

4.2.3 No Project Alternative

The District would not construct its project under this alternative. While no immediate effects would occur to biological resources as identified for the proposed project, increasing development and demand for water would eventually have some impact on local biological resources.

4.3 Cultural Resources

4.3.1 Proposed Project

A comprehensive cultural resource site record and report search (spanning approximately 48,000 acres) for the Otay Water District was completed at the South Coastal Information Center at San Diego State University and at the San Diego Museum of Man. The record and report search included information on the Central Area System and Otay Mesa System where the majority of the District's Projects will be implemented. In addition, historic map and photograph sources were reviewed to identify historic period resources such as archaeological deposits or buildings and structures. The resulting data is referred to as the Cultural Resource Inventory (CRI) for this Project. This CRI serves as the information necessary to determine potential significant impacts and ways to avoid, minimize, and/or mitigate appropriately.

The CRI revealed that large portions of the planning area have been surveyed for a variety of projects over the past 20 years; however, the search also showed that there are some areas for which no systematic cultural resources surveys have been completed. In general, Projects implemented within the boundaries of existing District facilities or roadways are not considered likely to impact cultural resources. Construction of new reservoirs, pump stations, or pipelines could result in potential impacts to archaeological, historical, or cultural sites and features, particularly trenching for pipeline construction. Mitigation measures implemented by the District would avoid, minimize, and/or mitigate potential impacts through a program of identification, evaluation, avoidance of impacts, or mitigation through programs of data recovery to capture scientific information that would otherwise be lost. To insure that the mitigation measures are followed, a Programmatic Agreement (available upon request from Reclamation) between Reclamation, SHPO, and the District would be established specifying the duties of each participant. The Programmatic Agreement expands on the mitigation steps and may be obtained from Reclamation.

Construction of the Project requires excavation of undisturbed areas and could result in impacts to cultural resources unless such resources potentially present are identified and appropriate steps to avoid or mitigate impacts are taken. Portions of the Project will be

constructed in existing roadways, or undergo concurrent construction with roads. Trenching to install pipelines could affect potential subsurface deposits of cultural materials not detected in the surveys and testing.

Owing to the scope of the proposed Project, identification of cultural resources that are eligible for inclusion in the NRHP cannot be fully determined at this time. A preliminary impact assessment was conducted to determine which sites occur in the vicinity of the Project. An overlay analysis was conducted using GIS by combining spatial information on project location and archaeological sites. A buffer area of approximately 150 feet was used to assess potential for archaeological sites in the vicinity of the Project. Archaeological sites that occur within the 150 feet buffer are listed in Table 4.2. A Confidential attachment showing the location of these archaeological sites is on file at Reclamation.

The District will implement the following procedures as the project designs are finalized:

- A review of the current status of investigations for the proposed location(s) will be made to ensure compliance with 36 CFR 800.4. The adequacy of study will be determined by review of existing documents on file at the South Coastal Information Center and San Diego Museum of Man, Otay Water District records, and other sources as applicable. Native American Tribes (Tribes) shall be consulted and their comments and concerns shall be addressed throughout the identification and evaluation process.
- If investigation of the location(s) satisfies 36 CFR 800.4 and no cultural resources are present, a finding of no adverse effect for the proposed CIP project(s) will be recommended. A letter of notification of this finding will be submitted to Reclamation and will identify the CIP project, its location, status of investigations in the study area, and conclusions of the review.
- If studies in the selected project location(s) do *not* satisfy 36 CFR 800.4, additional survey will be implemented in order to comply. A letter indicating the need for additional survey investigations will be submitted to Reclamation identifying the project, its location, status of prior research, and proposed methods for additional survey.
- If at this point the investigation of the location(s) satisfies 36 CFR 800.4 and no cultural resources are present, a finding of no effect for the proposed project will be recommended.
- If cultural resources that do not meet NRHP eligibility criteria are present within the added survey areas, a finding of no properties/no effect for the proposed project will be recommended.

**TABLE 4.2
CULTURAL RESOURCES IMPACT ANALYSIS**

CIP Number	OHP Site Number	SDMM Site Number	Site Type	Content	NRHP Status Indicated by the Documentation	Quad	Report Author, Year and Number on File at South Coastal Information Center
R001	10473		Lithic Scatter	Knapped Stone	Not Eligible	IB	Fink 74+45
R001	10473		Lithic Scatter	Knapped Stone	Not Eligible	IB	Kyle 96-76
R001	10473		Lithic Scatter	Knapped Stone	Not Eligible	IB	Gallegos 97+172
R004	N/A	520	Lithic Scatter	Knapped Stone	Not Eligible	IB	None
R022	7983		Lithic Scatter	Knapped Stone	Not Eligible	IB	City of S.D. 93+36
R022	7983		Lithic Scatter	Knapped Stone	Not Eligible	IB	SRS 80+11
R022	7983		Lithic Scatter	Knapped Stone	Not Eligible	IB	Carrico 76+30
R022	7984		Lithic Scatter	Knapped Stone	Not Eligible	IB	City of S.D. 93+36
R022	7984		Lithic Scatter	Knapped Stone	Not Eligible	IB	SRS 80+11
R022	7984		Lithic Scatter	Knapped Stone	Not Eligible	IB	Carrico 76+30
R022	8065		Artifact Scatter	Knapped Stone and Shell	Not Eligible	IB	Smith 89+50
R022	8065		Artifact Scatter	Knapped Stone and Shell	Not Eligible	IB	SRS 80+11
R022	8065		Artifact Scatter	Knapped Stone and Shell	Not Eligible	IB	SRS 80+4
R022	8065		Artifact Scatter	Knapped Stone and Shell	Not Eligible	IB	SRS 84+33
R022	10473		Lithic Scatter	Knapped Stone	Not Eligible	IB	Fink 74+45
R022	10473		Lithic Scatter	Knapped Stone	Not Eligible	IB	Kyle 96-76
R022	10473		Lithic Scatter	Knapped Stone	Not Eligible	IB	Gallegos 97+172
R022	11079		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	IB	SRS 84+35
R022	11079		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	IB	Pignolo 89+9
R022	11079		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	IB	Kyle 94+60
R023	10518		Lithic Scatter	Knapped Stone	Not Specific	IB	SRS 84+35
R025	11384		Historic Site	Foundation and Trash Scatter	Not Eligible	OM	Smith 96+301
R025	11412		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R028	11968		Lithic Scatter	Knapped Stone	Not Eligible	IB	Smith 96+301
R028	11968		Lithic Scatter	Knapped Stone	Not Eligible	IB	Carrico 158
R028	12289		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	OM	Smith 96+301
R028	12293		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	IB/OM	Smith 96+302
R028	13226		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	OM	Smith 96+301
R028	13867		Lithic Scatter	Knapped Stone	Not Eligible	IB	Carrico 158
R028	13867		Lithic Scatter	Knapped Stone	Not Eligible	IB	Carrico 158
R028	I-451		Isolate	Core	Not Eligible	IB	Smith 86+301
R028	I-451		Isolate	Core	Not Eligible	IB	Carrico 158
R028	I-634		Isolate	Flake	Not Eligible	OM	Smith 86+301
R028	I-634		Isolate	Flake	Not Eligible	OM	Carrico 158
R028	I-634		Isolate	Flake	Not Eligible	OM	Gallegos 97+172
R028	P-014175		Isolate	No Record on File	Not Eligible	OM	Carrico 158
R028	P-014177		Isolate	No Record on File	Not Eligible	OM	Carrico 158

TABLE 4.2
CULTURAL RESOURCES IMPACT ANALYSIS
(continued)

CIP Number	OHP Site Number	SDMM Site Number	Site Type	Content	NRHP Status Indicated by the Documentation	Quad	Report Author, Year and Number on File at South Coastal Information Center
R028	P-014182		Isolate	No Record on File	Not Eligible	IB	Carrico 158
R028	P-014184		Isolate	No Record on File	Not Eligible	IB	Smith 96+301
R028	P-014184		Isolate	No Record on File	Not Eligible	IB	Carrico 158
R028	P-014185		Isolate	No Record on File	Not Eligible	IB	Smith 96+301
R028	P-014185		Isolate	No Record on File	Not Eligible	IB	Carrico 158
R028	N/A	4865	Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	IB	Smith 96+301
R037	11412		Lithic Scatter	Knapped Stone	Not Eligible	OM	None
R037	15235		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96 + 301
R037	14235		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R037	14236		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96 + 301
R037	14236		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R037	4789 (4988)		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96 + 301
R037	4789 (4988)		Lithic Scatter	Knapped Stone	Not Eligible	OM	Rosen 90+24
R037	4789 (4988)		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R037	4789 (4988)		Lithic Scatter	Knapped Stone	Not Eligible	OM	Schaefer 94+23
R040	12278		Lithic Scatter	Knapped Stone	Not Eligible	JM	Smith 96+301
R040	12278		Lithic Scatter	Knapped Stone	Not Eligible	JM	Buysei 99+5
R041	I-443		Isolate	No Record on File	Not Eligible	OM	Carrico 158
R043	I-447		Isolate	No Record on File	Not Eligible	IB	Smith 96+301
R043	I-447		Isolate	No Record on File	Not Eligible	IB	Rosen 90+24
R043	I-447		Isolate	No Record on File	Not Eligible	IB	Carrico 158
R047	11384		Historic Site	Foundation and Trash Scatter	Not Eligible	OM	Carrico 158
R052	10511		No Documentation	No Record on File	Not Eligible	IB	SRS 84+35
R052	10511		No Documentation	No Record on File	Not Eligible	IB	Pignolio 89+9
R052	10511		No Documentation	No Record on File	Not Eligible	IB	Kyle 94+60
R058	12886		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR+14
R072	1077		Isolate	Scraper	Not Eligible	IB	County of SD 88 EIR 23
R072	6941		Habitation Site	Midden, Knapped Stone, Ground Stone	Not Eligible	IB	None
R072	10197		Artifact Scatter	Knapped Stone and Ground Stone	Not Eligible	IB	None
R072	14084		Lithic Scatter	Knapped Stone	Not Specific	IB	None
R075	7208		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR 14
R075	7215		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR 14
R075	7857		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR 14
R075	8654		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR 14
R075	8753		Lithic Scatter	Knapped Stone	Not Eligible	IB	SRS 84+35
R075	10207		Lithic Scatter	Knapped Stone	Not Eligible	IB	SRS 84+35
R075	10207		Lithic Scatter	Knapped Stone	Not Eligible	IB	City of SD 96+101

TABLE 4.2
CULTURAL RESOURCES IMPACT ANALYSIS
(continued)

CIP Number	OHP Site Number	SDMM Site Number	Site Type	Content	NRHP Status Indicated by the Documentation	Quad	Report Author, Year and Number on File at South Coastal Information Center
R075	10627		Lithic Scatter	Knapped Stone	Not Eligible	OM	Westec 82 EIR 9
R075	10627		Lithic Scatter	Knapped Stone	Not Eligible	OM	Thesken 82+5
R075	10627		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR+14
R075	11799		Lithic Scatter	Cistern	Not Specific	OM	Carrico 74+141
R075	12337		Lithic Scatter	Knapped Stone	Not Specific	OM	County of SD 83 EIR+14
R075	12337		Lithic Scatter	Knapped Stone	Not Specific	OM	Carrico 74+141
R075	12337		Lithic Scatter	Knapped Stone	Not Specific	OM	Carrico 158
R075	12337		Lithic Scatter	Knapped Stone	Not Specific	OM	Rosen 90+24
R075	14090		Lithic Scatter	Knapped Stone	Not Specific	OM	County of SD 83 EIR+14
R075	14092		Lithic Scatter	Knapped Stone	Not Specific	OM	None
R075	14094		Lithic Scatter	Knapped Stone	Not Specific	OM	County of SD 83 EIR+14
R077	6941		Habitation Site	Midden, Knapped Stone, Ground Stone	Not Eligible	IB	None
R077	7215		Lithic Scatter	Knapped Stone	Not Eligible	OM	County of SD 83 EIR 14
R077	8081	2071	Lithic Scatter	Knapped Stone	Not Specific	OM	Carrico 74+141
R077	8654	453	Lithic Scatter	Knapped Stone	Not Specific	OM	County of SD 83 EIR 14
R077	10627		Lithic Scatter	Knapped Stone	Not Eligible	OM	Westec 82 EIR 10
R077	10627		Lithic Scatter	Knapped Stone	Not Eligible	OM	Hector 82+46
R077	I-514		Isolate	Flake	Not Eligible	OM	Carrico 74+141
R078	4739		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96+301
R078	4739		Lithic Scatter	Knapped Stone	Not Eligible	OM	Rosen 90+24
R078	4739		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	4740		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96+301
R078	4740		Lithic Scatter	Knapped Stone	Not Eligible	OM	Rosen 90+24
R078	4740		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	4740		Lithic Scatter	Knapped Stone	Not Eligible	OM	McDonam 93+4
R078	4741		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96+301
R078	4741		Lithic Scatter	Knapped Stone	Not Eligible	OM	Rosen 90+24
R078	4741		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	4741		Lithic Scatter	Knapped Stone	Not Eligible	OM	Schaefer 94+23
R078	4743		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96+301
R078	4743		Lithic Scatter	Knapped Stone	Not Eligible	OM	Rosen 90+24
R078	4743		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	4743		Lithic Scatter	Knapped Stone	Not Eligible	OM	Schaefer 94+23
R078	4790		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96+301
R078	4790		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	4863		Artifact scatter	Knapped Stone and Ground Stone	Not Eligible	IB/OM	Smith 96+301
R078	4863		Artifact scatter	Knapped Stone and Ground Stone	Not Eligible	IB/OM	Fink 73-25

TABLE 4.2
CULTURAL RESOURCES IMPACT ANALYSIS
(continued)

CIP Number	OHP Site Number	SDMM Site Number	Site Type	Content	NRHP Status Indicated by the Documentation	Quad	Report Author, Year and Number on File at South Coastal Information Center
R078	11362		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96 + 301
R078	11362		Lithic Scatter	Knapped Stone	Not Eligible	OM	Co. of S.D. 83 EIR + 14
R078	11362		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	11362		Lithic Scatter	Knapped Stone	Not Eligible	OM	Banks 80 + 2
R078	11968		Lithic Scatter	Knapped Stone	Not Eligible	IB	Carrico 158
R078	12293		Artifact scatter	Knapped Stone and Ground Stone	Not Eligible	IB/OM	Fink 73-75
R078	14203		Artifact scatter	Knapped Stone and Ground Stone	Not Eligible	OM	Smith 96+301
R078	14205		Lithic Scatter	Knapped Stone	Not Eligible	OM	Ritz 89
R078	14205		Lithic Scatter	Knapped Stone	Not Eligible	OM	Smith 96+301
R078	14205		Lithic Scatter	Knapped Stone	Not Eligible	OM	Rosen 90+24
R078	14205		Lithic Scatter	Knapped Stone	Not Eligible	OM	Carrico 158
R078	14231		Artifact scatter	Bedrock Milling and Knapped Stone	Not Specific	OM	Smith 96+301
R078	14232		Artifact scatter	Bedrock Milling and Knapped Stone	Not Specific	OM	Smith 96+301
R078	4789 (4988)		Lithic Scatter	Knapped Stone	Not Eligible	OM	None
R079	10783		Artifact Scatter	Knapped Stone and Ground Stone	Not Specific	IB	City of S.D. 98+112
R081	7198		Lithic Scatter	Knapped Stone	Not Eligible	JM	Westec 79+10
R081	7198		Lithic Scatter	Knapped Stone	Not Eligible	JM	Kaldenberg 75+15
R081	7198		Lithic Scatter	Knapped Stone	Not Eligible	JM	Co. of S.D. 88 EIR 23
R081	16084		Lithic Scatter	Knapped Stone	Not Eligible	JM	Westec 79+10
R081	16084		Lithic Scatter	Knapped Stone	Not Eligible	JM	Wade 88+11
R081	16084		Lithic Scatter	Knapped Stone	Not Eligible	JM	Co. of S.D. 88 EIR 23
R081	I-376		Isolate	No Record on File	Not Eligible	JM	Rosen 90+24
R081	I-376		Isolate	No Record on File	Not Eligible	JM	Carrico 158
R083	P-014168		Isolate	Flake	Not Eligible	IB	Carrico 158
R084	I-449		Isolate	Historic Glass	Not Eligible	OM	Carrico 158
R085	P-014176		Isolate	Drill	Not Eligible	OM	Carrico 158
R077	11798		Artifact Scatter/Historic Site	Knapped Stone and 1903 Building	Not Specific	JM	Carrico 74+141
R077	12888		Historic	Historic Trash	Not Specific	OM	Carrico 74+141
R072	14083		No Documentation	No Record on File	Not Specific	IB	None
R072	14086/H		Lithic Scatter/Historic Site	Knapped Stone/ Historic Trash	Not Specific	IB	None
R072	14086/H		Lithic Scatter/Historic Site	Knapped Stone/ Historic Trash	Not Specific	IB	None

* Key to USGS 7.5' Quadrangle abbreviations: IB – Imperial Beach; JM – Jamul Mountains; OM – Otay Mesa.

- If an archaeological resource is determined to be eligible for the NRHP, and avoidance is not feasible, the District will develop a Treatment Plan to be submitted to Reclamation for a review and comment period. At a minimum, a Treatment Plan shall include a research design, research questions and data requirements to answer them, a data recovery plan, proposed disposition of recovered materials and records, proposed methods for involving Tribes and the interested public, and a proposed schedule for implementation of the plan.

The District shall ensure that a report is prepared for each data recovery project covered in the Treatment Plan. Reclamation shall review the report and consult with the SHPO, Tribes, and interested parties on draft data recovery reports.

- The District will ensure that research results from the Data Recovery excavations at eligible archaeological sites will be provided to the South Coastal Information Center and the San Diego Archaeological Center and will also be disseminated to the general public.
- Excavation records and materials recovered from non-eligible archaeological sites will be curated at an appropriate facility.

To insure that the procedures identified here are completed, a Programmatic Agreement between Reclamation, SHPO, and the District shall be executed specifying the duties of each part. The Programmatic Agreement expands on the steps discussed above and may be obtained from Reclamation.

Determining the significance of impacts to cultural resources is dependent on whether a site meets or does not meet the significance criteria identified in the NRHP and the California Register of Historic Resources (CRHR). The evaluation criteria of these two programs are very similar in their organization and terminology. The NRHP criteria are identified in 36 CFR 60. The NRHP identifies the specific criteria by alphabetical designation (i.e., Criteria A through D) and the CRHR identifies the criteria with numeric designations (i.e., Criteria 1 through 4). The content of the criteria remain consistent between the two programs. The NRHP criteria are provided here as the example:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or

- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

4.3.1.1 District Implemented Projects

Cultural Resource Mitigation Measures

- On-site cultural resource surveys shall be conducted by a qualified archaeologist prior to implementation of an individual project. The purpose of the survey will be to more precisely locate and map significant cultural resources.
- If cultural resources are encountered during construction, construction activities will stop until a qualified archaeologist examines the findings, and assesses significance. Procedures outlined in the Programmatic Agreement will be followed.
- If human bones are found during construction, all work shall stop and the County Coroner will be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American heritage Commission who shall notify the person it believes to be the most likely descendant. The most likely descendant shall work with the District to develop a program for re-internment of the human remains and any associated artifacts. No construction work shall take place in the immediate vicinity of the find until the above actions have been executed.

4.3.1.2 Developer Implemented Projects

Cultural Resource Mitigation Measures

- Survey of the entire project area and testing of sites as outlined in the Otay Ranch RMP and appendices. Implement mitigation to preclude impacts to significant site based on the survey and testing program.
- Perform paleontological monitoring during excavation of geologic formations with paleontological sensitivity to prevent disturbance to significant resources.

4.3.2 No Action Alternative

Reclamation would not execute an Agreement with the District, so there would be no allocation of federal funds for the Project. The District would still implement the Project in order to meet future water demands and maximize the use of local water supplies. The Project would still be implemented, so environmental effects to cultural resources would be the same as the Proposed Project.

Under this alternative, there would be no Programmatic Agreement between Reclamation, the District, and the SHPO. The orderly procedure of cultural resource mitigation as outlined in the Programmatic Agreement would not be followed. The District would be required to comply with the National Historic Preservation Act and SHPO on a project-by-project basis, following the Section 106 process.

4.3.3 No Project Alternative

The District would not implement the Project. There would be no significant impact on cultural resources.

4.4 Land Use

4.4.1 Proposed Project

Water service facilities are exempt from local planning and zoning requirements under Section 53091 of the California Government Code. Even though District facilities are not subject to local zoning and land use designations, District policy requires careful planning and review in order to coordinate their facilities with local land use policies and zoning. This ensures that there is no adverse impact from implementation of District facilities and infrastructure.

District facilities are a necessary infrastructure element for all types of development. The District's recycled water CIP program was developed after a careful survey of existing and planned development, and the phasing and intensity of future development. Many water utilities are designed and constructed as part of subdivision improvements under the approval of local jurisdictions. This is done wherever possible for efficiency, economy, and avoidance of later disruption of communities and public rights-of-way. Expansion of the District's recycled water infrastructure in the Central Area System is anticipated to meet market demands. This increase in recycled water demand is partly a result of land use policies in the local jurisdictions and development projects. Large developments are being required to install parallel water delivery systems so that recycled water can be used for irrigation of landscaping.

Elements of the Project that interact with land uses include pipelines, pump stations, and reservoirs. Pipelines are installed belowground in public rights-of-way in existing or planned roads as much as possible, and do not have any significant effects after installation. Pump stations and reservoirs are installed partly or entirely aboveground and are visible. During pipeline construction and maintenance, there may be potential impacts associated with traffic and possible conflicts with other utilities. Any potential conflicts with other utilities, such as natural gas lines or electrical conduits, are identified in the engineering and design stage of the project and avoided. District policy is to coordinate all construction, repair, and maintenance activities with other utilities that may be in the shared rights-of-way. Therefore, any potential impacts on utilities are identified and avoided, or mitigated to less than significant by District policy. No land use changes are expected to occur in the District as a result of the proposed Project.

4.4.1.1 District Implemented Projects

Land Use Mitigation Measures

- The District will follow applicable land use policies addressing sensitive lands when appropriate. This will reduce potential conflicts with environmentally sensitive lands regulations.
- The District will coordinate project construction with other utilities that may exist in utility rights-of-way in order to minimize disruption of service.

4.4.1.2 Developer Implemented Projects

Land Use Mitigation Measures

- Inclusion of landscaping and buffering guidelines in the GDP and SPA plans would reduce any potential incompatibility with internal project land uses in the Otay Valley Parcel, including residential, commercial, and industrial uses.

4.4.2 No Action Alternative

The District would still implement the Project, even without the Agreement and federal funding. By implementing the Project, the District could maximize use of local water supplies, and meet future water demands. Environmental impacts would occur from Project implementation, and would be the same as the proposed Project alternative. See section 4.5.3 for potential impact details.

4.4.3 No Project Alternative

The District would not construct its project under this alternative. Use of local water sources would not be maximized. The District's ability to meet future water demands may be hindered. The approximate 9,126 acre-feet per year of recycled water that the Project would supply would not be available. The intended use of the recycled water is for irrigation.

Current recycled water customers are developments including EastLake Greens, EastLake Trails, EastLake Business Center, Rancho del Rey, Sunbow, Rancho San Miguel, Rolling Hills Ranch, Otay Ranch and the Olympic Training Center. Future recycled water demands include 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 that require irrigation. Under the no project alternative, the potential for irrigation for these future areas would be limited. Without the Project, the District's recycled water system would continue to be supplemented with potable water.

4.5 Aesthetics

4.5.1 Proposed Project

Implementation of the Project will require temporary disturbance of the sites for construction. Many of the individual projects are not prominently visible from residences, roads, or other public viewsheds. For those projects that would be viewable, construction may result in highly noticeable effects. Disturbance of ground cover, grading, excavation, material stockpiles, and the operation of construction equipment are common features of construction sites. When construction is completed, most of the projects would have no significant effect on the visual environment.

Installation of pipelines will occur primarily in roadways that are being constructed. This simultaneous construction of roads and pipelines will reduce temporary construction impacts. Existing traffic on these roads would be minimal, often the roads are dirt and used primarily by construction vehicles, which further reduces adverse visual impacts since public use is limited. Visual disturbance from construction is short-term, and impacts are reduced upon the completion of construction. Pipelines in roadways are belowground installations and would have no visual effect when completed. Pipelines outside of roadways would have no effect when the area is revegetated upon completion of construction.

Pump stations are structures that may be near roads and developed areas. Pump stations typically have masonry walls and a roof, resembling an ordinary single-story building. Because they are ordinary looking once constructed, they usually are an unremarkable feature in the landscape for most viewers. The potential for significant visual effects from a pump station is low, but their appearance can be enhanced by exterior treatment and landscaping. Pump stations will not have significant aesthetic effects.

The visual effect of reservoirs depends on the visibility of the site, degree of landform alteration, size, color and prominence of the structure, the number and proximity of the viewers, and any landscaping or screening of the facility. In order for reservoirs to function with the system's operating pressure, they are required to be located at the appropriate elevation, usually on hillsides, hilltops, or ridges in prominent locations. Reservoirs are typically constructed out of steel or concrete, and are cylindrical in shape. Features associated with the reservoir may contribute to its visual effects, such as grading to create a level pad, which may include cut and fill slopes, depending on site topography. Fencing and utility connections can also add visible features, though these would usually be minor in comparison to the reservoir. Landscaping can help to screen the form of a reservoir, but in most cases it is more effective in developed areas than in native hillsides. In such cases, revegetation with native species, especially taller native scrub species, including trees, is recommended. In some cases, it may be possible to build an earthen berm around the base of a reservoir and revegetate it to blend with its natural surroundings.

Reservoirs are highly visible features; viewer reactions and attitudes may be mixed. Water storage reservoirs are familiar features of the landscape in San Diego County; for many residents of and visitors to viewsheds, reservoir presence in the landscape is familiar, and because of that familiarity, accepted without much remark. For some viewers, they are perceived as marring the landscape. This is common where reservoirs are set in natural landscapes, in less densely developed areas, and on ridges, hillsides, or hilltops.

The project has been designed to be compatible with existing neighborhoods and future developments plans as much as possible. Where potential exists for a significant impact to visual resources, such as a reservoir, the District would identify the viewer groups, and involve them in the project planning process as project details are finalized. This coordination would minimize potential adverse impacts to a less-than-significant level.

Most components of the Project would result in minor external changes and would have no significant visual impact. Most pipelines will have no permanent visual effects. When potential exists for an impact, the District will incorporate the affected viewer group(s) into the design process to minimize potential impacts to a less-than-significant level using design features, screening, landscaping, and native vegetation.

4.5.1.1 District Implemented Projects

Aesthetics Mitigation Measures

- Where possible, projects shall be sited in areas that have natural features, such as topography and vegetation, which would block views to the project facilities.
- Design facilities to blend in with their proposed surrounding. Include color and design that blends with the vegetation, rocks, etc. within the sites surrounding characteristics.
- Provide landscaping to screen views to the proposed project facilities.

4.5.1.2 Developer Implemented Projects

Measures below were developed in the context of the Otay Ranch development. Developers are required to implement these measures as each village is constructed. These measures address the village development, and do not specifically address the roads that the pipelines will be under.

Aesthetics Mitigation Measures

- Grading will be limited to below tops of major ridgelines, as outlined in GDP. Integration of natural buffering between development and landforms shall be performed.
- Specific guidelines for grading, design, landscaping and buffering, building heights and colors, and setbacks, as outlined in village SPA plans shall be included.

4.5.2 No Action Alternative

There would be no federal allocation of funds under this alternative. The District would still implement the Project to meet future water demand. The most visible components of the Project are reservoirs, and to a lesser extent, pump stations. In general, pipelines are located underground and do not have any impact on the visual quality of the surface. The Project would still be constructed under this alternative, and aesthetic impacts would be the same as the proposed Project alternative.

4.5.3 No Project Alternative

The Project would not be constructed for this alternative. There would be no direct effects to aesthetic resources, since reservoirs and pump stations, the most visible

components of the Project, would not be constructed. Temporary aesthetic impacts associated with construction would not occur, since the Projects would not be built.

4.6 Air Quality

4.6.1 Proposed Project

Implementation of the proposed project would result in emissions generated by construction equipment, private and District vehicles, and power-consuming District facilities such as pump stations. The San Diego APCD regulates pollutant emissions from motorized construction equipment.

Standard equipment used for the construction of reservoirs, pump stations and pipelines can include bulldozers, rollers, dewatering pumps, backhoes, loaders, delivery and haul trucks, and other equipment. Typical equipment and associated emissions found at construction sites is listed in Table 4.3.

**TABLE 4.3
EXHAUST EMISSIONS FROM TYPICAL CONSTRUCTION EQUIPMENT (pounds per day)**

Equipment	Average Hours/Day of Operation	Emissions				
		NO _x	CO	PM ₁₀	VOC	SO ₂
Front-end loader	8	13.01	3.24	1.27	0.94	1.34
Crawler tractor	4	14.46	3.62	1.51	0.81	1.87
Roller	8	22.24	10.01	1.47	1.65	1.88
Backhoe	4	5.6	3.44	0.6	0.82	0.40
Utility truck	8	11.16	2.40	1.00	0.56	1.36
12,000-gallon tanker	4	25.51	7.14	1.57	1.16	2.79
Dump truck	4	7.66	2.14	0.47	0.35	0.84

SOURCES: Radian Corporation and Environmental Protection Agency 1988.

NO_x = oxides of nitrogen; CO = carbon monoxide; PM₁₀ = 10-micron particulates;

VOC = volatile organic compounds; SO₂ = sulfur dioxide

Table 4.4 lists the San Diego APCD air quality impact analysis trigger levels.

**TABLE 4.4
AIR QUALITY IMPACT ANALYSIS TRIGGER LEVELS**

Pollutant	Threshold (pounds/day)
NO _x	250
SO _x	250
CO	550
PM ₁₀	100
Lead	3.2
ROC	55*

SOURCE: San Diego APCD, Rule 20.2 (12/17/1998).

*The SDAPCD does not specify a threshold for ROG. The significance threshold of 55 pounds/day cited is from the South Coast Air Quality Management District CEQA Air Quality Handbook as recommended by San Diego County staff (County of San Diego 2005).

Under the SDABs APCD Rules and Regulations, a construction site may be considered a stationary source of air pollutant emissions. As long as “offset trigger levels” of emissions are not exceeded, site-specific impacts would not be considered significant. Offset trigger levels are 550 pounds per day for carbon monoxide, 250 pounds per day for sulfur dioxide and nitrogen dioxide, and 100 pounds per day for PM₁₀. Exhaust emissions from typical construction equipment, as listed in Table 4.3, would not exceed the SDAB trigger thresholds, listed in Table 4.4. Impacts to air quality from operation of construction equipment would be less-than-significant.

Grading and trenching have a potential to cause a discharge of particulates into the air. Fugitive dust emissions are subject to regulation by APCD and local jurisdictions. Typical grading ordinances require that all graded surfaces and materials, whether filled, excavated, transported, or stockpiled, be wetted, protected, or contained to minimize nuisance from dust. In general, working areas of a construction site are watered at the beginning of each working day and at least once during the day. More frequent watering may be required if warranted. While the quantities of grading involved in construction of the pipelines, reservoirs, and pump stations make it inevitable that some fugitive dust will be generated, adherence to APCD Rules and Regulations and applicable grading ordinances would reduce fugitive dust emissions to less-than-significant levels. Therefore, short-term air quality impacts from the operation of heavy equipment and fugitive dust emissions during construction would not be significant. In addition, many of the pipelines will be constructed concurrently with the roads, thereby reducing the overall temporary impact from construction activities.

Potential air quality impacts related to long-term operation of the projects include emissions associated with the generation of electricity for facilities, particularly pump stations. During power outages, power is provided by on-site diesel generators. Two recycled water pump stations would be constructed as part of the proposed project. Four projects involve upgrades to the RWCWRF, which may also increase the amount of energy use for long-term operations. These energy requirements are necessary components of the orderly, planned growth in the air basin associated with local land use jurisdictions’ general and community plans. The long-term air quality impacts from the operation and maintenance of pump stations and other District facilities are not significant.

4.6.1.1 District Implemented Projects

Air Quality Mitigation Measures

- The District and its contractors will maintain construction equipment engines to ensure minimum emissions.

- The District shall 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.
- Vehicles hauling dirt or fill will be covered to minimize fugitive dust and PM₁₀.

4.6.1.2 Developer Implemented Projects

These measures were developed in the context of the Otay Ranch and village development. Developers are required to implement measures as each village is constructed. These measures address the large-scale village development, and do not specifically address the roads that the pipelines will be under.

Air Quality Mitigation Measures

- Mitigation for vehicular emissions includes implementation of village design, public transit, TDM, and bike paths. Stationary source mitigation includes the promotion of mass transit, the installation of heat transfer modules on gas-fired furnaces, energy efficient building design, and minimization of drive-in establishments.
- Mitigation for construction emissions includes phasing construction, use of low pollutant-emitting construction equipment, and watering, stabilization and prompt paving of roadways.

4.6.2 No Action Alternative

Without executions of an Agreement, and no allocation of federal funds, the District would still likely implement the Project, in order to meet future water demands. Environmental effects to air quality for this alternative are the same as the proposed project.

4.6.3 No Project Alternative

Under this alternative, the District would not construct the Project. Any potential effects to air quality under this alternative would not occur since there would be no Project construction. Temporary, construction-related impacts such as increased fugitive dust and particulate matter, and vehicle emissions would not occur. There would be no significant effect to air quality.

4.7 Noise

4.7.1 Proposed Project

District recycled water facilities do not produce high noise levels. Pump stations can produce perceptible noise. The Project calls for construction and operation of two pump stations. During normal operation, pumps are powered by electric motors, and during emergencies diesel engine generators are used. Masonry enclosures for pump stations are effective at attenuating noise. Adequate areas around pump stations buffers nearby sensitive noise receivers.

The District tests emergency generators approximately once a week for approximately 30 minutes during normal working hours. The District does not ordinarily receive complaints from nearby residents about noise produced from normal operations or emergency tests at pump stations or other facilities. Based on this experience, effects on noise levels from the Project are less-than-significant.

Noise will be generated during Project construction. Construction equipment noise ranges from 70 dB(A) to 90 dB(A), and sometimes up to 100 dB(A) for rock drills and pile drivers. Noise from construction activities would occur at specific, localized sites for reservoirs and pump stations, or along extended linear sites for pipelines. Construction noises generally occur during daylight hours on weekdays when noise sensitivity is lower. Construction noises may be intrusive, however, they are generally considered less than significant because of short duration during normal working hours. Long-term construction noise impacts would not occur at site-specific locations.

Some facilities in this Project will be constructed in areas that are already developed, but others will be in areas where development has not yet begun. Identification of sensitive receivers is not yet possible for components of the Project since specific details have not yet been determined. Where sensitive receivers are, compliance with the applicable jurisdictions noise ordinance for construction would mitigate impacts from Project construction to less-than-significant levels.

4.7.1.1 District Implemented Projects

Measures outlined below address construction and operational noise.

Noise Mitigation Measures

- Pump Stations: Identify sensitive receivers within 250 feet and conduct noise analysis to determine noise levels. 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.

- Implement noise barriers in sensitive areas.
- For projects adjacent to sensitive wildlife habitat, (e.g., least Bell's vireo), follow established protocols for noise monitoring during construction.
- District and contractors will comply with local ordinances and regulations specifying sound control and noise level rules.
- Construction work shall be conducted Monday through Friday between the hours of 7:00 A.M. and 5:00 P.M., in compliance with the San Diego county noise ordinance for construction. No construction shall occur outside these days and times except in an emergency.
- Construction equipment, and equipment at facilities will have mufflers.
- No equipment shall create noise levels in excess of 75 dB(A) at the nearest residential property line for any eight-hour period during its allowed times of operation.

4.7.1.2 Developer Implemented Projects

The measures outlined below address noise impacts at a large-scale village development level. These measures will be implemented as village development occurs.

Noise Mitigation Measures

- Perform site-specific studies for each village SPA plan and implement identified mitigation measures, including setbacks and noise berms.
- In areas adjacent to habitat, prepare site-specific studies on roadways and development.

4.7.2 No Action Alternative

Under this alternative the District would still implement the Project, even without federal funding, in order to meet future water demands. Impacts to ambient noise levels include construction-related noise, and operation noise from pump stations. Adherence to local jurisdictional noise ordinances would mitigate noise impacts to less-than-significant levels. These impacts are the same as the proposed project alternative.

4.7.3 No Project Alternative

The District would not construct its project under this alternative. There would be no effect on ambient noise levels from construction or operation activities.

4.8 Transportation

4.8.1 Proposed Project

Many of the pipeline projects are located in roads associated with new development. In the circulation element of the Chula Vista General Plan, undergroundings of utilities within street rights-of-way and transportation corridors is encouraged to enhance the visual appearance of the roadway and create a safer driving environment. The District's Project complies with this objective.

Pipelines would be constructed as roads are constructed, so there would be minimal impact to traffic patterns since the majority of existing traffic patterns are construction related.

For pipeline construction in existing roads, engineering design would coordinate pipeline location with other utilities located in the street right-of-way. Construction, including work schedules, traffic control, and detour routes would be coordinated with local jurisdictions. All construction would be contained within the right-of-way of the roads and staging areas. No road design features would be affected by the proposed project. Therefore, there would be no significant impacts to traffic for the few projects that are located in existing roadways.

4.8.1.1 District Implemented Projects

Transportation Mitigation Measures

- 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.
- For projects in public roadways, the District shall coordinate with local jurisdictions and conform to applicable traffic control requirements during construction.
- Implement traffic management measures including marking temporary traffic lanes, use of barricades and lights at excavations and crossings.

- When feasible, during pipeline construction maintain both directions of traffic flow.

4.8.1.2 Developer Implemented Projects

Transportation Mitigation Measures

- Transportation mitigation will include the following: development of transportation demand management mitigation strategies; preparation of transportation phasing plans; provide parallel arterial system; improve mode split; increase local/regional trip capture; increase freeway, segment, and intersection capacities; implement transportation system management strategies and traffic control strategies.

4.8.2 No Action Alternative

Without executions of an Agreement, and no allocation of federal funds, the District would still likely implement the Project, in order to meet future water demands. Transportation impacts under this alternative are the same as the proposed project.

4.8.3 No Project Alternative

Under this alternative the District would not construct the Project. There would be no impact to transportation.

4.9 Environmental Justice

4.9.1 Proposed Project Impact Assessment

The proposed project consists of reservoirs, pump stations, pipelines, and building upgrades for recycled water distribution. The majority of facilities, particularly pipelines, are located underground and are generally not visible. The project facilities are located throughout the District's Central Area and Otay Mesa Systems, which cover diverse neighborhoods. In addition, recycled water delivered to customers is subject to health and safety regulations under Title 22 of the California Code of Regulations.

The pipelines would not be noticeable once installed, and benefits of reclaimed water availability would accrue equally to customers of the District. For these reasons, neither benefits nor risks associated with the proposed action would disproportionately affect minority or low-income populations, and no impacts of either the proposed action or the no action alternative associated with environmental justice are anticipated.

In addition, the proposed project would be located primarily within public street rights-of-way, or on property owned by the District. There are no known legal interests in assets held in trust by the federal government for federally recognized Indian tribes or individual Indians (Indian Trust Assets or ITAs) associated with the project site. Therefore, the proposed project will not have significant impacts.

4.9.2 No Action Alternative Impact Assessment

Without executions of an Agreement, and no allocation of federal funds, the District will likely implement the Project, in order to meet future water demands. There would be no significant impact to environmental justice for this alternative. For discussion, please refer to proposed Project assessment discussion (Section 4.10.3).

4.9.3 No Project Alternative Impact Assessment

Under this alternative, the District would not construct the Project. Without the Project, the anticipated 9,219 acre-feet of recycled water per year would not be available. Without Project implementation, any shortage of water would be incurred by the entire District. No neighborhoods would be unfairly affected by potential water shortages. There would be no environmental justice concerns for this alternative.

4.10 Cumulative Impacts

Cumulative impacts are those impacts that by themselves are not significant but, when considered with impacts occurring from other projects in the vicinity, would result in a total or cumulative impact. The proposed project is a series of projects to be implemented over a period of approximately 25 years or less. The proposed project consists of the Phase II and III Recycled Water CIP. The proposed project consists of three reservoirs, two pump stations, 33 pipelines, and four upgrades to the RWCWRF. These projects are within the scope of the District's Capital Improvement Program and Water Resource Master Plan, which was prepared to anticipate and meet future customer demands. Many of the projects are within the scope of the Master Environmental Impact Report (MEIR) for the District's Water Resource Master Plan. Mitigation for potential impacts was identified in the MEIR and incorporated into this Programmatic EA.

As project specific details are determined for individual project components, the District would follow the Biological Resource Measures (Section 4.2.1.1), and Cultural Resource Programmatic Agreement. These protocols will be implemented as necessary to ensure that potential environmental effects are avoided and minimized to a level of less-than-significant. The Programmatic Agreement is available upon request from Reclamation.

No significant impacts to environmental justice or ITAs would be associated with the proposed project. With implementation of the mitigation measures, biological resource protocol, and cultural resource Programmatic Agreement, no significant impacts associated with the proposed project have been identified that would be insignificant in and of themselves but would be significant in combination with impacts of other projects. The proposed project would not contribute to significant cumulative impacts.

The proposed project would not have any adverse significant environmental impacts, however, there would be a significant beneficial effect regarding the increase and distribution of recycled water. The proposed Project would significantly increase the amount and distribution of recycled water. Given the current demand for recycled water within the Central Area System of the District, and the future demand in both the Central Area and Otay Mesa System, the proposed project would not only meet the demand for recycled water, it would make available the potable water that is currently used to supplement the recycled water supply to meet present day demands.

Program level cumulative effects that may occur of overall regional development proceeds during the implementation of the Project as allowed by existing land use designations and zoning. Existing land use designations and zoning include San Diego County, City of San Diego, and City of Chula Vista General Plans; and HCPs including City of Chula Vista MSCP Subarea Plan, and County of San Diego and City of San Diego MSCP. Other region-wide plans and regulations developed for protection of the environment include the Otay Ranch Resource Management Plan.

By implementing the Recycled Water CIP Program, which includes the proposed Project, the District will be able to provide recycled water to its customers. The cumulative impacts of the proposed Project would be reduced to a less-than-significant level with the implementation of measures to avoid and minimize potential effects as outlined in the Programmatic EA. By implementing the Water Resources Master Plan, the District will be able to reliably provide water to its customers by ensuring that an adequate supply is available and that adequate infrastructure is in place to transport and treat the water.

The Otay Ranch development is a planned community that is being phased over a period of 30 to 50 years. The Otay Ranch Final Program EIR identified unavoidable cumulative impacts to the environment including impacts to land use, landform alteration and aesthetics, biological resources, agricultural resources, mineral resources, transportation, air quality and noise. These impacts are associated with the conversion of undeveloped land from primarily open space and agricultural use to urban uses.

The proposed Project involves recycled water pipelines that will be installed in roadways as development occurs in Otay Ranch. These pipelines will be underground and will not result in significant cumulative impacts. The cumulative impacts from Otay Ranch development have and will occur independent of the District's pipelines.

4.11 Irreversible and/or Irretrievable Commitments of Resources

This section considers the effects of the proposed Project that would result in the commitment of resources and uses of the environment that could not be recovered if the project were constructed. An irreversible or irretrievable commitment of resources would occur when resources were consumed, committed, or lost as a result of the Project. The commitment of a resource would be irreversible if the project started a process that would not be stopped. As a result, the resource, its productivity, or its utility would be consumed, committed, or lost forever. Commitment of a resource would be considered “irretrievable” when the project would directly eliminate the resource, its productivity, or its utility for the life of the project.

The reservoir and pump station components of the Project would involve the commitment of land to these facilities. Implementation of the Project would involve the consumption of energy derived from nonrenewable sources, such as fossil fuels. Building materials would be considered permanently consumed. These changes would be irreversible.

Section 5.0

Consultation and Coordination

The following individuals and agencies were consulted during the analysis of the proposed action and the preparation of this environmental study.

Otay Water District

Dianne Kilwein
Jim Peasley
Robert Scholl

U.S. Department of the Interior, Bureau of Reclamation

Doug McPherson
Laurie Perry
Dennis Wolfe

City of San Diego

Kim Vance
Ron Buckley

U.S. Army Corps of Engineers

Jae Chung
Laurie Ikuta
Stacey Jensen
Robert Smith

U.S. Fish and Wildlife Service

Chris Otahal

California Department of Fish and Game

David Mayer

San Diego Regional Water Quality Control Board

Mike Porter

State Historic Preservation Officer

Hans Kreuzberg

California Coastal Commission

Lee McEachern

Section 6.0

Environmental Commitments

In order for the proposed projects to be implemented, the following processes must be completed:

- Initiate and complete a formal Section 7 consultation with USFWS to obtain a Biological Opinion. This Biological Opinion will finalize the mitigation required for the proposed project impacts and determine the effect to listed species.
- Negotiate a Programmatic Agreement with SHPO. This Agreement will identify the process necessary for avoiding or mitigating impacts to historic properties. Implementing the agreement will satisfy USBR responsibilities under Section 106 of the NHPA.
- Obtain a Coastal Zone Consistency Act determination from the California Coastal Commission. This determination is required any time a portion of the proposed project falls within or adjacent to the Coastal Overlay Zone, to insure the District is in compliance with the Coastal Zone Consistency Act.

Section 7.0

List of Preparers

This Programmatic Environmental Assessment was prepared by RECON. Persons assisting in preparation include:

Karen L. Bowling, GIS Analyst
Russell O. Collett, Archaeologist
Elizabeth E. Davidson, Archaeologist
Amy S. Hewitt, Production Specialist
Cheri B. Kim, Biologist
Christina T. Liang, GIS Analyst
Vince Martinez, Graphic Artist
Frank M. McDermott, GIS Analyst
Diana G. Saucedo-Ortiz, Biologist
Lee A. Sherwood, Principal
Donna Steel, Environmental Analyst
Shannon B. Turek, Environmental Analyst
Carmen Zepeda-Herman, Archaeologist

Section 8.0

References

The following documents were consulted during the preparation of this Programmatic EA:

AMEC Earth & Environmental, Inc.

- 2005 Otay Water District Recycled Water Pipeline, Reservoir, and Pump Station Project: Final Environmental Impact Report (EIR) SCH# 2003101027. January.

City of Chula Vista

- 2003 City of Chula Vista MSCP Subarea Plan, February 2003.

City of Chula Vista and County of San Diego

- 1992 Final Program Environmental Impact Report Otay Ranch, Volume 2: Revisions to Draft Program Environmental Impact Report. Prepared for Otay Ranch Joint Planning Project. Prepared by Ogden, December 1992.
- 1993 Otay Ranch General Development, Otay Subregional Plan, Volume 2. Prepared by The Otay Ranch Joint Planning Project.
- 1996 Otay Ranch Phase 2 Resource Management Plan.

Dudek and Associates

- 2004 Biological Resources Report and Impact Assessment for Otay Ranch Villages Two & Three. April 2004.

Holland, R. F.

- 1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Game. October.

Otay Water District (OWD)

- 1996 Otay Water District Final Environmental Impact Report for the Otay Water District Water Resources Master Plan, May 8, 1996. Prepared by RECON. SCH No. 9510147.

- 1997 Otay Water District Supplemental Biological Assessment for Reinitiation of ESA Section 7 consultation on the Otay Water District Capital Improvement Program (BO 1-6-94-F-42). Prepared by Otay Water District and Merkel & Associates, August 1997.
- 1998 Otay Water District Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) Subarea Plan, January 1998. Prepared by RECON.
- 2002 Otay Water District Water Resources Master Plan, August 2002. Prepared by Otay Water District.
- 2004a Otay Water District Final Program Environmental Impact Report for the Water Resources Master Plan, June 2004. Prepared for Otay Water District. Prepared by HDR. SCH No. 2004011020.
- 2004b Otay Water District 2003 Annual Report for the Otay Water District San Miguel Habitat Management Area, January 2004. Prepared by AMEC Earth & Environmental, Inc.

Radian Corporation

- 1988 *Feasibility and Cost Effectiveness of Controlling Emissions from Diesel Engines in Rail, Construction, Farm, and Other Mobile Off-Highway Equipment*. February.

Reclamation Wastewater and Groundwater Study and Facilities Act of 1992, (Title XVI of Public Law 102-575, as amended).

U.S. Army Corps of Engineers (USACE)

- 1987 Corps of Engineers Wetlands Delineation Manual. Wetlands Research Program, Technical Report Y-87-1. Department of the Army, Washington, D.C.

U.S. Bureau of Reclamation (Reclamation)

- 1998 Guidelines for Preparing, Reviewing, and Processing Water Reclamation and Reuse Project Proposals Under Title XVI of Public Law 102-575, as Amended. United States Department of the Interior, Bureau of Reclamation, December 1998.

U.S. Environmental Protection Agency (EPA)

- 1985 *Compilation of Air Pollutant Emission Factors* (AP-42). 4th ed. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina.

U.S. Fish and Wildlife Service (USFWS)

- 1994 Biological Opinion on the Otay Water District Capital Improvement Program, San Diego, California (1-6-94-F-42).
- 1999 Reinitiation of the Biological Opinion for Otay Water District's Capital Improvement Program, County of San Diego, California (1-6-94-F-42-R1); Corps Permit No. 94-20807-00-EW.
- 2003a Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the San Diego Fairy Shrimp (*Branchinecta sandiegonensis*). *Federal Register* 68 (77): 19888-19917, April 22.
- 2003b Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*) and Determination of Distinct Vertebrate Population Segment for the California Gnatcatcher (*Polioptila californica*); Proposed Rule. *Federal Register* 68 (79): 20228-20312, April 24.

Walker, J.

- 2004 Personal communications with Shannon Turek, RECON. AMEC. July 22.

Section 9.0

Distribution List

California Coastal Commission
7575 Metropolitan Drive, Suite 103
San Diego, CA 92108

California Department of Fish and Game
4949 Viewridge Ave
San Diego, CA 92123

California State Historic Preservation Officer
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001

City of Chula Vista
Planning Department
276 Fourth Avenue
Chula Vista, CA 91910

City of San Diego
Water Department
600 B Street, 13th Floor, MS 913
San Diego, CA 92101

County of San Diego
Department of Planning and Land Use
5201 Ruffin Road, Suite B
San Diego, CA 92123-1666

Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

U.S. Army Corps of Engineers
16885 West Bernardo Drive, Suite 300-B
San Diego, CA 92127

U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92009