best use. This may reflect current uses and/or future potential development uses. Estimated land values and site improvements for each property will be developed. The values were based on 2014/2015 land listings and sales. Values for the various land uses will be estimated from local real estate sales and listings obtained through the Loopnet, Realtor.Com, and other internet sites. The agricultural values obtained were reviewed with data presented in the 2014/2015 publication "Trends in Agricultural Land and Lease Values." Site improvement and curative costs are obtained from the Marshal Valuation Service and Assessor's Cost Handbooks [Residential & Agricultural] developed by the California Board of Equalization.

The Assessor's Parcel Number (APN) and necessary property rights (permanent easement and temporary easements) were identified during the facilities design. The information is arrayed on a spreadsheet and includes the APN; the owner; the total parcel size; rights, interests (permanent easement and temporary easement) and project requirements. This allows the estimator to observe the potential impact to the ownerships along the proposed facilities.

This information is the basis of the right of way budget costs. The developed land unit values were applied directly to the areas required for acquisition. Aerial photography aided in validating information regarding the possible impacts on improvements. Damages are based on proposed curative measure for the remainder.

The project requires the purchase of a permanent easement. In the absence of direct easement sales data, the estimator will develop a percentage of the total fee value rights and interests required for the easement and a percentage of the fee value retained by the residual or underlying owner. Subsurface easements for pipelines usually severely restrict the majority of surface activities previously enjoyed by an owner. The acquisition is considered tantamount to full fee or 100 percent of the rights leaving only a reversionary right to the underlying owner should the pipeline be abandoned in the future.

Temporary construction easements values are similar to land rental rates. In the absence of rental data, the rate is derived using a rate of return (10 percent) applied to the total fee value of the property to estimate the rental rate for the construction period. For the preliminary estimate a period of one year is reflected in the costs.

No major improvements or structures are impacted by the proposed project. As a result, there are no occupant displacements. Therefore, there are no costs for Relocation Assistance or demolition of major improvements.

Finally, the budget estimate includes escrow costs and reimbursement funds for owners who desire to obtain their own appraisal. Under Senate Bill 1210 which became effective January 1, 2007, an owner is eligible to receive up to $5,000 reimbursement to secure their own appraisal.

The total right of way cost for individual parcels were estimated by totaling the land value, improvement value, severance damages, and title/escrow fees. A contingency is provided for potential administrative settlements, adverse court awards, and minor environmental mitigation costs.

Summary of Property Values

Table 2-1 summarizes of property values by land use category. With the volatility of the real estate market in California, these values should be considered as a gross comparison. As the Investigation moves forward, and recommended alternative is elected, a complete appraisal is recommended to account for individual parcel values and parcel income values.

Table 2-1. Summary of 2015 Parcel Values by Land Use Category

Land Use Category	Range of Parcel Values ($/acre)	
	Low	High
Row Crop		
Large parcels	$9,000	$10,000
Medium parcels	$10,000	$12,500
Small parcels	$12,500	$35,000
Orchard		
	$25,000	$25,000
Residential[1]		
Greater than 5 acres	$30,000	$35,000
Less than 5 acres	$40,000	$40,000
Pasture		
Less than 100 acres	$10,000	$15,000
100 plus acres	$9,000	$9,000

Note:
[1] Residential values only include the value of land and not the improvements as no improvements are estimated to be impacted

Row crop lands included large, medium, and small parcels. Based on large row crop (greater than 100 acres) land sales, parcel values ranged from $9,000 to $10,000 per acre. Medium (55 to 100 acres) row crop values ranged from $10,000 to $12,500 per acre. Small (less than 55 acres) row crop values ranged from $12,500 to $35,000 per acre. The parcels were valued based on their individual size and characteristics.

Only one orchard crop parcel was identified at 49 acres. Based on land sales, large orchard values are about $25,000 per acre depending on size and quality of the trees.

Residential parcels contained large, and small parcels. Based on land sales, large (greater than 5 acres) residential parcel values ranged from $30,000 to $35,000 per acre. Small (less than 5 acres) residential parcel values were about $40,000 per acre.

Pasture parcels contained large acreage parcels. Based on land sales, values for large (greater than 100 acres) pasture sites typically are about $9,000 per acre.

Assumptions and Departures from Standard Appraisal Practices

The market value analysis performed for the Investigation is a budgetary estimate that was prepared in a restricted format, in accordance with and subject to the Uniform Standards of Appraisal Practice adopted by the Appraisal Standards Board of the Appraisal Foundation. A budgetary estimate means this analysis was less than or different from a summary or a self-contained appraisal report. Below are the extent of the appraisal process preformed and the departures taken:

- The properties were viewed by aerial photos.

- No surveys of individual properties were provided. County assessor property information was used for property sizes and improvements. (It was assumed that this information is reasonably correct.)

- Owners/occupants of the properties were not interviewed or contacted.

- Sales and listings histories of the properties were researched using public information and local Multiple Listing Sales data.

- Exposure and marketing times were not reported because taking of these properties may constitute an eminent domain procedure.

- A range of values was estimated for the properties because of lack of detailed information other than assessor property information.

- No valuation was provided for CCWD, state, and Federal lands within the study area.

- Personal property (such as manufactured homes and other structures not on permanent foundations) were not included as part of the evaluation.

- This restricted appraisal report is intended for Reclamation to use to develop land and easement costs and determine potential value differences between alternatives within the Investigation study area. The value ranges presented are Bender Rosenthal Inc.'s conclusions, with rational, supporting data, and information as part of the appraiser's work file.

Chapter 3 Land Acquisition Costs

This chapter summarizes the estimated real estate acquisition costs associated with the proposed Investigation alternatives.

Methodology

Acquisition costs are estimated for both the temporarily and permanently impacted parcels that are located in project area. Temporary impacts are those impacts that would occur only during the construction period and were assumed to be on property within the engineering estimate for easements. Permanent impacts are considered for all property within the engineering estimate for easements.

Using 2015 market property values established in Chapter 2, land acquisition costs are estimated for the impacted acreages of each parcel. For temporarily impacted parcels, real estate costs are estimated as a percentage of total acquisition costs for the impacted acreages. In this analysis, a 10 percent factor is used. It should be noted that final costs would be subject to negotiations with land owners.

Real estate costs for temporarily and permanently impacted parcels also include administrative costs. These costs are described in the following section.

Real Estate Acquisition Administration

The administrative cost of one parcel acquisition with no relocation is estimated at $30,000 for the purpose of this analysis. This administrative cost includes the work of surveyors, geographical information system, legal counsel, title company support, appraisers, and a team of realty specialists/land agents. For properties that would be temporarily impacted, the administrative cost for obtaining temporary easement agreements is assumed to be $10,000 per parcel.

The administrative cost of one parcel acquisition with a residential or business relocation is estimated at $70,000. This includes all of the work discussed above for parcel acquisition plus relocation advisory services and relocation benefits. It should be noted that no relocations of private properties have been identified as part of the proposed Investigation alternatives.

Real Estate Acquisition Costs

Facilities associated with the proposed alternatives are organized in four groups to facilitate analysis:

- Group 1: Delta-Transfer Pipeline, and Expanded Transfer Station

- Group 2: Bethany-Transfer Pipeline
- Group 3: In-Watershed Facilities associated with the Los Vaqueros Dam raise

Tables E3-1 and E3-2 summarize the real estate acquisition costs for temporarily and permanently impacted parcels, respectively. Costs in Table 3-1 are 10 percent of the market value of the impacted acreages.

Estimated real estate costs for Investigation alternatives associated with temporarily and permanently impacted parcels are shown in Table 3-3 and 3-4, respectively. Table 3-5 shows the total land acquisitions costs for each alternative, including administrative costs. The total land acquisitions costs are based on the average market value for each impacted property. Table 3-6 summarizes the total land acquisition cost for each alternative in January 2018 price levels.

Table 3-1. Estimated Real Estate Costs for Temporarily Affected Parcels

	No. of Parcels	Total Impacted Acres	Land Value[1,2]
Delta-Transfer Pipeline, and Expanded Transfer Station	28	16.63	$27,464
Transfer-Bethany Pipeline – Westerly Alignment [3]	13	13.7	$185,779
Transfer-Bethany Pipeline – Easterly Alignment [4]	16	34.1	$31,899
In-watershed facilities associated with the dam raise	0	0	$-
Total	41	30.33	$213,243

Notes: [1] Values represent 10 percent of the market value of the impacted acreages. Values in 2015 price levels.
[2] Values do not include contingency, Improved Value, or Damages
[3] Preferred alignment that ties into the head of the California Aqueduct
[4] Evaluated alignment, but not carried forward. It includes a tunnel segment and lake tab into Bethany Reservoir.

Table 3-2. Estimated Real Estate Acquisition Costs for Permanently Affected Parcels

	No. of Parcels	Total Impacted Acres	Land Value[1,2]
Delta-Transfer Pipeline, and Expanded Transfer Station	31	35.15	$995,966
Transfer-Bethany Pipeline – Westerly Alignment [3]	14	20.9	$299,379
Transfer-Bethany Pipeline – Easterly Alignment [4]	16	62.2	$623,674
In-watershed facilities associated with the dam raise	0	0	$-
Total	45	56.05	$1,295,345

Notes: [1] Values do not include contingency. Values in 2015 price levels.
[2] Values Include Improvement Value, Damages, Escrow, and SB1210
[3] Preferred alignment that ties into the head of the California Aqueduct
[4] Evaluated alignment, but not carried forward. It includes a tunnel segment and lake tab into Bethany Reservoir.

Table 3-3. Estimated Land Acquisition Costs for Temporarily Affected Parcels Under Final Alternatives (2015 price level)

Alternative	No. of Parcels	Total Impacted Acres	Land Value	Acquisition Administration
Alternative 1A, 1B, 2A	41	30.33	$213,243	$410,000
Alternative 4A	13	13.7	$185,779	$130,000

Table 3-4. Estimated Land Acquisition Costs for Permanently Affected Parcels Under Final Alternatives (2015 price level)

	No. of Parcels	Total Impacted Acres	Land Value	Acquisition Administration
Alternative 1A, 1B, 2A	45	56.05	$1,295,345	$1,350,000
Alternative 4A	14	20.9	$299,379	$420,000

Table 3-5. Estimated Total Land Acquisition Costs for Temporarily and Permanently Affected Parcels Under Final Alternatives (2015 price level)

	Combined Value	20% Contingency	Total Value	Acquisition Administration	Total Land Acquisition Cost [1]
Alternative 1A, 1B, 2A	$1,508,588	$301,718	$1,810,301	$1,760,000	$3,570,301
Alternative 4A	$485,158	$97,032	$582,190	$550,000	$1,132,190

Note:

[1] Total acquisition costs are based on the market value of impacted properties, and include the administrative costs.

Table 3-6. Estimated Total Land Acquisition Costs for Temporarily and Permanently Affected Parcels Under Final Alternatives (January 2018 price level)

	Total Land Acquisition Cost [1]
Alternative 1A, 1B, 2A	$3,070,000
Alternative 4A	$1,140,000

Note:

[1] Total acquisition costs are based on the market value of impacted properties, and include the administrative costs. Indexed from 2015 price levels using Reclamation construction cost indices.

This page left blank intentionally.

Chapter 4 References

CCWD. *See* Contra Costa Water District.

Contra Costa Water District. 2017. About Us. Contra Costa Water District. Available at: http://www.ccwater.com/27/About-Us. Accessed August 28, 2017.

This page left blank intentionally.