

RECLAMATION

Managing Water in the West

PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

FOR

OTAY WATER DISTRICT PHASE II AND III RECYCLED WATER CIP PROJECTS

Prepared for

OTAY WATER DISTRICT

Location

SAN DIEGO COUNTY, CALIFORNIA

Prepared by

RECON

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Lower Colorado Region
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The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian tribes and our commitments to island communities.

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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Executive Summary

This Programmatic Environmental Assessment (EA) has been prepared in accordance with Bureau of Reclamation (Reclamation) requirements to evaluate the environmental impact of Otay Water District's (District) Phase II and III Recycled Water Capital Improvement Program projects (Project). The District is seeking to execute a Cooperative Agreement (Agreement) between Reclamation and the City of San Diego. A sub-agreement between City of San Diego and the District will provide reimbursement funds for up to 25 percent of the Project costs.

Proposed Federal Action

The federal action is the execution of a Cooperative Agreement between the Bureau of Reclamation and the City of San Diego. A sub-agreement between the City of San Diego and the District will provide reimbursement funds for up to 25 percent of the District's costs for implementation of the Project.

Purpose and Need for Action

The purpose of the District's recycled water program is to reduce the demand for imported water, maximize the use of local water supplies, substitute recycled water for potable water, and provide a continuous and dependable source of supplemental water for the area. The Cooperative Agreement will assist the District with implementation of the recycled water program. The Project will ultimately provide for the annual use of an estimated 9,219 acre-feet of recycled water. This Project is needed because dependable water supplies in southern California are becoming more difficult to develop and maintain as imported water sources become less reliable.

Authority

Section 1612 of Public Law 102-575 (Title XVI) specifically authorizes the Secretary of the Interior to participate in the planning, design, and construction of reclamation projects in the San Diego area, with federal financial participation limited to 25 percent of the total project costs. Execution of a Cooperative Agreement is authorized under the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (P.L. 102-575, Title XVI, Sect. 1612).

Proposed Project

The proposed Project is the implementation of the District's Phase II and III Recycled Water Capital Improvement Program. This Project consists of three reservoirs, two pump stations, 33 pipelines, and four building upgrades, approximately \$63 million in costs.

Twenty of the projects would be implemented by the District, and 22 projects would be implemented by developers, as part of the Otay Ranch development. The developer-implemented projects consist of pipelines that will be constructed as roadways are constructed. Mitigation measures are discussed in Section 4.0 for developer-implemented projects as required by the Otay Ranch General Development Plan (GDP) and associated documents. The Otay Ranch Resource Management Plans (Phase 1 and 2) form the basis for mitigation measures in the Program Environmental Impact Report (EIR) for the Otay Ranch GDP. As development proceeds, lands are conveyed into the Otay Ranch Resource Management Preserve. While the Resource Management Plan (RMP) presents policies and programs for the protection and enhancement of sensitive resources, the Program EIR provides the vehicle for assuring that the policies and programs included in the RMP are carried out.

Alternatives

No Action

Under the No Federal Action Alternative, there would be no Agreement, and no allocation of federal funding for the District's Project. The District has identified the Project as necessary to meet future recycled water demand and fulfill District, state, regional, and local policies. Therefore, the District is likely to implement the Project without the federal funds. As a result, the District would incur the entire cost of implementing the Project. This alternative would be considerably more expensive for the District.

For the No Action alternative, environmental review would occur on a project-by-project approach. This project-by-project approach would result in increased costs and time, which may hinder the District's ability to meet future recycled water demands, and compliance with policies requiring the development of recycled water sources.

No Project

Under the No Project Alternative, the District would not implement the Project. The 42 Phase II and III Recycled Water projects would not be constructed. The estimated 9,219 acre-feet per year of recycled water that the Project would produce would not be available. The use of imported, potable water to supplement the District's recycled water supply would continue.

Under this alternative, the District would not fulfill state, regional, and local policies that direct alternative water source development. In addition, the District would not follow its Water Resource Master Plan. The District's ability to meet future water demands may be hindered.

Assessment of Environmental Effects

Environmental effects of the No Action alternative would be the same as the Proposed project, since the Project would be implemented under both alternatives. The main difference would be the increased costs for the District under the No Action alternative, since there would be no federal funds for the Project.

The No Project alternative would not have the direct environmental effects from implementation of the Project, including temporary construction impacts and permanent impacts. However, this alternative would continue to rely on imported water sources to meet future water demands, which would continue to strain imported water sources, resulting in indirect impacts.

Environmental effects are summarized in Table ES-1, along with measures that will be implemented to avoid and reduce potential environmental effects to a less-than significant level. The two resources most likely to be impacted from Project implementation are Biology and Cultural Resources.

**TABLE ES-1
ENVIRONMENTAL EFFECTS SUMMARY AND ALTERNATIVE COMPARISON**

Resource	No Action	No Project	Proposed Action	Measures to Minimize and Reduce Potential Impacts	Significance After Measures
Water Resources	Same as proposed project	Direct, significant impact on local water supplies including groundwater. Indirect impact on imported water sources.	Impacts to water quality during construction. Less than significant impact to groundwater from dewatering during construction.	<ol style="list-style-type: none"> 1. Comply with all current federal, state, regional, and city water quality regulations. Obtaining all necessary permits (NPDES and General Construction). 2. Prepare and implement a project-specific Stormwater Pollution Prevention Plan 3. Implement an inspection program to assure the effectiveness of BMP control measures. 	Less than significant with mitigation.
Biological Resources	Potentially significant effects.	Indirect significant impact on biological resources that depend on local water supplies.	Direct and indirect impacts to gnatcatcher, quino checkerspot butterfly, least bell's vireo, Otay tarplant and other sensitive species. Habitat and critical habitat loss from project implementation.	<ol style="list-style-type: none"> 1. Construction of projects in the vicinity of critical and native habitat would occur outside the avian breeding season (February 15th to August 30th). If construction must occur during avian breeding season, a qualified biologist would be present to monitor the effect of noise on breeding activities. If the noise level is affecting the breeding activities, a sound barrier will be constructed to reduce noise effects to breeding pairs. 2. When appropriate, conduct biological surveys on land that may be disturbed during construction of facilities. 3. Avoid, to the extent practicable through design or site selection, special-status species, sensitive habitats, and wetland areas. 4. Initiate consultation with the appropriate State or Federal jurisdictional agency if the potential for special-status species disturbance exists. 5. When applicable comply with permits and conditions for USACE Section 404 of CWA, RWQCB Section 401 of CWA, and CDFG Section 1600 Streambed Alteration Agreement. 6. When applicable, as recommended by wildlife agencies, the District shall use its mitigation credits for the San Miguel Habitat Management Area for mitigation for its projects. 	Less than significant with mitigation, and implementation of the District Biology Procedures.
Cultural Resources	Potentially significant effects.	No significant impact.	Potential direct impacts to archaeological sites.	Implementation of Programmatic Agreement between Reclamation, State Historic Preservation Officer (SHPO), and District.	Less than significant with implementation of Programmatic Agreement.

TABLE ES-1
ENVIRONMENTAL EFFECTS SUMMARY AND ALTERNATIVE COMPARISON
(continued)

Resource	No Action	No Project	Proposed Action	Measures to Minimize and Reduce Potential Impacts	Significance After Measures
Land Use	No significant impact	No significant impact.	No significant impact.	<ol style="list-style-type: none"> 1. The District will follow applicable land use policies addressing sensitive lands when appropriate. This will reduce potential conflicts with environmentally sensitive lands regulations. 2. The District will coordinate project construction with other utilities that may exist in utility rights-of-way in order to minimize disruption of service. 	Less than significant.
Aesthetics	Same as proposed project	No significant impact.	No visual impact from pipelines. Potential adverse impact from reservoirs and pump stations.	<ol style="list-style-type: none"> 1. The District will coordinate with affected viewer groups during project design to minimize aesthetic impacts. 2. Where possible, projects shall be sited in topographically screened locations, in locations screened by vegetation, or adjacent to existing facilities and surface disturbance to reduce visual contrast with adjacent undisturbed areas. 3. Design elements of the facility will incorporate surrounding features and vegetation. 4. Landscaping and/or fencing that screens facilities will be used when feasible to reduce aesthetic impacts. 5. Scenic resource, such as mature trees and rock outcroppings, will be avoided when feasible. When unavoidable, the removal of trees will be mitigated by replacement ratios determined by wildlife agencies. 6. Projects requiring night lighting will include a lighting plan to reduce glare, light spill, and containment of stray light. 7. Ground disturbance from construction will be revegetated with appropriate native vegetation to minimize aesthetic impacts. 	Less than significant with mitigation.
Air Quality	Same as proposed project	No significant impact.	Indirect impacts during construction from fugitive dust and vehicle emissions. Less than significant impact from operation of generators at pump stations.	<ol style="list-style-type: none"> 1. Maintain construction equipment engines to minimize emissions. 2. Adhere to APCD regulations and grading ordinances to minimize fugitive dust by applying water or chemical dust suppressants to disturbed areas and unpaved roadways to maintain a stabilized surface. 3. Vehicles hauling dirt or fill will be covered to minimize fugitive dust and PM₁₀. 	Less than significant with mitigation.

TABLE ES-1
ENVIRONMENTAL EFFECTS SUMMARY AND ALTERNATIVE COMPARISON
(continued)

Resource	No Action	No Project	Proposed Action	Measures to Minimize and Reduce Potential Impacts	Significance After Measures
Noise	Same as proposed project	No significant impact.	Temporary construction noise impacts.	<ol style="list-style-type: none"> 1. At pump stations identify sensitive receivers within 250 feet and conduct noise analysis. Incorporate feasible engineering measures into facility design to reduce noise levels. Criteria for successful mitigation shall be the reduction of noise levels affecting sensitive receivers to 65 dB(A) CNEL from normal facility operation. 2. Implement noise barriers in sensitive areas. 3. For projects adjacent to sensitive wildlife habitat, such as least bell's vireo, prepare site-specific study by qualified biologists. 4. District and contractors will comply with local ordinances and regulations specifying sound control and noise level rules. 5. Construction work shall be conducted Monday through Friday between the hours of 7:00 A.M. and 5:00 P.M. No construction shall occur outside these days and times except in an emergency. 6. Construction equipment, and equipment at facilities will have mufflers. 7. No equipment shall create noise levels in excess of 75 dB(A) at the nearest residential property line for any eight-hour period. 	Less than significant with mitigation.
Transportation	Same as proposed project	No significant impact.	Temporary traffic disturbance during project construction.	<ol style="list-style-type: none"> 1. Develop and submit Traffic Control Plan prior to the start of construction. This plan shall specify temporary traffic control zones, posting of appropriate signage, and speed limits for control zones. 2. For projects in public roadways, the District shall coordinate with local jurisdictions and conform to the Caltrans Traffic Control Manual. 3. Implement traffic management measures including marking temporary traffic lanes, use of barricades and lights at excavations and crossings. 4. When feasible, during pipeline construction maintain both directions of traffic flow. 	Less than significant with mitigation.
Environmental Justice	No significant impact	No significant impact.	No significant impact.	None.	No significant impact.

Acronyms and Abbreviations

Agreement	Cooperative Agreement under Title XVI
APCD	Air Pollution Control District
APE	Area of potential effect
BMP	Best Management Practice(s)
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CE	Categorical Exemption
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Registrar
CIP	Capital Improvement Project
CNDDDB	California Natural Diversity Database
CRHR	California Register of Historic Resources
CNEL	Community Noise Equivalent Level
CRI	Cultural Resource Inventory
District	Otay Water District
EA	Environmental Assessment
EIR	Environmental Impact Report, pursuant to CEQA
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESL Ordinance	Environmentally Sensitive Lands
FCF	flow control facilities
FONSI	Finding of No Significant Impact
GDP	Otay Ranch General Development Plan
GIS	Geographic Information System
gpd	gallons per day
HMA	Habitat Management Area
I-5	Interstate 5
I-805	Interstate 805
ITAs	Indian Trust Assets
LBV	least Bell's vireo
mgd	million gallons per day
MWD	Metropolitan Water District
MSCP	Multiple Species Conservation Program
MSCP-CV	City of Chula Vista Multiple Species Conservation Program Subarea Plan
MSCP-SCS	County of San Diego Multiple Species Conservation Program Subarea Plan, South County Segment

MSL	mean sea level
NCCP	California Natural Community Conservation Plan Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollution Discharge Eliminator System
NRHP	National Register of Historic Places
POM	Preserve Owner/Manager
Project	Phase II and III of the Recycled Water Capital Improvement Program
QCB	quino checkerspot butterfly
Reclamation	U.S. Bureau of Reclamation
RMP (I, II)	Otay Ranch Resource Management Plan
RWCWRF	Ralph W. Chapman Water Recycling Facility
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SBWRP	South Bay Water Reclamation Plant
SCAQMP	South Coast Air Quality Management District
SDCWA	San Diego County Water Authority
SHPO	State Historic Preservation Officer
SPA	Specific Area Plan
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
Tribes	Native American Tribes
USFWS	U.S. Fish and Wildlife Service
Villages	Villages proposed for development as part of Otay Ranch
WRMP	Water Resources Master Plan
WTP	Water Treatment Plant

Section 1.0 Purpose and Need

1.1 Purpose and Need

The purpose of the Otay Water District (District) recycled water program is to reduce the demand for imported water, maximize the use of local water supplies, substitute recycled water for potable water, and provide a continuous and dependable source of supplemental water for the area. The recycled water program is needed because dependable water supplies in southern California are becoming more difficult to develop and maintain as continuance of traditional imported water sources, such as the Colorado River and northern California, become increasingly less reliable. Section 1612 of Public Law 102-575 (Title XVI) authorizes the Secretary of the Interior to participate in the planning, design, and construction of reclamation projects in the San Diego area.

The District implemented Phase I of the recycled water program, and is currently embarking on Phase II and III of the Recycled Water Capital Improvement Program (Project). As part of the Phase II and III recycled water program, the District is seeking to execute a Cooperative Agreement (Agreement) with the U.S. Bureau of Reclamation via a sub-agreement with the City of San Diego. Section 1612 of Public Law 102-575 (Title XVI) authorizes the Secretary of the Interior to participate in the planning, design, and construction of reclamation projects in the San Diego area, with federal financial participation limited to 25 percent of the total project costs. The Agreement is authorized under the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI of the Federal Water Projects Authorization and Adjustments Act of 1992, Public Law 102-575).

The Agreement provides federal funding for up to 25 percent of the costs for the planning, design, and construction of the District's Project. The Project will ultimately provide for the annual use of an estimated 9,219 acre-feet of recycled water in the District's service area.

1.2 Purpose of the Programmatic EA

The purpose of an Environmental Assessment (EA) is to provide analysis for the NEPA process. This EA contains data, analysis, and explanations that demonstrate that Reclamation has made a good faith effort to identify and disclose reasonably foreseeable potential environmental effects that may result from implementation of the Project or

alternatives. A Programmatic EA is warranted for this project since the proposed action has common locations, project elements, and stages.

As specific project details are determined, further environmental review may be warranted if the proposed measures will not effectively reduce potential effects to less-than significant levels. This procedure is discussed in Section 4.0. Further environmental review may include, but is not limited to, revisions or additions to proposed measures to minimize and avoid potential effects, and Agency consultation.

The EA process and the information it generates will be used for the following purposes:

- To outline expected program-related environmental effects
- To outline procedures and develop measures that reduce or eliminate these environmental effects
- To assist Reclamation and other agencies in the decision-making process pursuant to National Environmental Policy Act (NEPA)
- To serve as a starting point for evaluation of site-specific environmental impacts

1.3 Background

The District is seeking Reclamation funds for its Projects. The execution of the Agreement and allocation of federal funds is the federal action. It is anticipated that the Projects will be eligible for the issuance of grants by Reclamation pursuant to Title XVI. This federal action is needed to assist the District in fulfilling state, regional, and local policies that direct the development of alternative water sources, including recycled water.

Title XVI authorizes Reclamation to participate in the planning, design, and construction of reclamation projects that are part of the San Diego Area Water Reclamation Program. The District's Projects are part of this program. Under Title XVI, the City of San Diego is the only agency authorized to receive federal funds. Reclamation enters into a Cooperative Agreement with the City with the understanding that the City and the District will enter into a sub-agreement. The Agreements will provide federal funding for up to 25 percent of the cost for the District's Projects, depending on annual congressional funding authorization for Title XVI. The District's Projects will be implemented by the District, or by local developers.

Development in the District's Central Area System, known as Otay Ranch, is guided by the Otay Ranch GDP, as designed and implemented by the County of San Diego and City

of Chula Vista. The GDP requires that developers build infrastructure as they go, so developers typically install pipeline infrastructure, such as recycled water pipes. Once constructed, the District takes over operation and maintenance of the recycled water infrastructure.

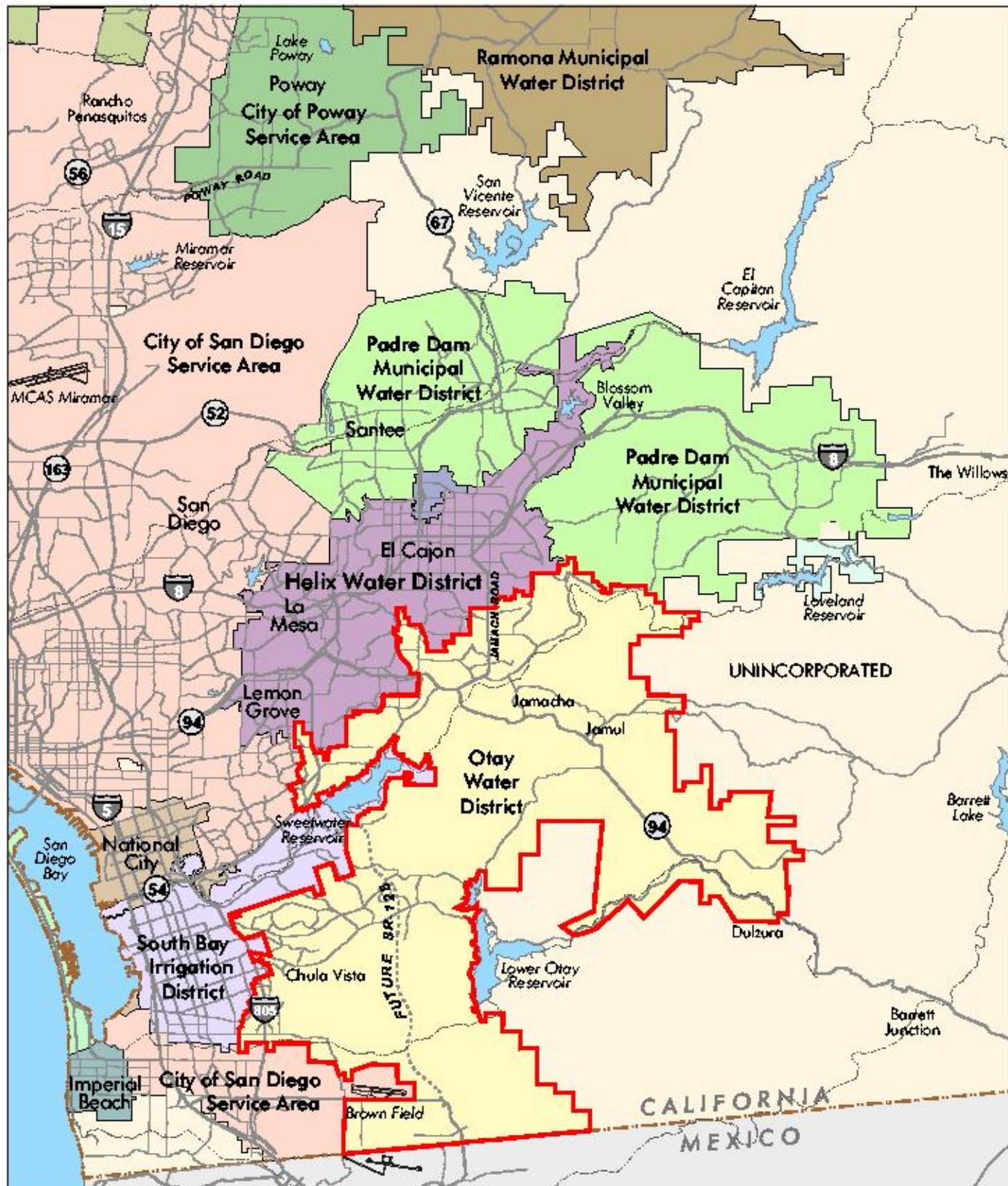
1.4 Otay Water District

The District is responsible for delivering potable and recycled water to customers within its jurisdictional area of approximately 80,320 acres (125.2 square miles), and includes an additional 8,960 acres (14 square miles) in its area of influence. The District is located in southwestern San Diego County, inland from the cities of San Diego, Chula Vista, and National City as shown in Figure 1.1. The District is a member agency of the San Diego County Water Authority (SDCWA), who is a member of the Metropolitan Water District (MWD) of Southern California. The District receives imported potable water from the aqueduct systems owned and operation by SDCWA and MWD of southern California. The District is active in reducing demands through conservation measures while pursuing other sources of supply to increase its system reliability and flexibility, such as interagency agreements, recycled water, and groundwater wells.

In southern California, dependable water supplies are difficult to develop and maintain. In order to facilitate better use of existing water supplies, the District has been actively pursuing water recycling to maximize the use of local water. The District's 2002 Water Resources Master Plan (WRMP) predicts future water demands and identifies the necessary capital facilities needed to meet those demands. The WRMP established phased Capital Improvement Projects (CIPs) that will be needed to provide an adequate, reliable, flexible, and cost effective water system, including Phase II and III projects of the District's Recycled Water CIP.

Lands in the District are in three jurisdictions: the unincorporated County of San Diego and the cities of Chula Vista and San Diego (see Figure 1.1). Approximately 70 percent of the District is either undeveloped or undergoing development activity. Land use and population expectations provided by the San Diego Association of Governments (SANDAG), the regional planning agency, anticipates that the District will ultimately serve approximately 84,000 dwelling units in comparison to about 44,000 today. The current District average water demand is approximately 22.44 million gallons per day (mgd). This demand is expected to increase to 56.29 mgd at ultimate build-out.

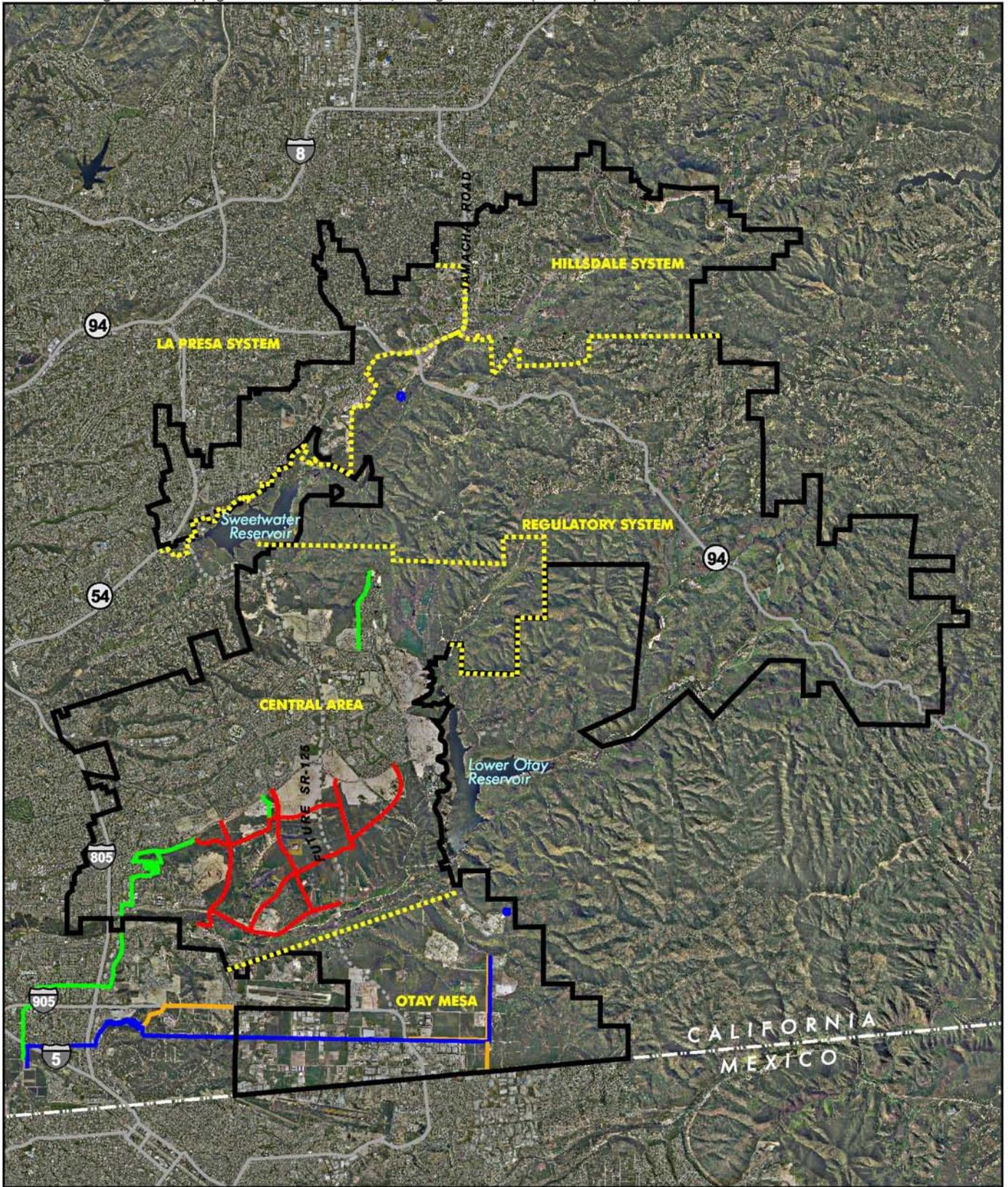
The District is located in the southern California region east of San Diego (see Figure 1.1). The District is comprised of five water service areas (Figure 1.2). The District's service area spans approximately 80,320 acres (125.2 square miles) and an 8,960-acre (14 square miles) area of influence. Currently the District supplies an average



 Otoy Water District boundary

0 Miles 4 N

FIGURE 1.1
Otoy Water District Regional Location



- Phase II District implemented project
- Phase II Developer implemented project
- Phase III District implemented project
- Phase III Developer implemented project
- Otay Water District boundary



Otay Water District boundary



Potable water systems boundary



FIGURE 1.2
Otay Water District
Service Area and
Water Systems

of 22.4 mgd to a population around 143,000. At build-out, anticipated demand is projected to be 56 mgd for a population of 276,600.

The District supplies potable water via five operating systems: La Presa, Hillsdale, Regulatory, Central Area, and Otay Mesa, as shown in Figure 1.2. In addition to supplying potable water throughout its service area, the District maintains and operates a recycled water system. Distribution of recycled water is restricted to the South District, which consists of the Central Area System and the Otay Mesa System. The San Diego Regional Water Quality Control Board (RWQCB) currently prohibits recycled water use in the District's northern area and a small portion of the Central Area System because it is within the watershed of the Sweetwater, Upper Otay, and Lower Otay Reservoirs.

1.4.1 Otay Water District Recycled Water Program

The Ralph W. Chapman Water Recycling Facility (RWCWRF), owned and operated by the District, supplies the District's recycled water system. The RWCWRF can produce approximately 1.0 mgd of recycled water daily. Recycled water is pumped southward to storage ponds in the District's Use Area, and is distributed throughout the Central Area System to a number of major developments. Current recycled water customers include residential developments. Future recycled water markets are developments that require landscape irrigation, including parks, golf courses, street and highway landscapes, freeways, schools, office parks, commercial and industrial areas, government facilities, health care centers, multi-family residential housing, and other common areas.

Presently, the District distributes recycled wastewater treated at the RWCWRF to meet the California Title 22 Requirements for reuse. The District has acquired 6 mgd of additional recycled water to supply existing and future recycled water consumers. This supply is from the City of San Diego's South Bay Water Reclamation Plant (SBWRP). The primary potential recycled water markets are developments that require landscape irrigation.

The District's Recycled Water CIP program is being implemented in three phases:

- Phase I consisted of three projects. The first project was the lining and covering of Pond No. 4 at the District's Use Area. This project involved improvements to Pond No. 4, a transfer pipeline between Pond No. 4 and Pond No. 5, upsizing existing inlet and outlet pipelines, improving the drainage system inside and outside the reservoir, and paving the existing road around the perimeter of Pond No. 4 for erosion protection. The second project was the implementation of recycled water mains in Telegraph Canyon Road, Otay Lakes Road, Paseo Ranchero, and Rancho del Rey Parkway. The Third project was the implementation of recycled water mains in Otay Mesa Road, Cactus Road, Airway Road, Siempre Viva Road,

Britannia Boulevard, and the 905 Freeway. The Cooperative Agreement for Phase I of the Recycled Water CIP, executed in June of 1998, included three projects implemented by the District.

- Phase II projects consist of 29 projects in the Central Area System: one reservoir, one pump station, and 27 pipelines, listed in Table 1.1. Figure 1.3 shows the proposed Phase II and III CIP Project locations. These projects will be implemented over the next 25 years.
- Phase III projects consist of 13 projects in the Otay Mesa System: two reservoirs, one pump station, six pipelines, and four upgrades to the RWCWRF, listed in Table 1.1. Four of these projects for the RWCWRF include one building remodel, one effluent meter, one waste backwash water pipeline, and one load equalization tank. These projects will be implemented over the next 25 years.

The costs for the Phase II and III projects are anticipated to be approximately \$67 million. Total costs of Phase II projects are estimated at \$43.5 million, and Phase III at \$23.5 million. These Projects will enable the distribution of approximately 8.43 mgd of annual average demand for recycled water.

The District policy (Otay Water District Code of Ordinances, Section 12, Water Reclamation Plan and Implementing Procedures) authorizes the District to use recycled water wherever it is financially and technically feasible, and consistent with legal requirements, preservation of public health, safety and welfare, and the environment. The implementation of this policy enables the District to plan, fund, and construct facilities to meet recycled water demand. The District provides recycled water to portions of its service area in fulfillment of a mandate from the State of California for water districts to develop and provide alternative water sources. Municipalities in the District's service area have required land developers to provide separate recycled water delivery systems within their subdivisions for irrigation of specific areas. The production and distribution of recycled water is encouraged by the policies of the State of California, local land use jurisdictions, local and regional water supply agencies, the District, and the federal government. The proposed Projects are part of the District's long-range plans to develop recycled water use in order to fulfill these policies.

1.5 Other Discretionary Actions

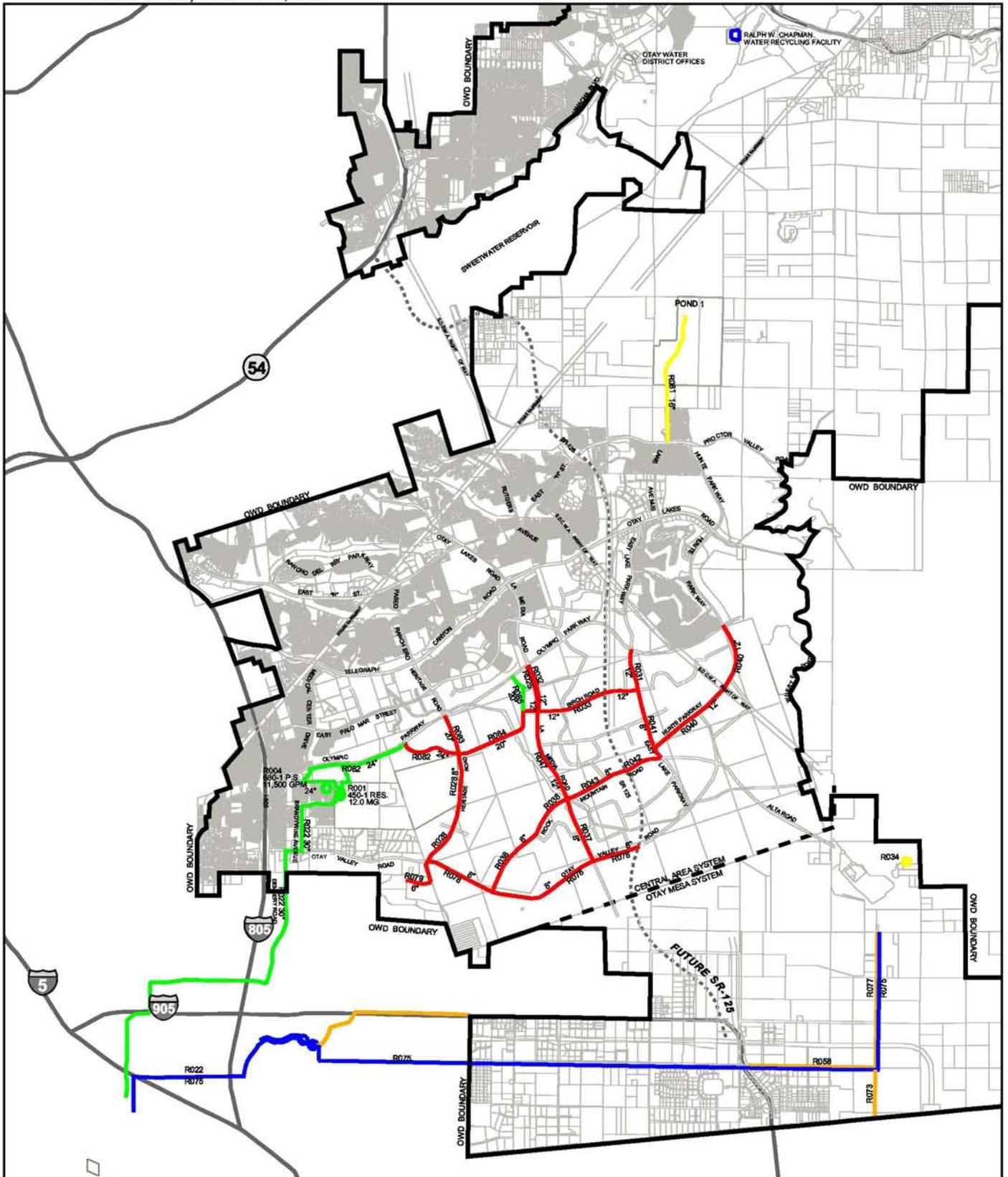
Implementation of the Projects may require actions and permits from other federal agencies, state, regional, and local jurisdictions to comply with regulations. Potential permitting issues and authorizing authority that may be required are listed in Table 1.2.

TABLE 1.1
OTAY WATER DISTRICT PHASE II AND III RECYCLED WATER CIP PROJECTS

CIP Number	Type	Description	Estimated Cost
<u>PHASE II</u>			
R001	Reservoir	RecRes-405-1 Reservoir 12.0 MG	\$5,940,000
R004	Pump Station	RecPS-680-1 Pump Station (11,500 GPM)	\$5,892,000
R022	Pipeline	RecPL-30-Inch, 450 Zone, Otay Valley-Dairy Mart/450-1 Reservoir	\$19,000,000
R025	Pipeline	RecPL-12-Inch, 680 Zone, La Media Road-Olympic/Birch	\$340,000
R028	Pipeline	RecPL-8-Inch, 680 Zone, Heritage Road-Olympic/Otay Village	\$376,000
R031	Pipeline	RecPL-12-Inch, 944 Zone, EastLake Parkway-Olympic/Birch	\$195,000
R032	Pipeline	RecPL-12-Inch, 944 Zone, La Media Road-Olympic/Birch	\$252,000
R033	Pipeline	RecPL-12-Inch, 944 Zone, Birch Road-La Media/EastLake	\$630,000
R037	Pipeline	RecPL-8-Inch, 680 Zone, La Media Road-Rock Mountain/Otay Valley	\$164,000
R038	Pipeline	RecPL-8-Inch, 680 Zone, Rock Mountain Road-La Media/Otay Valley	\$296,000
R040	Pipeline	RecPL-12-Inch, 680 Zone, Hunte Parkway-Olympic/EastLake	\$900,000
R041	Pipeline	RecPL-8-Inch, 944 Zone, EastLake Parkway-Birch/Rock Mountain	\$140,000
R042	Pipeline	RecPL-8-Inch, 944 Zone, Rock Mountain Road-SR-125/EastLake	\$120,000
R043	Pipeline	RecPL-8-Inch, 944 Zone, Rock Mountain Road-La Media/SR-125	\$130,000
R047	Pipeline	RecPL-12-Inch, 680 Zone, La Media Road-Birch/Rock Mountain	\$370,000
R078	Pipeline	RecPL-8-Inch, 680 Zone, Otay Valley Road-SR-125/Heritage	\$560,000
R079	Pipeline	RecPL-6-Inch, 450 Zone, Otay Valley Road-Otay Valley/Entertainment	\$150,000
R081	Pipeline	RecPL-16-Inch, 944 Zone, Lane Avenue-Proctor Valley/Pond No. 1	\$850,000
R082	Pipeline	RecPL-24-Inch, 680 Zone, Olympic Parkway-Village 2/Heritage	\$1,485,000
R083	Pipeline	RecPL-20-Inch, 680 Zone, Heritage Road-Village 2/Olympic	\$289,000
R084	Pipeline	RecPL-20-Inch, 680 Zone, Village 2-Heritage/La Media	\$825,000
R085	Pipeline	RecPL-20-Inch, 680 Zone, Village 2-High School/Olympic	\$359,000
<u>PHASE III</u>			
R023	Reservoir	RecRes-450-2 Reservoir 4.0 MG	\$2,900,000
R034	Reservoir	RecRes-860-1 Reservoir 4.0 MG	\$2,400,000

TABLE 1.1
OTAY WATER DISTRICT PHASE II AND III RECYCLED WATER CIP PROJECTS
(continued)

CIP Number	Type	Description	Estimated Cost
R035	Pump Station	RecPS-860-1 Pump Station (3,400 GPM)	\$2,100,000
R052	Pipeline	RecPL-30-Inch, 450 Zone, Tijuana Valley-Otay Mesa Place/450-2 Res.	\$5,000,000
R053	Upgrade	RWCWRF-R.O. Building Remodel	\$231,000
R055	Upgrade	RWCWRF-Effluent Meter	\$60,000
R058	Pipeline	RecPL-16-Inch, 860 Zone, Airway Road-Otay Mesa/Alta	\$1,925,000
R067	Upgrade	RWCWRF-Waste Backwash Water Pipeline	\$140,000
R068	Upgrade	RWCWRF-Load Equalization Tank	\$1,000,000
R072	Pipeline	RecPL-16-Inch, 860 Zone, Otay Mesa Road-860-1 Pump station/Heritage	\$1,177,000
R073	Pipeline	RecPL-24-Inch, 860 Zone, Alta Road-Airway/Border	\$475,000
R075	Pipeline	Brine Disposal Pipeline Otay Mesa to Metro Sewer System	\$5,000,000
R077	Pipeline	RecPL-24-Inch, 860 Zone, Alta Road-Alta Gate/Airway	\$1,170,000



- Phase II District implemented project
- Phase II Developer implemented project
- Phase III District implemented project
- Phase III Developer implemented project
- Otay Water District boundary

Note: CIP projects are shown with project numbers.



FIGURE 1.3
 Otay Water District Phase II and III
 Recycled Water CIP Locations

TABLE 1.2
POTENTIAL ISSUES AND AUTHORITY

Authority	Authorizing Agency	Potential Issues
Endangered Species Act of 1973	U.S. Fish and Wildlife Service	Endangered Species
California Endangered Species Act of 1985, and Natural Community Conservation Planning Act of 1991	California Department of Fish and Game	Endangered Species
Section 404 of the Clean Water Act	U.S. Army Corps of Engineers	Dredge/Fill of Waters of the U.S.
Section 401 of the Clean Water Act	Regional Water Quality Control Board	Water Quality
Clean Water Act of 1972—National Pollutant Discharge Elimination System Permit	Regional Water Quality Control Board	Discharge to Surface Waters
Clean Water Act of 1972—General Permit for Storm Water Discharges Associated with Construction Activity	Regional Water Quality Control Board	Storm Water
Section 1601—Streambed Alteration Agreement	California Department of Fish and Game	Wetlands
Section 106 of the National Historic Preservation Act of 1966, and Native American Graves Protection and Repatriation Act	State Historic Preservation Officer; Advisory Council on Historic Preservation	Cultural Resources
Clean Air Act of 1970	San Diego Air Pollution Control District	Air Quality
Various state and local policies allowing construction, and pipeline placement in public right-of-way.	City of San Diego, City of Chula Vista, San Diego County, Caltrans	Construction, right-of-way issues
California Coastal Act of 1976	California Coastal Commission	Coastal zone protection

1.6 Other Documents

Many documents have been prepared that relate to the District's Project. All projects are subject to environmental review under California Environmental Quality Act (CEQA). This section briefly discusses the planning and environmental documents that are relevant to the Project and this EA. The following environmental documents are incorporated by reference.

- **Otay Water District Water Resources Master Plan (WRMP):** The WRMP (Otay Water District, 2002) identifies the capital facilities needed to provide an adequate, reliable, flexible, and cost effective potable and recycled water system for the delivery of water to meet approved land use development plans and growth projections. The plan identifies potable and recycled facilities and expansions to existing facilities along with required capacity, phasing, and estimated probable capital costs. This plan incorporates previous District planning efforts and ensures that the list of long-range CIP projects correlates with the recommendations in the WRMP. The District updated the WRMP in 2002.
- **Otay Water District WRMP Program Environmental Impact Report (PEIR):** An updated draft of the WRMP PEIR (Otay Water District, 2004a) was circulated for public review in June 2004. The document provides the public and agencies with information about the potential environmental effects of the proposed WRMP. The PEIR addresses the potentially significant adverse program level impacts related to implementation of the WRMP. The PEIR proposes mitigation measures to reduce the potentially significant impacts to a level of not significant. The program level analysis serves as a guidance document for subsequent site-specific evaluation of environmental impacts at the project level.
- **30-inch Recycled Water Pipeline, 450-1 Recycled Water Reservoir, and 680-1 Pump Station Project Draft EIR:** The EIR for the Phase II projects R001 (450-1 reservoir), R004 (680-1 pump station), and R022 (30-inch, 450 zone, Otay Valley to Dairy Mart Road/450-1 reservoir pipeline) was finalized and certified on February 1, 2005. This EIR evaluates the potential environmental impacts at the site-specific project level.
- **The Otay Ranch General Development Plan/Subregional Plan (GDP):** The GDP was adopted on October 28, 1993 by the San Diego County Board of Supervisors and the Chula Vista City Council. The GDP governs 23,000+ acre Otay Ranch properties. The plan contains 11 villages within the Otay Valley Parcel. The GDP has related implementation program documents that guide the development of Otay Ranch including village phasing plan, service revenue plan, facility implementation plan, and resource management plan. As each village is

implemented, subsequent development proposals, Specific Area Plan (SPA) plans, or Specific Plans are required with corresponding environmental documentation.

- **Otay Ranch Final Program EIR:** This document was prepared in December of 1992, and the purpose was to inform the public, decision makers, and regulatory agencies about the nature of the project and the extent and type of environmental impacts associated with the project and alternatives. The programmatic approach to environmental analysis allowed for tiering of future project EIRs on specific development proposals. Approval of subsequent plans (SPA or specific plans) determine the phasing of individual villages and infrastructure, road networks within individual villages, grading plans, specific public service locations and facilities, and conveyance of dedicated parcels into the Otay Ranch Preserve. Mitigation measures proposed by the program EIR identify the guidelines and performance standards that subsequent development proposals (SPA plans) shall meet in order to be considered consistent with the findings of the GDP EIR. Supplemental EIRs that tier-off of the Otay Ranch GDP EIR address the impacts that will occur from implementation of the SPA plans, along with mitigation measures and conveyance of dedicated parcels as required by the Otay Ranch RMP.
- **Otay Ranch Resource Management Plan, Phase I (RMPI):** The RMPI was adopted in the 1993 GDP in order to establish a permanent open space preserve within Otay Ranch. The plan is intended to provide long-term protection, enhancement and management of sensitive resources, and create an open space system. The RMPI identifies an open space system of 11,375 acres including wildlife corridors to connect the open space areas. The preserve boundaries from the RMPI have been incorporated into the adopted GDP. The RMPI incorporates a Preserve Conveyance Plan that outlines a transfer mechanism for preservation of high-quality resource land as villages are developed. Conveyance is required prior to the approval of final maps. The estimated conveyance obligation of 11,375 acres to the Otay Ranch Preserve would be met on a village-by-village basis as Otay Ranch is developed. Approximately 6,175 acres have been dedicated, offered for dedication, purchased for conservation, or anticipated to be imminently conveyed into the preserve.
- **Otay Ranch Resource Management Plan Phase II (RMPII):** The RMPII identifies the process that encompasses a series of tasks that must be performed throughout implementation of the Otay Ranch GDP. The document is a collection of the implementation studies, plans and programs which must be performed, or processes which must be initiated as a condition of approval of the initial Otay Ranch SPA. RMPII addresses activities related to preserve management, conveyance, and funding. RMPII outlines the conveyance program to be followed as villages are developed.

Section 2.0

Proposed Action and Alternatives

2.1 Introduction

The proposed action is the execution of an Agreement and allocation of federal funds for the Project. Alternatives to the proposed action, including the No Action alternative, are also discussed.

2.2 Proposed Action Alternative

2.2.1 Project Description

The District currently supplies recycled water in the Central Area and Otay Mesa Systems, located in the South District. New developments are required by land use jurisdictions, in cooperation with the District, to have separate, dual distribution systems for potable and recycled water.

The RWCWRF, owned and operated by the District, supplies the recycled water system. The RWCWRF can produce about 1.0 mgd of reclaimed water daily. The existing recycled water demand currently exceeds supply from the RWCWRF. The District intends to meet the existing and future recycled water demands with effluent from the City of San Diego's SBWRP. The SBWRP has a projected recycled water production capacity of approximately 15.0 mgd. Currently, the District's recycled water system is, and will continue to be, supplemented with potable water until the effluent from the SBWRP is available and the recycled water infrastructure necessary to receive the effluent are in operation. The Project will ultimately provide for the annual use of an estimated 9,219 acre-feet of recycled water. This will enable the District to meet the existing and future recycled water demand.

2.2.1.1 General Project Description

The following is a brief description of the major project features associated with implementation of the Project and proposed action:

Reservoirs

Three reservoirs are included in the District's Project. A reservoir site consists of a storage tank constructed on a level, graded pad, underground supply and delivery

pipelines, fencing for access and control, and access road for maintenance. Since maintaining proper pressures in the system are critical, reservoirs must be placed at optimal elevations for efficient and economical operation of the delivery system. Where possible, pipelines are constructed in road rights-of-way. Where pipelines must leave rights-of-way to reach a reservoir, the practice is to use the shortest feasible route from the right-of-way to the reservoir. Using the shortest route considers engineering considerations, minimizes disturbance, and avoidance of site-specific constraints. Areas disturbed by construction are typically replanted with native vegetation, and best management practices are implemented where needed for erosion control.

Pump Stations

Two pump stations are included in the District's Project. Pump stations are needed to move water between pressure zones. Pump stations move water uphill between pressure zones, and pressure-reducing valves are used when water flows from a higher-pressure zone to a lower one. Pressure-reducing valves are unobtrusive and passive and are installed along with the pipeline. Pumps are placed in pump stations that consist of a building to house the pumps, electric power-line connections, pipeline connections, fencing, and an access road. Pump stations are constructed on a level, graded pad with fencing for access and control. Areas disturbed by construction are typically replanted with native vegetation, and best management practices are implemented where needed for erosion control.

Pipelines

The District's Project contains 33 pipelines. Thirty of the 33 pipeline projects are located in roadways. The majority of pipeline projects are located in roadways and in most projects, pipeline construction activities will occur concurrently with road construction activities, within road rights-of-way. Engineering designs would coordinate construction of pipelines with other utilities located in the street right-of-way. Work schedules, traffic control, and detour routes would be coordinated with developers and jurisdictions for concurrent construction activities when appropriate.

The typical pipeline construction process is as follows. First, a construction zone would be cleared. Next, a trench would be excavated in the right-of-way by heavy construction equipment with excavated material placed next to the trench. Pipe would be stored at a staging area and delivered as needed, or stored along the pipeline route where space is available. Pipe installation would occur at an appropriate depth designed to avoid interference with other underground utilities. Any necessary valves, blow-off valves, air valves and test stations will be located in areas typically within the right-of-way. A crane or similar equipment would be used to lower the pipe into place for steel pipelines. Joints would be welded and coated for corrosion protection. The trench would be backfilled, using the excavated material if possible or imported material, if necessary. Surface finishing (paving, compacting, or other) would be completed as part of the road project.

Any excess material excavated would be disposed of in a permitted, legal construction material landfill or other permitted disposal or reuse area. All material storage and stockpile areas would be identified and approved by the District to insure that no adverse impacts to sensitive environmental resources would occur.

2.2.1.2 Project Costs

Preliminary cost estimates for the District's Project is approximately \$67 million. Total costs of Phase II projects are estimated at \$43.5 million, and Phase III at \$23.5 million. Once constructed, operation and maintenance costs would be relatively low and included in the District's maintenance and operations budget for the recycled water system.

2.2.1.3 Project Implementation

The District's recycled water program is being implemented in three phases. Phase I has already been implemented. Phase II projects occur in the Central Area System. Phase III projects occur in the Otay Mesa System. Construction of Phase II and III would occur over a period of 25 years or less.

Many of the projects, particularly the pipelines in roadway alignments, are often planned, funded, and constructed by development project proponents. In some instances, the proposed alignments for the pipelines and roadways may be altered as development plans are finalized. After construction of the developer's pipeline projects, the District takes over the operation and maintenance of the pipelines.

Projects that are planned, funded and constructed by the District and the developers are as follows:

DISTRICT-IMPLEMENTED PHASE II PROJECTS:

- CIP No. R001: RecRes-450-1 Reservoir 12.0 MG
- CIP No. R004: RecPS-680-1 Pump Station (11,500 GPM)
- CIP No. R019: RecPL-20-Inch, 944 Zone, SDCWA R/W - 944-1 Pump Station/Olympic
- CIP No. R022: RecPL-30-Inch, 450 Zone, Otay Valley-Dairy Mart/450-1 Reservoir
- CIP No. R081: RecPL-16-Inch, 944 Zone, Lane Avenue-Proctor Valley/Pond No. 1
- CIP No. R082: RecPL-24-Inch, 680 Zone, Olympic Parkway-Village 2/Heritage. The portion in Olympic Parkway
- CIP No. R085: RecPL-20-Inch, 680 Zone, Village 2-High School/Olympic

DISTRICT-IMPLEMENTED PHASE III PROJECTS:

- CIP No. R023: RecRes-450-2 Reservoir 4.0 MG
- CIP No. R034: RecRes-860-1 Reservoir 4.0 MG

- CIP No. R035: RecPS-860-1 Pump Station (3,400 GPM)
- CIP No. R052: RecPL-30-Inch, 450 Zone, Tijuana Valley-Otay Mesa Place/450-2 Res
- CIP No. R053: RWCWRF-R.O. Building Remodel
- CIP No. R055: RWCWRF-Effluent Meter
- CIP No. R058: RecPL-16-Inch, 860 Zone, Airway Road-Otay Mesa/Alta
- CIP No. R067: RWCWRF-Waste Backwash Water Pipeline
- CIP No. R068: RWCWRF-Load Equalization Tank
- CIP No. R072: RecPL-16-Inch, 860 Zone, Otay Mesa Road-860-1 Pump Station/Heritage
- CIP No. R073: RecPL-24-Inch, 860 Zone, Alta Road-Airway/Border
- CIP No. R075: Brine Disposal Pipeline Otay Mesa to Metro Sewer System
- CIP No. R077: RecPL - 12-Inch, 860 zone, Alta Road - Alta Gate/Airway

DEVELOPER-IMPLEMENTED PHASE II PROJECTS:

- CIP No. R013: RecPL-16-Inch, 944 Zone, East H Street-Eastlake/Lane
- CIP No. R016: RecPL-16-Inch, 944 Zone, Eastlake Parkway-Trinidad Cove/Olympic
- CIP No. R025: RecPL-12-Inch, 680 Zone, La Media Road-Olympic/Birch
- CIP No. R028: RecPL-8-Inch, 680 Zone, Heritage Road-Olympic/Otay Village
- CIP No. R029: RecPL-12-Inch, 944 Zone, Otay Lakes Road-Hunte/Eastlake Vistas
- CIP No. R030: RecPL-8-Inch, 944 Zone, Eastlake Vistas-Otay Lakes/Olympic
- CIP No. R031: RecPL-12-Inch, 944 Zone, EastLake Parkway-Olympic/Birch
- CIP No. R032: RecPL-12-Inch, 944 Zone, La Media Road-Olympic/Birch
- CIP No. R033: RecPL-12-Inch, 944 Zone, Birch Road-La Media/EastLake
- CIP No. R037: RecPL-8-Inch, 680 Zone, La Media Road-Rock Mountain/Otay Valley
- CIP No. R038: RecPL-8-Inch, 680 Zone, Rock Mountain Road-La Media/Otay Valley
- CIP No. R040: RecPL-12-Inch, 680 Zone, Hunte Parkway-Olympic/EastLake
- CIP No. R041: RecPL-8-Inch, 944 Zone, EastLake Parkway-Birch/Rock Mountain
- CIP No. R042: RecPL-8-Inch, 944 Zone, Rock Mountain Road-SR-125/EastLake
- CIP No. R043: RecPL-8-Inch, 944 Zone, Rock Mountain Road-La Media/SR-125
- CIP No. R047: RecPL-12-Inch, 680 Zone, La Media Road-Birch/Rock Mountain
- CIP No. R071: RecPL-12-Inch, 944 Zone, Olympic Parkway-La Media/Eastlake
- CIP No. R078: RecPL-8-Inch, 680 Zone, Otay Valley Road-SR-125/Heritage
- CIP No. R079: RecPL-6-Inch, 450 Zone, Otay Valley Road-Otay Valley/Entertainment
- CIP No. R080: RecPL-12-Inch, 680 Zone, Olympic Parkway-Medical Center/Heritage
- CIP No. R082: RecPL-24-Inch, 680 Zone, Olympic Parkway-Village 2/Heritage. The portion between Olympic Parkway and Heritage Road
- CIP No. R083: RecPL-20-Inch, 680 Zone, Heritage Road-Village 2/Olympic
- CIP No. R084: RecPL-20-Inch, 680 Zone, Village 2-Heritage/La Media

2.2.1.4 Project Descriptions

Phase II projects will develop recycled water infrastructure in the Central Area System. Phase III projects develop recycled water infrastructure in the Otay Mesa System, and involve upgrades to the RWCWRF. The following sections indicate which projects will list individual project descriptions according to phase and implementation.

DISTRICT-IMPLEMENTED PHASE II PROJECTS:

CIP No. R001; RecRes – 450-1 Reservoir 12.0 MG

The 450-1 Reservoir is to be located on a site in the northwest corner of the Otay Valley Landfill property. This 12-million-gallon reservoir will provide the Central Area System with enough capacity to meet operational storage requirements and receive supply from the City of San Diego South Bay Water Reclamation Plant.

CIP No. R004; RecPS – 680-1 Pump Station (11,500 GPM)

The 680-1 Pump Station is to be located on the same site as the 450-1 Reservoir. This pump station will supply the 680 Pressure Zones in the Central Area System. Also included is a 24-inch discharge pipeline to the existing Olympic Parkway recycled water main.

CIP No. R019: RecPL - 20-Inch, 944 Zone, SDCWA R/W – 944-1 Pump Station/Olympic

This project consists of the installation of a 20-inch recycled water pipeline in the 944 Pressure Zone. The 2,400-foot-long pipeline will extend southeast through San Diego County Water Authority's right-of-way from the 944-1 Pump Station to Olympic Parkway.

CIP No. R022; RecPL – 30-Inch, 450 Zone, Otay Valley – Dairy Mart Road/450-1 Reservoir

This 30-inch transmission main is approximately 28,000 feet long in the 450 Pressure Zone and extends from Dairy Mart Road in the Tijuana River Valley to the 450-1 Reservoir. At build-out, this pipeline will transport an average of 6 mgd of recycled water from the City of San Diego's SBWRP into the Central Area System.

CIP No. R081; RecPL – 16-inch, 944 Zone, Lane Avenue – Proctor Valley/Pond No. 1

This project consists of the installation of an 8,300-foot-long 16-inch pipeline in the 944 Pressure Zone, located in Lane Avenue between Proctor Valley Road and Storage Pond No. 1 in the City of Chula Vista.

CIP No. R082; RecPL – 24-inch, 680 Zone, Olympic Parkway–Village 2/Heritage

The portion of this project in Olympic Parkway will be constructed by the District. The portion of this project between Olympic Parkway and Heritage road will be constructed by a developer, then operated and maintained by the District. This project consists of the installation of a 24-inch recycled water pipeline in the 680 Pressure Zone. The 6,700-foot-long pipeline will extend east through Olympic Parkway from the proposed industrial park driveway, located approximately 2,200 feet east of the intersection of Olympic and Brandywine Avenue, to Otay Ranch Village 2 West, then through Otay Ranch Village 2 West to Heritage Parkway.

CIP No. R085; RecPL – 20-inch, 680 Zone, Village 2–High School/Olympic

This project will be constructed by the District. This project consists of the installation of a 20-inch recycled water pipeline in the 680 Pressure Zone. The 2,800-foot-long pipeline will extend north through Otay Ranch Village 2 from the southeast corner of the new high school to Olympic Parkway.

DISTRICT-IMPLEMENTED PHASE III PROJECTS:

CIP No. R023; RecRes – 450-2 Reservoir 4.0 MG

The 4.0-million-gallon 450-2 Reservoir is to be located on a site near the western portion of Otay Mesa. The reservoir will provide the Otay Mesa System to meet the operational storage requirements and receive supply from the City of San Diego’s SBWRP.

CIP No. R034; RecRes – 860-1 Reservoir 4.0 MG

This 4.0-million-gallon 860-1 Reservoir is to be located on a site adjacent to the San Diego County Detention Facility on Otay Mesa. It will provide recycled water operational storage for the 860 Pressure Zone.

CIP No. R035; RecPS – 860-1 Pump Station (3,400 GPM)

The 860-1 Pump Station is to be located on the same site as the 450-2 Reservoir near the western portion of Otay Mesa. This pump station will lift recycled water to the 860-1 Reservoir located at the San Diego County Detention Facility.

CIP No. R052; RecPL – 30-Inch, 450 Zone, Otay Mesa Road – Remington Hills/450-2 Reservoir

This 30-inch pipeline is approximately 4,200 feet long in the 450 Pressure Zone, located in Otay Mesa Road from Remington Hills Drive to the 450-2 Reservoir. This pipeline will transport recycled water from the City of San Diego’s SBWRP into the Otay Mesa System.

CIP No. R053; RWCWRF – R. O. Building Remodel

The purpose of this project is to remodel the RWCWRF reverse osmosis system building into a water recycling/conservation school education facility and treatment plant operation personnel offices.

CIP No. R055; RWCWRF – Effluent Meter

The purpose of this project is to install a meter on the RWCWRF effluent pipeline to monitor plant output.

CIP No. R058; RecPL – 16-Inch, 860 Zone, Airway Road – Otay Mesa/Alta

This project will be constructed, operated and maintained by the District. This 16-inch pipeline is approximately 16,000 feet long in the 860 Pressure Zone, located in Airway Road between Otay Mesa Road and Alta Road in Otay Mesa.

CIP No. R067; RWCWRF – Waste Backwash Water Pipeline

The purpose of this project is to install a pipeline at the RWCWRF between the waste backwash water tank and an existing unused water storage tank. This will increase plant effluent by allowing longer filter backwashes and using the backwash water for primary treatment needs in lieu of plant product water.

CIP No. R068; RWCWRF – Load Equalization Tank

The purpose of this project is to install a raw water load equalization storage tank at the RWCWR Facility to allow for 24-hour raw water influent. This will increase total plant production of water output.

CIP No. R072; RecPL – 16-Inch 860 Zone, Otay Mesa Road – 860-1 Pump Station/Heritage

This project will be constructed, operated and maintained by the District. This 16-inch pipeline is approximately 16,000 feet long in the 860 Pressure Zone, located in Otay Mesa Road between the 860-1 Pump Station and Heritage Road in Otay Mesa.

CIP No. R073; RecPL – 24-Inch, 860 Zone, Alta Road – Airway/Border

This project will be constructed, operated and maintained by the District. This 24-inch pipeline is approximately 4,800 feet long in the 860 Pressure Zone, located in Alta Road between Airway Road and the United States and Mexico border in Otay Mesa.

CIP No. R075; Brine Disposal Pipeline Otay Mesa to Metro Sewer System

The purpose of this project is to install a reverse osmosis brine disposal pipeline from the Otay Mesa System to the City of San Diego Metro System ocean outfall. This pipeline will provide the incentive to attract potentially large recycled water industrial and commercial consumers that require brine disposal on Otay Mesa.

CIP No. R077; RecPL – 24-Inch, 860 Zone, Alta Road – Alta Gate/Airway

This project will be constructed, operated and maintained by the District. This 24-inch pipeline is approximately 13,000 feet long in the 860 Pressure Zone, located in Alta Road between the Alta Road gate and Airway Road in Otay Mesa.

DEVELOPER-IMPLEMENTED PHASE II PROJECTS:

CIP No. R013; RecPL – 16-Inch, 944 Zone, East H Street – Eastlake/Lane

This project will be constructed by a developer, then operated and maintained by the District. This 16-inch pipeline is approximately 7,500 feet long in the 944 Pressure Zone, located in East H Street between Eastlake Parkway and Lane Avenue in the City of Chula Vista.

CIP No. R016; RecPL – 16-Inch, 944 Zone, Eastlake Parkway – Trinidad Cove/Olympic

This project will be constructed by a developer, then operated and maintained by the District. This 16-inch pipeline is approximately 3,300 feet long in the 944 Pressure Zone, located in Eastlake Parkway between Trinidad Cove and Olympic Parkway in the City of Chula Vista.

CIP No. R025; RecPL – 12-Inch, 680 Zone, La Media Road – Olympic/Birch

This 12-inch pipeline is approximately 4,200 feet long in the 680 Pressure Zone and is located in La Media Road between Olympic Parkway and Birch Road in the City of Chula Vista. This project will be constructed by a developer, then operated and maintained by the District.

CIP No. R028; RecPL – 8-Inch, 680 Zone, Heritage Road – Olympic/Otay Valley

This 8-inch pipeline is approximately 9,300 feet long in the 680 Pressure Zone, located in Heritage Road from Telegraph Canyon Road to Olympic Parkway in the City of Chula Vista. This project will be constructed by a developer, then operated and maintained by the District.

CIP No. R029; RecPL – 12-Inch, 944 Zone, Otay Lakes Road – Hunte/Eastlake Vistas

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 2,600 feet long in the 944 Pressure Zone, located in Otay Lakes Road between Hunte Parkway and Eastlake Vistas in the City of Chula Vista.

CIP No. R030; RecPL – 8-Inch, 944 Zone, Eastlake Vistas – Otay Lakes/Olympic

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 5,000 feet long in the 944 Pressure Zone, located in Eastlake Vistas between Otay Lakes Road and Olympic Parkway in the City of Chula Vista.

CIP No. R031; RecPL – 12-Inch, 944 Zone, EastLake Parkway – Olympic/Birch

This 12-inch pipeline is approximately 2,500 feet long in the 944 Pressure Zone, located in EastLake Parkway between Olympic Parkway and Birch Road in the City of Chula Vista. This project will be constructed by a developer, then operated and maintained by the District.

CIP No. R032; RecPL – 12-Inch, 944 Zone, La Media Road – Olympic/Birch

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 2,800 feet long in the 944 Pressure Zone, located in La Media Road between Olympic Parkway and Birch Road in the City of Chula Vista.

CIP No. R033; RecPL – 12-Inch, 944 Zone, Birch Road – La Media/EastLake

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 6,300 feet long in the 944 Pressure Zone, located in Birch Road between La Media Road and EastLake Parkway in the City of Chula Vista.

CIP No. R037; RecPL – 8-Inch, 680 Zone, La Media Road – Rock Mountain/Otay Valley

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 4,000 feet long in the 680 Pressure Zone, located in La Media Road between Rock Mountain Road and Otay Valley Road in the City of Chula Vista.

CIP No. R038; RecPL – 8-Inch, 680 Zone, Rock Mountain Road – La Media/Otay Valley

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 6,800 feet long in the 680 Pressure Zone, located in Rock Mountain Road between La Media Road and Otay Valley Road in the City of Chula Vista.

CIP No. R040; RecPL – 12-Inch, 680 Zone, Hunte Parkway – Olympic/EastLake

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 8,600 feet long in the 680 Pressure Zone, located in Hunte Parkway between EastLake Parkway and Olympic Parkway in the City of Chula Vista.

CIP No. R041; RecPL – 8-Inch, 944 Zone, EastLake Parkway – Birch/Rock Mountain

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 4,200 feet long in the 944 Pressure Zone, located in EastLake Parkway between Birch Road and Rock Mountain Road in the City of Chula Vista.

CIP No. R042; RecPL – 8-Inch, 944 Zone, Rock Mountain Road – SR-125/EastLake

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 2,500 feet long in the 944 Pressure Zone, located in Rock Mountain Road between State Route (SR) 125 and EastLake Parkway in the City of Chula Vista.

CIP No. R043; RecPL – 8-Inch, 944 Zone, Rock Mountain Road – La Media/SR-125

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 3,600 feet long in the 944 Pressure Zone, located in Rock Mountain Road between La Media Road and SR 125 in the City of Chula Vista.

CIP No. R047; RecPL – 12-Inch, 680 Zone, La Media Road – Birch/Rock Mountain

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 4,000 feet long in the 680 Pressure Zone, located in La Media Road between Birch Road and Rock Mountain Road in the City of Chula Vista.

CIP No. R071; RecPL – 12-Inch, 944 Zone, Olympic Parkway – La Media/Eastlake

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 7,500 feet long in the 944 Pressure Zone, located in Olympic Parkway between La Media Road and Eastlake Parkway in the City of Chula Vista.

CIP No. R078; RecPL – 8-Inch, 680 Zone, Otay Valley Road – SR-125/Heritage

This project will be constructed by a developer, then operated and maintained by the District. This 8-inch pipeline is approximately 14,000 feet long in the 680 Pressure Zone, located in Otay Valley Road between SR-125 and Heritage Road in the City of Chula Vista.

CIP No. R079; RecPL – 6-inch, 450 Zone, Otay Valley Road – Otay Valley/Entertainment

This project will be constructed by a developer, then operated and maintained by the District. This 6-inch pipeline is approximately 2,400 feet long in the 450 Pressure Zone, located in Otay Valley Road from the intersection with Heritage Road and in Entertainment Circle from Otay Valley Road in the City of Chula Vista.

CIP No. R080; RecPL – 12-Inch, 680 Zone, Olympic Parkway – Medical Center/Heritage

This project will be constructed by a developer, then operated and maintained by the District. This 12-inch pipeline is approximately 8,800 feet long in the 680 Pressure Zone, located in Olympic Parkway between Medical Center Drive and Heritage Road in the City of Chula Vista.

CIP No. R082; RecPL – 24-inch, 680 Zone, Olympic Parkway–Village 2/Heritage

The portion of this project between Olympic Parkway and Heritage road will be constructed by a developer, then operated and maintained by the District. The portion of this project in Olympic Parkway will be constructed by the District. This project consists of the installation of a 24-inch recycled water pipeline in the 680 Pressure Zone. The 6,700-foot-long pipeline will extend east through Olympic Parkway from the proposed industrial park driveway, located approximately 2,200 feet east of the intersection of Olympic and Brandywine Avenue, to Otay Ranch Village 2 West, then through Otay Ranch Village 2 West to Heritage Parkway.

CIP No. R083; RecPL – 20-inch, 680 Zone, Heritage Road–Village 2/Olympic

This project will be constructed by a developer, then operated and maintained by the District. This project consists of the installation of a 20-inch recycled water pipeline in

the 680 Pressure Zone. The 1,000-foot-long pipeline will extend north through Heritage Road between Otay Ranch Village 2 and Olympic Parkway.

CIP No. R084; RecPL – 20-inch, 680 Zone, Village 2–Heritage/La Media

This project will be constructed by a developer, then operated and maintained by the District. This project consists of the installation of a 20-inch recycled water pipeline in the 680 Pressure Zone. The 5,200-foot-long pipeline will extend east through Otay Ranch Village 2 between Heritage Road and La Media Road.

2.2.2 Measures Proposed to Avoid and Minimize Potential Impacts

This Programmatic EA contains data, analysis, and explanations that evaluate potential environmental impacts that may result from implementation of the Project or alternatives. Measures are included as part of the proposed project to reduce potentially significant effects to less-than-significant levels. These measures are discussed in Section 4.0 as they pertain to environmental issues.

2.2.3 Otay Ranch Background and Framework for Developer-Implemented Projects

The purpose of this section is to outline the procedures that developers are required to follow as villages of Otay Ranch are developed. Development of villages includes the roadways that the pipelines will be constructed in, so mitigation for road impacts is addressed at the larger-scale of village impacts.

Otay Ranch is a large-scale, 30- to 50-year planned community that, when implemented, will support development of a cohesive community and regional facilities in southern San Diego. The community includes a balanced housing mix, employment and education centers, open space and regional parks, and a program for the comprehensive management and protection of natural resources. The Otay Valley Parcel (approximately 9,618 acres), one of three parcels within the development, coincides with the District's Central Area System.

In the Central Area System, pipelines will be constructed as development for the Otay Ranch occurs. Development in Otay Ranch is guided by the Otay Ranch GDP and subsequent SPA plans required for each of the 11 villages. The GDP requires that developers build infrastructure as they go, so developers would install recycled water pipelines. Once constructed, the District takes over operation and maintenance of the recycled water infrastructure.

The District's Project contains 22 recycled water pipelines that will be implemented by developers within the Central Area System.

The recycled water pipelines planned as part of the Otay Ranch development would be located in public rights-of-way. Pipelines would be constructed simultaneously with roadways and other development infrastructure. This minimizes construction impacts.

2.2.3.1 Otay Ranch GDP and EIR

The Final Program EIR for The Otay Ranch GDP identifies approximately 23,088 acres of development in an area consisting mostly of undeveloped land used for agriculture and cattle grazing. The Program EIR allows for the tiering of future project EIRs for each village as they are developed. Subsequent SPA plans determine road networks within villages, grading plan, specific public service locations and facilities, and conveyance of dedicated parcels into the preserve. Mitigation measures in the EIR address large-scale impacts from village development, including roads. These measures would reduce some potential effects. The Program EIR identified significant irreversible effects of the Otay Ranch GDP including conversion of open space and agricultural land, commitment of important biological resources, loss of mineral resources, disturbance of cultural and paleontology resources. Unavoidable adverse impacts were identified including land use/planning/zoning, landform alternation/aesthetics, biological resources, agricultural resources, transportation, air quality, and noise.

The Program EIR established mechanisms that would allow for the impacts from recycled pipelines constructed in roads by developers to be mitigated. This mitigation addresses the large-scale impacts of village development, including impacts from road construction, and concurrent implementation of pipeline infrastructure.

Most importantly, the Program EIR and GDP implemented the Otay Ranch RMP (along with many other technical studies and management plans) that establishes a large-scale, open space preserve for the protection and management of natural resources. The following sections discuss the Otay Ranch RMP that establishes the Preserve.

2.2.3.2 Otay Ranch Resource Management Plan (RMP)

In general, the objectives, policies, and standards presented in the RMP form the basis for mitigation measures in the Program EIR for the Otay Ranch GDP. While the RMP presents policies and programs for the protection and enhancement of sensitive resources, the Program EIR provides the vehicle for assuring that the policies and programs included in the RMP are carried out.

The goal of RMP is to establish a permanent resource preserve dedicated to the protection and enhancement of the biological, paleontology, cultural and scenic resources

of the ranch, maintenance of long-term biological diversity, and the assurance of the survival and recovery of native species and habitats within the resource preserve. The Otay Ranch GDP permits 11,524 acres of land to be developed, and requires 11,375 acres of land to be conveyed for resource preserve. The RMP restoration component requires approximately 1,300 acres of coastal sage scrub, and 56 acres of maritime succulent scrub.

The Otay Ranch Land Use Plan, when coupled with the Otay Ranch RMP and the mitigation measures outlined in the Program EIR, meets or exceeds virtually all the preservation standards contained in the MSCP.

Phase 1 of the RMP was developed in 1993, which established the overall framework for the RMP. Phase 2 of the RMP translated the Phase 1 policies into specific action programs and was completed in 1996 in support of the initial Otay Ranch SPA. As individual SPA plans are proposed within Otay Ranch, additional tasks must be executed as required for each SPA. Table 2.1 outlines the tasks that were executed as part of Phase 1 and 2 of the RMP, and the tasks required as villages are implemented.

Implementation of RMP began with the first SPA, and continues during the build-out of Otay Ranch as each village is developed. It involves:

1. The phased conveyance of acreage designated for inclusion in the Preserve to the permanent Preserve Owner/Manager;
2. Implementation of enhancement and restoration plans; and
3. Funding for RMP implementation.

Each Otay Ranch SPA is conditioned to be in conformance with Phase 1 and 2 RMP to require phased conveyance of acreage to the owner of the Preserve, and funding, and/or in-kind construction/services, related to Preserve resource protection, enhancement, and restoration activities.

RMP implementation will continue throughout much of the build-out of Otay Ranch. Gradually, the focus of the RMP will shift from acquisition, implementation, and construction of the Preserve components to maintenance and operation of the Preserve.

RMP Conveyance Plans

RMP acreage transfers, payment of RMP fees, other required funding, or completion of in kind services or related infrastructure facilities are linked to the issuance of building permits for the first final map within each SPA area to assure that development proceeds in an orderly manner consistent with the RMP.

TABLE 2.1
OTAY RANCH RESOURCE MANAGEMENT PLAN TASKS

PHASE 1 TASKS
<ul style="list-style-type: none"> • Identify sensitive resources • Identify a conceptual preserve boundary • Design the preserve to maximize protection of multiple species and resources • Identify necessary RMP studies and research • Establish comprehensive, coordinated resource protection, enhancement, and restoration policies • Identify permitted uses and guidelines for locating such uses within the Preserve • Identify the qualifications, responsibilities and selection process for the Preserve Owner/Manager • Identify the content of remaining phase of RMP • Formulate RMP Implementation Programs for resource protection, enhancement, and restoration. • Monitor the effectiveness of RMP implementation
PHASE 2 TASKS
<ul style="list-style-type: none"> • Conduct resource studies and related research • Select a Preserve Owner/Manager • Commence implementation of RMP programs for • Conveyance of acreage to Preserve Manager • Resource protection, enhancement, and restoration • Funding • Monitoring the effectiveness of RMP implementation • Refine the Preserve boundary based on completed studies/research • Develop conceptual infrastructure plans for facilities located within or across the Preserve • Identify locations of permitted uses within the Preserve
TASKS FOR EACH VILLAGE
<ul style="list-style-type: none"> • Implement enhancement and restoration plans • Continue and complete long-term research • Provide educational and interpretive facilities and programs • Monitor for overall RMP compliance and progress • Assure compliance with RMP policies and standards • Carry out phased conveyance of parcels to the Preserve • Provide for phased funding of RMP programs • Convey parcels to the Preserve

SOURCE: Otay Ranch Resource Management Plan, 1993.

Purpose of the Conveyance Plan is to outline policies for the orderly conveyance of Otay Ranch land to the Preserve Owner/Manager (POM). The Conveyance Plan identifies three key elements:

1. How much land each village must convey to ensure the eventual conveyance of the 11,375-acre resource preserve to the POM.
2. The government approval (issuance of building permits) that triggers actual conveyance of land to the POM.
3. Where land will be conveyed on a village-by-village basis.

GDP permits 11,524 acres of land to be developed, and requires 11,375 acres of land to be conveyed for resource preserve. The approximate conveyance ration is 1.188 acres conveyed per 1-acre of development. The Applicant must convey fee title, or an easement restricting the use of the land to those permitted by the RMP (upon the consent of the POM and any lien holder); to the Resource Preserve and POM upon the recordation of each final map for an amount of land equal to the final map's conveyance obligation as required by the RMP.

Conveyance of acres to the POM is guided by the following:

- First priority is given to conveyance of highest quality resources and most vulnerable area;
- Conveyance shall occur in an orderly manner beginning with an identified "keystone" parcels and proceed to the next logical block of land;
- Areas with restoration potential shall be conveyed early in order to begin research and restoration activities;
- Cumulative acreage conveyed shall be greater than or equal to the cumulative acreage of the proposed SPA development;
- General guidelines regarding in-kind mitigation and no net loss of wetlands shall be considered in the development of the conveyance schedule, particularly in the context of applicable State and Federal regulations;
- Applicable State and Federal regulations regarding protection of sensitive habitat and species shall be followed in the development of the conveyance schedule; and
- The POM shall participate in preparation of the conveyance schedule.

Otay Ranch Development Status

As development has proceeded in Otay Ranch, Preserve land has been dedicated or offered for dedication to the POM. Additional Preserve assembly has occurred through land sales to conservation entities including USFWS, CDFG, and the Environmental Trust. Figure 2.1 shows the location of Preserve land that has either been dedicated, offered for dedication, purchased for conservation or is anticipated to be imminently conveyed. These lands, approximately 6,175 acres, represent more than half of the total RMP Preserve acreage of 11,375 acres (Dudek and Associates, 2004).

In the Otay Ranch development, Villages 1, 5, 6, and 11 have had SPA, EIR, and final map approval. Lands have been conveyed to the Preserve for this Village development. Village 2, 3, 7, and a portion of 4 are in the process of SPA development and environmental review. Lands will be conveyed to the Preserve before final map approval and permit issuance. Village 8, 9, 10, and a portion of 4 have not yet had a SPA plan developed. There has been no Preserve conveyance for these Villages.

The following planning documents are currently in the process of review and updates:

- City of Chula Vista General Plan update
- City of San Diego, Otay Mesa Community Plan Update
- City of Chula Vista, Otay Ranch Villages 2, 3, and 18

2.3 No Action Alternative

Under the No Action Alternative, there would be no Agreement, and no allocation of federal funding for the District's Project. Without federal funding, the District is likely to proceed with the implementation of the Project in order to meet future water demands. The District's WRMP has identified the Project as necessary to meet future recycled water demands and fulfill District, state, regional, and local policies that direct the development of alternative water sources. Without the federal allocation of funds, the District would incur the entire cost of implementing the Project. This alternative would be considerably more expensive for the District.

The No Action alternative would result in increased costs to implement the Project for the District. The environmental review process would likely consist of a project-by-project approach. The increased costs, as well as the time-consuming process of the project-by-project approach, may hinder the District in meeting future recycled water demands. This may delay the District's ability to comply with policies to develop recycled water sources.

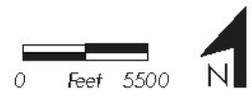
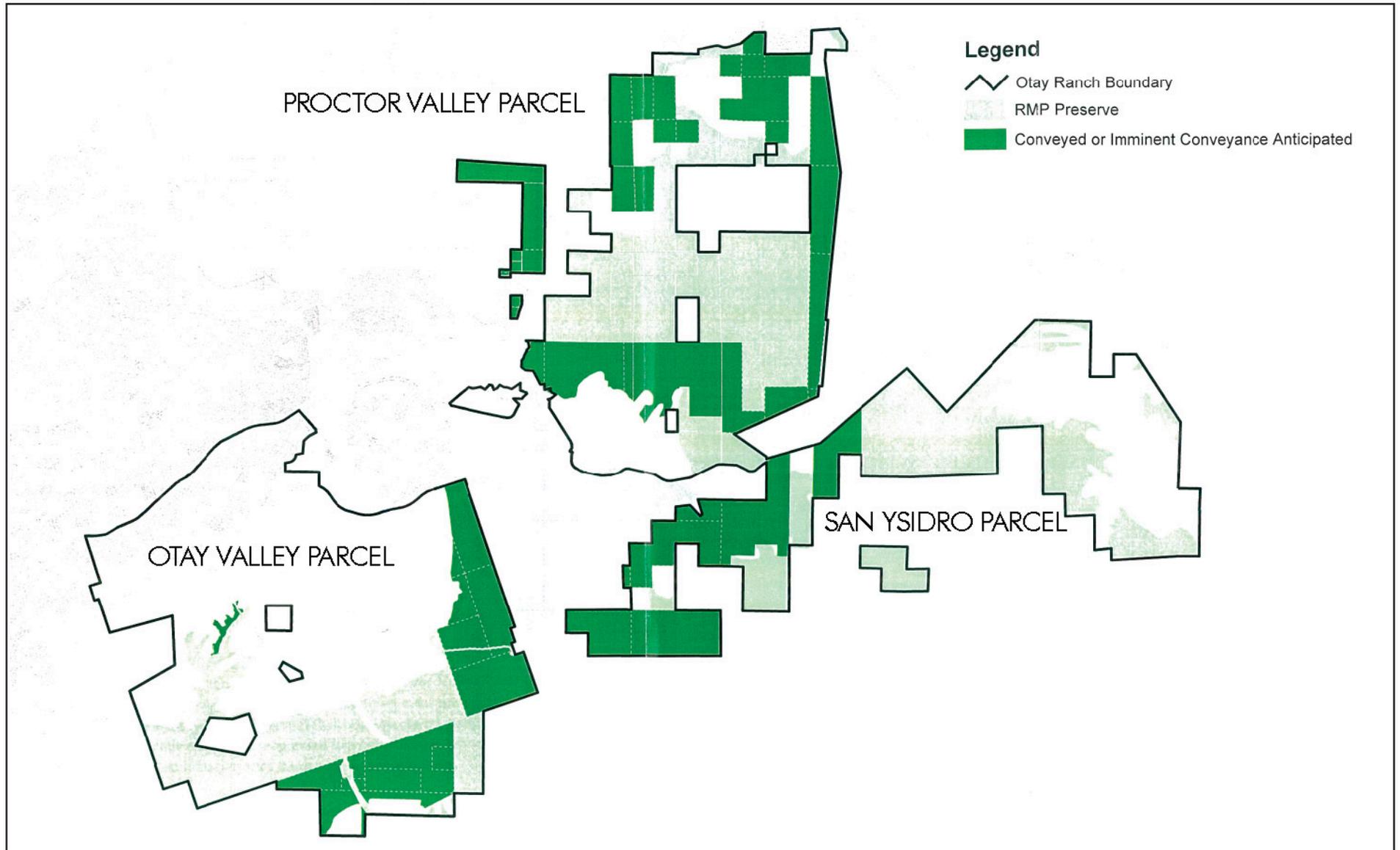


FIGURE 2-1
Otay Ranch Resource Management Preserve

2.4 No Project Alternative

Under the No Project Alternative, the District would not implement the Project. The 42 Phase II and III Recycled Water projects would not be constructed. The estimated 9,219 acre-feet per year of recycled water that the Project would produce would not be available. The use of imported, potable water to supplement the District's recycled water supply would continue.

The District's WRMP identified the Project as needed to meet future recycled water demands and fulfill District, state, regional, and local policies that direct the development of alternative water sources. Under the No Project Alternative, the District would not follow its WRMP, and would be in violation of policies advocating the development of recycled water sources. Without implementation of this Project, the District's ability to meet future water demands may be hindered.