One alternative would be to transport untreated effluent from the District's Project Area to the Delta Diablo Sanitary District (DDSD) plant located in Pittsburg, where it would be treated. Compared to the oxidation ditch treatment system, this alternative would be more environmentally disruptive because it would require the construction of pipelines and the installation of additional pump stations along a nine-mile long corridor from Oakley to Pittsburg. This method could not be staged over time in order to reduce its impacts, but would require that the entire pipeline be constructed all in one phase.

Once the effluent reached the DDSD treatment plant, it would be treated prior to direct discharge to the San Joaquin River, thus eliminating any possibility of beneficially using the treated effluent for agricultural irrigation. If the District elects to use the oxidation ditch treatment system in combination with a microfiltration/reverse osmosis treatment facility in order to directly discharge treated effluent to the San Joaquin River, then this comparative environmental benefit of the oxidation ditch treatment system would not be realized.

Under another alternative, the District would pump untreated effluent to the City of Brentwood's treatment plant which is located along Marsh Creek in the northern part of the City. This alternative would be more environmentally disruptive than the oxidation ditch treatment system, because it would require the construction of a pipeline to the Brentwood plant and would require the City to acquire adjacent agricultural land in order to expand the capacity of its treatment system. The Brentwood treatment system also discharges directly to Marsh Creek, thus eliminating any possibility of beneficially using the treated effluent for agricultural irrigation on Jersey Island. While it would be possible to transport the treated effluent from the Brentwood plant to Jersey Island for land application, this would require the construction of a three to four mile long pipeline through an urbanizing area.

The District's existing pond treatment system would be expanded under another alternative. Since the area covered by ponds would expand, there would be a slight decrease in the amount of District land available for crop production, and a minor increase in the potential for the adverse effects of mosquitoes. In addition, expanding the existing ponds would not address the District's objective of developing a treatment process which could be readily adapted to meet anticipated future treatment requirements, such as filtration and nutrient removal, which can be expected to be more restrictive. For these reasons, this alternative is somewhat environmentally inferior compared to the oxidation ditch

treatment system, but the difference is slight.

As described in Chapter 2 of the Final EIR, the first increment of the upgrading and expansion of the treatment system, which itself is one of the three components of the Facilities Project, comprises short-term improvements to the existing aerated pond system. These improvements would not require the physical expansion of the existing pond treatment system, but would encompass improvements which would increase treatment plant capacity to 3.0 mgd.

The District evaluated three activated sludge processes. In addition to the oxidation ditch treatment system (with or without a microfiltration/reverse osmosis treatment facility), the District examined two other activated sludge processes: pond conversion and conventional activated sludge. The oxidation ditch system was incorporated into the Facilities Project.

The existing aerated pond system could be converted to operate in an extended aeration activated sludge mode. Major modifications would be required, including increasing the horsepower in each of the completely mixed basins, additions of secondary clarifiers, providing a return activated sludge system and adding sludge disposal facilities. Even with these improvements, the converted pond system would not provide a nitrified effluent. Substantial piping changes would be necessary, in addition to large doses of chemicals for Ph adjustment.

A conventional activated sludge process is similar to the oxidation ditch process, except that the former is more susceptible to shock loading and provides a lesser degree of digestion of volatile solids. A conventional activated sludge process is also significantly more complex than an oxidation ditch system in terms of operation.

The oxidation ditch treatment system was determined to be environmentally superior to pond conversion and a conventional activated sludge process for the following reasons. One, it has the advantage of being tolerant to organic shock loading due to its large solids inventory and long detention time. Two, the process is easier to understand, does not require constant operator attention, and produces an effluent of consistent quality. Three, this process provides a nitrified effluent and it affords greater flexibility to meet future water quality standards, which are expected to become more stringent.

Treatment Plant Location Alternatives

In addition to the existing location of the treatment system, the District examined two alternative locations: property owned by the District on Jersey Island and other lands in the Oakley area. The No Project alternative, not upgrading and expanding the treatment plant, was considered as part of the analysis of alternative processes for expanding the capacity of the treatment system.

Finding: The District concluded that the existing location of the treatment system was environmentally superior to a location on Jersey Island.

Rationale for the Finding: One, a Jersey Island location is more remote than the present site from the residences of the District employees who would staff the treatment plant and from the District's administration building, thus requiring additional travel time and greater energy consumption. Two, constructing the plant on Jersey Island would convert existing agricultural land to non-agricultural uses. Three, the Island's soil conditions would require the plant to be constructed on piles.

The District also concluded that the existing location of the treatment system was environmentally superior to a location elsewhere in Oakley. Given the existing urbanization of Oakley, it would be difficult and probably impossible to locate an alternative Oakley site which is as secluded as the present site, making it much more difficult to avoid any potential adverse visual and odor impacts associated with the plant.

Expansion of Effluent Disposal Capacity

In addition to the No Project alternative, the District identified and evaluated the following methods for expanding the capacity of the existing effluent disposal system:

- Land application on Jersey Island,
- Direct Discharge to the San Joaquin River,
- Discharge into a constructed wetland,
- Land application on lands other than Jersey Island,
- Purchase of the Emerson Dairy property,
- Multiple use water recycling, and
- Discharge into Big Break.

Finding: The District finds that land application on Jersey Island, or alternatively, direct discharge to the San Joaquin River, is the environmentally superior alternative.

Rationale for the Finding: The No Project alternative for effluent disposal would be feasible only in the event that

the No Project alternative was also selected for the expansion of the capacity of the treatment plant, or in other words, the District decided not to expand treatment system capacity. For the reasons explained above, this alternative was not determined to be the environmentally superior alternative.

One alternative would create a constructed wetland on Jersey Island. Soil and percolation tests on Jersey Island indicated that the soil was not conducive for constructed wetlands due to high percolation rates. In order to construct wetlands on Jersey Island, it would be necessary to place a liner in the ground in order to pond water, and large quantities of soil would need to be imported. The U.S. Fish and Wildlife Service expressed concerns regarding the above ground power lines that cross Jersey Island, and the hazard they pose for the migrating waterfowl which would be attracted to the constructed wetlands.

For these reasons, this alternative was determined not to be environmentally superior to the effluent disposal method selected for the Project, that is, land application on Jersey Island or direct discharge to the San Joaquin River.

District staff undertook surveys of Oakley area property owners in 1989 and 1991 to determine the potential for the District to either purchase or enter into long-range agreements for the amount of acreage of sufficient quality needed for the land application of treated effluent. Both surveys revealed that it would be very difficult for the District to acquire or obtain long-term commitments for acreage of sufficient quantity and quality. Even if such acreage were available, it would be dispersed throughout the Oakley area at varying distances from the treatment plant, thus presenting distribution problems. For these reasons, this alternative was determined not to be environmentally superior to the effluent disposal method selected for the Project, that is land application on Jersey Island or direct discharge to the San Joaquin River.

This alternative is a variation of the previous alternative. The Emerson Dairy was one of the Oakley area properties surveyed by District staff. The Emerson Dairy alone would not provide the District with an amount of acreage sufficient to meet its long-term disposal needs over the next 15-20 year period. This alternative was determined not to be environmentally superior to the effluent disposal method selected for the Project, that is land application on Jersey Island or direct discharge to the San Joaquin River.

Under the multiple use water recycling alternative, the District would dispose of treated effluent through a program

which would distribute or recycle it among various users of non-potable water, such as agriculture, landscaping and golf course irrigation, in-door plumbing flushing water and industrial process water. A survey by the District of potential recycled water users within the District identified only limited interest in such a program. Given the lack of user demand for treated effluent, this alternative was determined not to be environmentally superior to the effluent disposal method selected for the Project.

The District investigated the construction of an outfall to Big Break for the direct surface discharge of treated effluent. In October, 1990, J.M. Montgomery Engineers prepared a report entitled "Surface Water Discharge Analysis," which indicated that Big Break was not suitable for an outfall, due to the relatively shallow water depths of 3 to 9 feet. This shallow area would not provide the necessary water circulation and diffusion/dispersal of the effluent. Adverse biological and water quality impacts associated with this alternative would exceed any potential environmentally beneficial effects offered by this alternative. For these reasons, this alternative was determined not to be environmentally superior to the effluent disposal method selected for the Project.

Expansion of Sludge Disposal Capacity

In addition to the No Project alternative, the District identified and evaluated alternative processes for handling the sludge produced by the treatment system, as well as alternatives for the disposal of the sludge.

Finding: The District finds that the method of air drying sludge in beds, combined with the land application and beneficial reuse of the biosolids thus produced as a fertilizer and soil amendment in agricultural operations on Jersey Island, is the environmentally superior alternative.

Rationale for the Finding: The No Project alternative for the expansion of sludge disposal capacity would be feasible only in the event that the No Project alternative was also selected for the expansion of the capacity of the treatment plant, or in other words, the District decided not to expand treatment system capacity. For the reasons explained above, this alternative was not determined to be the environmentally superior alternative.

The Facilities Project incorporates the method of air drying sludge in beds, but the District also considered two mechanical sludge drying alternatives: a belt filter press facility and a centrifuge. While these mechanical sludge drying methods are feasible alternatives, the District

determined that they were not environmentally superior to the method of air drying sludge in beds, which also offers advantages for pathogen control.

Mechanical drying methods cannot obtain the same level of solids content as air drying, and have an average solids content of only up to 35% solids for centrifuges and only up to 22% solids for belt presses, compared with a minimum of 50% solids content for sludge beds, depending on the drying time. In addition, the operational and environmental costs associated with mechanical dewatering are higher than for air drying, due to the need for chemical additions (i.e., polymer is added to facilitate thickening), electrical power for machine operations, and maintenance of complex equipment.

While mechanical sludge drying would decrease the adverse odor effects associated with air-drying sludge beds, the former would increase potentially adverse noise effects over those expected under the latter. Buffer areas proposed for the Facilities Project (as discussed under mitigation measures in Section 3.6, Noise) could potentially eliminate the adverse effects of noise from mechanical sludge drying.

Mechanical sludge drying would result in sludge with a higher water content than the air-drying method, resulting in greater operational handling difficulties, such as discing into soils as a soil amendment, and transportation costs. Finally, mechanical sludge drying would eliminate landfill as a sludge disposal option at facilities that require a 50-percent solids content.

The District evaluated two alternatives for sludge disposal: landfill disposal and beneficial reuse through land application to agricultural crops. For landfill disposal, the District would have to dry the sludge to at least 20% solids and possibly 50% solids to meet requirements for a landfill disposal site permitted to accept "special wastes," which would include municipal sludge. Dried sludge would be stored at the plant and routinely trucked to the landfill site.

Landfill disposal of sludge is a feasible alternative, but was determined by the District not to be environmentally superior to land disposal for the following reasons. Landfill space is limited and the State and counties are increasingly regulating waste disposal in an effort to reduce waste and maximize limited landfill capacity. The long-term availability of landfill space for sludge disposal is uncertain. Beneficial reuse of sludge would eliminate one source of landfill waste in conformance with the Contra Costa County Integrated Waste Management Plan. Finally, stricter requirements have been imposed on sludge quality for landfill

disposal, making sludge disposal at a landfill more costly and more difficult than land application.

Sludge disposal at a landfill would be inconsistent with the County General Plan Public Facilities and Services Element goal 7-AH which states the need "to divert as much waste as feasible from landfills through recovery and recycling." Landfill disposal of sludge would also be inconsistent with several General Plan Solid Waste Management Policies.

Location of the Delta Environment Science Center (DESC) and Trails

In addition to the No Project alternative, the District identified and evaluated the following alternative locations for the Delta Environment Science Center (DESC):

- Jersey Island, and
- On the southeast side of the treatment plant near the District's administration building.

Finding: The District finds that the environmentally superior location for the DESC is at the northeast corner of the District's mainland property.

Rationale for the Finding: Under the No Project alternative, the District would not provide a site on its property for the construction of the DESC, and it would not facilitate the development of three public trails by the East Bay Regional Park District by providing 20 parking spaces for trail users and by granting a trail license for the portions of the trails that cross District property. The District determined that the No Project alternative was not the environmentally superior alternative because, while it would avoid the impacts associated with the construction of the DESC and trails, it would also forego the environmental benefits of the variety of educational and interpretive programs focusing on the wetlands and other Delta wildlife habitats which they would offer.

The District determined that the Jersey Island site was not environmentally superior to the proposed DESC site at the northeast corner of the District's mainland property because it contains fewer accessible areas of shallow water that are appropriate for the construction of the boardwalks and piers providing controlled public access from the DESC for the observation of the wetland habitats. Jersey Island is a more remote location, requiring greater travel time to reach it. Jersey Island also is lacking in infrastructure, and providing this infrastructure could potentially have adverse environmental effects.

The District determined that the site on the southeast side of the treatment plant, near the District's administration building, was not environmentally superior to the proposed DESC site, because this site is removed from the wetlands and the Big Break area, which would be the primary features of the DESC.

III. FINDINGS REGARDING SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS AND STATEMENT OF OVERRIDING CONSIDERATIONS

Findings:

(a) The Board finds that there are no direct impacts resulting from the proposed Project that would be significant and unavoidable. The Board finds that all of the significant direct impacts associated with construction or operation of the proposed Project would be avoided or substantially lessened and reduced to a less than significant level through the implementation of the mitigation measures which are proposed by the District as part of the Project.

(b) The Board finds that the growth supported by the Facilities Project is consistent with the growth and development allowed under the Contra Costa County General Plan, specifically its Land Use Element and growth management policies. Because the Facilities Project would accommodate this growth, the Facilities Project may be considered growth-inducing, as the term is defined by CEQA.

(c) The Board finds that some of the potential cumulative and secondary effects of the County's planned growth, as documented in the Final EIR prepared for the General Plan, would be significant and unavoidable. Thus, by supporting development as allowed under the County General Plan, the Facilities Project may indirectly have significant, unavoidable impacts due to the secondary effects of growth.

Statement of Overriding Considerations:

(a) The Board finds that to the extent that there may be any remaining significant, unavoidable direct impacts of the Project, these impacts are acceptable and are overridden by the environmental, economic, social and other benefits of the Project, as set forth in the administrative record and the Final EIR. These benefits include, but are not limited to, the provision by the District of the wastewater treatment capacity which will be required to support anticipated growth in a manner which is proactively planned in advance of the need, instead of being reactively provided after the need has overtaken the District, thereby depriving it of the opportunity to provide additional wastewater treatment

capacity in an environmentally responsible manner.

(b) The Board finds that to the extent that there may be significant, unavoidable impacts due to the secondary effects of growth, which growth will in part be supported by the Facilities Plan, these impacts are acceptable and are overridden by the environmental, economic, social and other benefits of growth, as set forth at pages 145 through 155 of the Statement of Overriding Considerations adopted by the Contra Costa County Board of Supervisors regarding the Contra Costa County General Plan, which is incorporated by this reference. The Board finds that these impacts are acceptable because of the overriding economic and social benefits of the General Plan land use plan, primarily provision of the County's fair share of the regional housing need, provision of affordable housing, and the economic welfare of the County and its ability to provide employment.

EXHIBIT D

IRONHOUSE SANITARY DISTRICT
MITIGATION MONITORING AND REPORTING PROGRAM
FOR THE
WASTEWATER FACILITIES PLAN AND
DELTA ENVIRONMENT SCIENCE CENTER

INTRODUCTION

This is the Mitigation Monitoring and Reporting Program (MMRP) for the Ironhouse Sanitary District's Wastewater Facilities Plan and for the Delta Environmental Science Center, each of which were analyzed in accordance with California Environmental Quality Act (CEQA) requirements in a draft Environmental Impact Report (EIR) published in July 1994. This MMRP is required by Section 21081.6 of the CEQA statute.

The MMRP includes the mitigation measures identified in the EIR which are required to avoid the significant impacts associated with the Project or to reduce them to a less than significant level. The significant impacts associated with the Project and the required mitigation measures are summarized in this program; the full text of the impact analysis and mitigation measures is presented in the Final EIR. The mitigation measures included in this program have been adopted by the District's Board of Directors as conditions of Project approval.

The MMRP is organized in the following format: each significant impact is stated, and beneath it is a table, keyed to each adopted EIR mitigation measure. The column headings in the table are defined as follows:

- **Measure Number**: The number given to the mitigation measure in the EIR. This number can be used to locate mitigation measures in the EIR, since the mitigation measure numbers are coded by EIR section.

- **Mitigation Measure**: In this MMRP, mitigation measures are restated exactly as listed in the EIR.

- **Implementation Procedure**: If needed, this column provides additional information on how mitigation measures will be implemented. The column is left blank if no elaboration on the mitigation is necessary.

- **Monitoring and Reporting Actions**: An outline of the appropriate steps to verify compliance with the mitigation measure.

- **Monitoring Responsibility**: Assignment of responsibility for the monitoring and reporting tasks. In almost all cases, ISD is the agency responsible for mitigation compliance verification. For mitigations related to the Delta Environment Science Center (DESC) and its related trails, ISD is not responsible for mitigation compliance monitoring or reporting, and this responsibility is assigned to the DESC managing agency.

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It has not yet been determined which agency will be responsible for construction and/or operation of the DESC. The DESC will be constructed on ISD property and operated by someone other than ISD, possibly by a joint powers entity including regional schools, institutions of higher learning, Contra Costa County and the East Bay Regional Park District. At this time, this MMRP refers to the "DESC managing agency" in lieu of a specific single agency or joint powers entity.

- **Monitoring Schedule**: The general schedule for conducting each monitoring and reporting task, identifying, where appropriate, both the timing and the frequency of the action.

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3.1 LAND USE, PLANS AND POLICIES

3.1-C: Certain aspects of operation of the proposed WWTP facilities and open air sludge drying beds, such as noise, odor, and increased hazardous materials handling, could be incompatible with future adjacent residential land uses, the proposed DESC, and/or the three regional trails around the WWTP site.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
	See Mitigation Measure 3.7-D1 in Section 3.7, Air Quality, for mitigation which would reduce odor impacts. See Mitigation Measures 3.8-A1, 3.8-A2, 3.8-A3, 3.8-A4, and 3.8-A5 in Section 3.8, Public Health/Hazardous Materials, for mitigation to reduce impacts of increased handling of hazardous materials. Implementation of these mitigation measures would reduce the potential Project impacts that could lead to incompatibility with adjacent land uses. In particular, Mitigation Measure 3.7-D1, maintenance of a minimum 1,000 foot buffer zone between the WWTP and adjacent properties, would significantly reduce potential land use incompatibility.	See listed mitigations.	See listed mitigations.	See listed mitigations.	See listed mitigations.

IRONHOUSE SANITARY DISTRICT
WASTEWATER FACILITIES PLAN AND DELTA ENVIRONMENT SCIENCE CENTER

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.2 GEOLOGY SOILS AND SEISMICITY

3.2-A: Project construction could result in soil erosion and sedimentation by wind or water.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.2-A1	ISD would cause the preparation of a Stormwater Pollution Prevention Plan (SWPP) in order to obtain an NPDES stormwater permit from the RWQCB for construction. The major component of the SWPP would be an erosion control plan, which would include measures such as keeping soils moist, limiting the amount of stockpiled material, and installation of temporary runoff facilities. The erosion control plan would be included in the construction contract specifications.		1. Review final design and grading plan to verify incorporation of SWPP; add plans to administrative record. 2. Review construction contract to verify inclusion. 3. Inspect construction site to verify compliance with SWPP.	ISD	1. Prior to approval of final design plans and specifications. 2. Prior to approval of contract. 3. Daily, during construction, and upon completion of construction.

3.2-B: Trench settlement and/or pipe failure could result from improper backfill of the pipeline excavation.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.2-B1	The design plans and specifications would specify standards for acceptable backfill material, and require testing (such as gradation) of native soil if it is proposed to be used for structural or pipeline backfill. Backfill would be mechanically compacted or jetted to meet the performance criteria specified by the design engineer.		1. Verify specification of appropriate backfill material and backfilling procedures in design plans. 2. Inspect construction site to verify compliance with design plan backfill standards.	ISD	1. Prior to approval of final design plans. 2. Weekly during construction, and upon completion of construction.

IRONHOUSE SANITARY DISTRICT
WASTEWATER FACILITIES PLAN AND DELTA ENVIRONMENT SCIENCE CENTER

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.2-C: The Project would be constructed in an area with soils prone to liquefaction during strong ground shaking from an earthquake. Liquefaction could damage Project facilities which could then expose people and the environment to treated and untreated wastewater.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.2-C1	Each component of the Project would be designed by the respective agency responsible for its construction to withstand earthquake groundshaking in accordance with applicable building and design standards. Design features would be incorporated into plans and specifications.		1. Review design plans for each component of the Project to verify that Project components are constructed according to applicable building and design standards. 2. Inspect Project facilities during construction to ensure that they are constructed according to design.	ISD and DESC managing agency	1. Prior to approval of design plans. 2. Weekly during construction.

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3.3 HYDROLOGY, DRAINAGE, AND WATER QUALITY

3.3-A: Project construction could result in soil erosion with resultant sedimentation of surface water bodies, and the introduction of pollutants into surface waters within the Project Site, including: Marsh Creek, Big Break and associated wetlands, and Dutch Slough.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-A1	ISD and its contractors and the DESC Managing Agency would obtain required permits governing construction activities and would comply with requirements for erosion control and stormwater pollution prevention. See also Measure 3.2-A1 regarding the erosion control plan.		See 3.2-A1. Include copies of permits in file.	See 3.2-A1.	See 3.2-A1.
3.3-A2	Fluid spills from construction vehicles would be cleaned up immediately and disposed of in the appropriate manner.		Monitor to verify that spills are cleaned up and disposed of appropriately.	ISD	As necessary, during construction.

3.3-B: Open trench pipeline installation across Marsh Creek would temporarily disrupt surface water flow and increase soils erosion, sedimentation and turbidity. If the trench is not properly installed, long-term erosion and sedimentation could persist along the pipeline trench.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.3-B1	For construction across Marsh Creek channel, ISD would require the construction contractor to schedule construction for the months when stream flows are low.	Establish in the construction contract that construction in Marsh Creek channel will occur during a period of low stream flow.	1. Review construction contract. 2. Inspect construction activity to verify that construction occurs during the agreed upon time period.	ISD	1. Prior to finalization of construction contract. 2. Weekly during construction.
MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-B2	For Marsh Creek construction, ISD would require the contractor to maintain a flow bypass around the construction site.	Include in the construction contract a requirement that a flow bypass be maintained around the construction site in the Marsh Creek channel.	1. Review construction contract. 2. Inspect construction site to verify compliance with construction contract.	ISD	1. Prior to finalization of construction contract. 2. Weekly during construction.

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.3-B3	Following pipeline installation, the creek/slough bed would be restored to its original contours. See also Measure 3.2-A1 regarding the erosion control plan.	Include in the construction contract a requirement that the creek/slough bed be surveyed prior to construction and restored to its original contours. Survey creek/slough bed prior to construction.	1. Review construction contract. 2. Maintain record of results of creek/slough bed survey carried out prior to construction. 3. Inspect construction site to verify that contractor restores bed as agreed; compare baseline survey to final contours.	ISD	1. Prior to finalization of construction contract. 2. Prior to construction. 3. Following construction completion.

IRONHOUSE SANITARY DISTRICT
WASTEWATER FACILITIES PLAN AND DELTA ENVIRONMENT SCIENCE CENTER

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.3-C: Pipeline installation across Dutch Slough and/or construction of any effluent outfall in the San Joaquin River could interfere with navigation.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-C1	ISD may elect to install the pipeline across Dutch Slough using a tunneling or drilling technique that would avoid channel disturbance.		Include the Board's record of decision regarding open trench vs. tunneling in the administrative record.	ISD	
3.3-C2	The District and its contractors would adhere to construction practices in the Section 404 permit obtained from the COE. Pipeline construction would only involve partial channel closure, allowing navigation in the remaining channel.	Include in the construction contract a requirement that construction be conducted in compliance with the Section 404 permit.	1. Review construction contract. 2. Inspect construction in and adjacent to navigable waters to verify compliance with conditions of the Section 404 permit.	ISD	1. Prior to final approval of construction contract. 2. Weekly during construction.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.3-F: Pipeline construction through, under or near delta levees along Dutch Slough and Marsh Creek could adversely affect levee stability and result in flooding or increase the risk of flooding.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-F1	The District would obtain and comply with the conditions in the County's flood control and/or drainage permits issued for construction of the Marsh Creek crossing	Obtain a flood control and/or drainage permit for construction of the Marsh Creek crossing. Include compliance with conditions of flood control and/or drainage permits as a condition of the construction contract.	1. Verify procurement of flood control and/or drainage permit for construction of Marsh Creek crossing; add permit to administrative record. 2. Review construction contract. 3. Inspect construction activity to insure compliance with permits.	ISD	1. Prior to commencement of construction. 2. Prior to approval of construction contract. 3. Weekly during construction.

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.3-F2	The District would work closely with Reclamation District No. 830 in the latter's ongoing program of assessing levee adequacy on Jersey Island and determining the need, if any, for additional stabilization.		1. Add written communication with (and pertinent RD 830 records received by ISD) to the administrative record. 2. Add records of levee assessments to administrative record.	ISD Reclamation District No. 830	1. In the year following Project construction. 2. Annually. 3. As needed.
3.3-F3	When paralleling a levee, the pipeline alignment would be set back from the levee a safe distance.	Determine pipeline alignments. For portions of alignment near levees, determine set-back distance that would provide an adequate margin of safety. Include set-back distance in engineering drawings for alignment.	1. Add engineering drawings showing alignment and setback to administrative record. 2. Inspect pipeline location to verify setback compliance.	ISD	1. Prior to construction commencement. 2. Weekly during construction, and upon construction completion.
MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

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3.3-F4	The District would include in the construction contract requirements that the contractor keep staging areas and equipment away from the levees.		1. Review construction contract to verify requirements. 2. Inspect construction site to verify that contractor remains outside of off-limits levee area.	ISD	1. Prior to commencement of construction. 2. Weekly during construction.

3.3-H: All proposed facilities and effluent/sludge disposal areas lie within the 100-year flood plain and thus are exposed to flood risk.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-H1	The District or Reclamation District No. 830, as appropriate, would construct and/or maintain the levees around all treatment facilities and effluent and sludge disposal areas at an elevation above the 100-year flood plain, and would design facilities to withstand a 100-year flood, as determined by a California licensed civil engineer.		1. Add engineering drawings relating to levee construction and maintenance to administrative record. 2. Check to verify that levee construction and maintenance activities are carried out according to engineering drawings.	ISD, Reclamation District No. 830	1. Prior to construction commencement. 2. Annually.
MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.3-H2	The agency constructing the DESC should either place it on piers to raise the facility above the 100-year flood zone, or levees should be constructed around the facility sufficient to protect it from a 100-year flood event. Visitors to the DESC would be prohibited from using the walkways whenever the risk of a 100-year flood exists.		1. Check DESC design plans to verify provision of protection from 100-year flood. 2. Inspect during construction to verify that DESC is constructed according to design. 3. Verify that a means of preventing visitor access to walkways in times of flood risk has been established.	DESC managing agency	1. Prior to approval of final design plans 2. Weekly during construction. 3. Prior to opening of walkways to the public.

3.3-I: Proposed effluent irrigation, sludge application and increased cultivation activities could affect levee stability and in turn, increase the flood risk for Jersey Island.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
	See Measure 3.3-F2. The District and Reclamation District No. 830 will assess the adequacy of the levees on Jersey Island and determine the need, if any, for additional stabilization and maintenance efforts.	See 3.3-F-2.	See 3.3-F-2.	See 3.3-F-2.	See 3.3-F-2.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-I1	ISD would develop its effluent and sludge application plan to address the issues of peat soil oxidation and increased subsidence.		1. Add cultivation and effluent irrigation plan to the administrative record. 2. Inspect cultivation and effluent irrigation sites regularly to verify that irrigation is carried out according to the effluent irrigation plan.	ISD	1. Prior to commencement of irrigation. 2. Monitor as specified in land application monitoring and reporting program. See Mitigation 3.3-J3.

3.3-J: Land application of effluent and sludge could degrade the surface water and/or groundwater quality on Jersey Island or in the San Joaquin River and, in turn, affect the state-designated beneficial uses of these waters.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.3-J1	The District would prepare a detailed effluent and sludge application plan specifying the types of crops to be grown, the location, crop rotation cycles, and proposed annual effluent and sludge application rates.		1. Add effluent and sludge application plan to administrative record. 2. Monitor effluent and sludge application to verify consistency with plan. See Mitigation 3.3-J3.	ISD	1. Prior to commencement of effluent and sludge application. 2. Monitor as specified in land application monitoring and reporting program. See Mitigation 3.3-J3.
MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-J2	The District would submit the proposed effluent and sludge application plan to the CVRWQCB for approval and apply for revised Waste Discharge Requirements (WDR) to permit program implementation. The District would comply with permit conditions.		1. Add the approved permit and revised WDR to administrative record. 2. Monitor effluent and sludge application to verify consistency with plan and WDR. See Mitigation 3.3-J3.	ISD	1. Prior to commencement of effluent and sludge application. 2. Monitor as specified in land application monitoring and reporting program. See Mitigation 3.3-J3.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-J3	The District would conduct a land application monitoring and reporting program as specified by the WDR.		1. Add land application monitoring and reporting program to administrative record. 2. Check regularly to verify that monitoring program is being carried out according to WDR specifications.	ISD	1. Prior to commencement of effluent and sludge application. 2. Annually.

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.3-J4	The District would maintain a minimum 100-foot setback between areas of effluent and sludge application and the domestic water wells on Jersey Island and conduct periodic well water monitoring in accordance with the WDR.	Prepare a map showing location of domestic wells and 100 foot setback lines, and communicate with individuals carrying out the effluent and sludge application to ensure that no effluent or sludge is applied within the 100 foot setback. Conduct periodic well water monitoring, as specified in the WDR. Send monitoring results to CVRWQCB.	1. Add well survey map and field and well water monitoring records to administrative record. 2. Observe effluent and sludge application to ensure that it is applied only beyond setback lines. 3. Check well monitoring to ensure that it is carried out in accordance with the WDR and that results are sent to the CVRWQCB.	ISD	1. Prior to commencement of land application. 2. Monitor as ~~often as~~ specified in the land application monitoring and reporting program. See Mitigation 3.3-J3. 3. Monitor well water as per the requirements of the WDR.

3.3-L: Direct discharge of effluent to the San Joaquin River must comply with state and federal water quality and public health standards to insure that it does not degrade surface water quality and, in turn, adversely affect beneficial uses of these waters.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.3-L1	ISD would provide additional treatment to address the water quality requirements for direct discharge to the San Joaquin River. The District would apply for a revised NPDES permit for direct river discharge.	Determine whether or not the Project will require direct discharge to the San Joaquin River. Apply for an NPDES permit for the discharge, if required. Provide additional treatment, if required, to meet the requirements of the NPDES permit. Discharge effluent in a manner consistent with permit. Monitor discharge, and report monitoring results, as required by the permit.	If Project selects direct discharge, then: 1. Add NPDES permit to administrative record. 2. Review plans for for inclusion of required additional treatment. 3. Maintain NPDES monitoring reports on file and relevant correspondence with CVRWQCB. 4. Check discharge and monitoring procedure to verify that it is done in a manner consistent wi	ISD	1. Prior to commencement of discharge. 2. As required by permit. 3. Annually.

3.3-M: An outfall from Jersey Island into the San Joaquin River could interfere with navigation.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.3-M1	The District would apply to the Sacramento COE for a permit to install the proposed discharge outfall. ISD would comply with outfall design, location and construction requirements, as specified by COE. The outfall could be relocated along the north shore of Jersey Island or could extend from another point on the island, if needed to avoid impacts on navigation.	Determine whether or not the Project will involve discharge to the San Joaquin River. Apply for permit from the Sacramento COE for discharge outfall construction, if required. Incorporate recommendations of the COE regarding design, location, and construction procedure into engineering plans for the outfall. Construct outfall according to COE recommendations.	1. Add copy of COE permit to administrative record. 2. Check engineering plans to verify consistency with COE recommendations. 3. Field-check construction of outfall to ensure that it complies with COE permit.	ISD	1. Prior to commencement of outfall construction. 2. Prior to approval of final design plans. 3. Weekly during construction.

3.3-N: The proposed effluent irrigation areas could provide habitat for mosquito populations. Increasing mosquito populations could increase the public health risk of infection with diseases which are carried by mosquitoes.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-N1	The waste discharge requirements issued to ISD by the CVRWQCB would require management of effluent irrigation activities such that excessive surface runoff would not be created.	Comply with requirements of the WDR regarding prevention of excessive surface runoff.	Monitor the site to ensure that effluent application program is carried out and successfully prevents excessive surface runoff.	ISD	Monitor as often as required by WDR.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.3-N2	The District would consult with the Contra Costa Mosquito Abatement District in designing the effluent irrigation plan.		1. Add correspondence with CCMAD to file. 2. Monitor effluent irrigation to verify that it is carried out according to the recommendations of the Mosquito Abatement District. Report to CCMAD as required.	ISD	1. Prior to finalizing plans for effluent irrigation. 2. Monitor and report annually.

3.3-O: Inconsistency with County General Plan policies regarding flooding and water quality would be a significant impact.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
	Refer to Mitigation Measures 3.3-A1, 3.3-A2, 3.3-B1, 3.3-B2, 3.3-B3, 3.3-F1, 3.3-F2, 3.3-F3, 3.3-F4, 3.3-H1, 3.3-H2, 3.3-I1, 3.3-J1, 3.3-J2, 3.3-J3, 3.3-J4, 3.3-L1 and 3.3-M1.	See referenced mitigations.	See referenced mitigations.	See referenced mitigations.	See referenced mitigations.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.4 VEGETATION AND WILDLIFE

3.4-B: Construction of the effluent pipeline to Jersey Island and of the DESC and associated boardwalks and piers could result in the loss of or disturbance to wetland and/or riparian habitats.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.4-B1	Prior to final design and siting of the plant and the routing of the effluent pipeline, the District would consult with the Sacramento COE to confirm the preliminary assessment conclusion that the proposed plant site and pipeline routing do not affect jurisdictional wetlands. If jurisdictional wetlands are present, the District would revise the facility siting and pipeline routing to avoid jurisdictional wetlands, to the extent possible. If Project development still involved fill of jurisdictional wetlands, it would likely affect less than one acre of wetland and, as such, could qualify for a Nationwide Permit. The District would obtain and comply with the applicable COE permit conditions, including minimizing the construction disturbance area in wetlands, prohibiting storage of materials or fill in adjacent wetlands, implementing erosion control measures, and restoring surface contours. As contemplated by mitigation measure 3.4-D1, the District would conduct surveys for special status plant and animal species with potential to occur in wetland areas.		1. Add correspondence with the COE regarding jurisdictional wetlands, including any 404 permit and delineation, to the administrative record. 2. Review design plans to verify avoidance of wetlands. 3. Monitor during construction to ensure that Project avoids wetlands as proposed. 4. Monitor to ensure that mitigation plan is carried out as planned (if one is prepared), report to COE as required.	ISD	1. Prior to commencement of construction. 2. Prior to approval of final design plans. 3. Monthly during construction. 4. Monitor and report as often as specified in mitigation plan.

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.4-B2	Prior to final design and siting of the DESC structure, its boardwalks and piers, the agency which would contruct them would conduct a wetland delineation and consult with COE for a jurisdictional wetland determination. If jurisdictional wetlands are present, the agency would first revise the facility layout to avoid jurisdictional wetlands to the extent possible. If project development still involved fill of jurisdictional wetlands, it would likely affect less than one acre of wetland and, as such, could qualify for a Nationwide Permit. The agency would obtain and comply with any required COE permit. As contemplated by mitigation measure 3.4-D1, the agency would conduct surveys for special status plant and animal species with potential to occur in wetland areas.		1. Add correspondence with the COE regarding jurisdictional wetlands, including any 404 permit and delineation, to the administrative record. 2. Review design plans to verify avoidance of wetlands. 3. Monitor during construction to ensure that Project avoids wetlands as proposed. 4. Monitor and verify that mitigation plan is carried out (if one is prepared); report to COE as required.	The DESC Managing Agency	1. Prior to commencement of construction. 2. Prior to approval of final design plans. 3. Monthly during construction. 4. Monitor and report as often as specified in mitigation plan.
3.4-B3	The agency constructing the DESC would locate it in an upland area outside of the Big Break wetlands and the 2.42-acre water storage area wetlands.	Delineate wetlands, get delineation confirmed by the COE, design DESC layout to avoid jurisdictional wetlands.	1. Add delineation and COE confirmation to administrative record. 2. Check to verify that DESC is constructed, as planned, outside of the wetland areas.	The DESC Managing Agency	1. Prior to approval of final design plans. 2. Monthly during construction.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.4-B4	Pipeline construction for the Dutch Slough crossing would avoid the willow riparian area identified on Jersey Island.	Stake out the willow riparian area in the vicinity of construction sites. Add requirement to construction contract that willow riparian areas be avoided.	1. Maintain record of willow riparian location. 2. Check construction contract. 3. Monitor to ensure that construction activity, including vehicle movement, does not impact staked willow riparian areas.	ISD	1. Prior to commencement of construction. 2. Prior to approval of construction contract. 3. Weekly during construction.

3.4-C: Disturbance to aquatic habitat and aquatic species could occur due to pipeline construction across Marsh Creek and Dutch Slough. Disturbance to the aquatic habitat could include disturbance to the water flow and increased sedimentation and erosion from the banks into the creek.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

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	See Measure 3.2-A1 regarding the erosion control program ISD would implement during pipeline construction. See Measures 3.3 -B1, B2, and B3 regarding mitigation to minimize flow disruption in Marsh Creek and to require that bypass flow be maintained during construction.	See listed mitigations.	See listed mitigations.	See listed mitigations.	See listed mitigations.

3.4-D: Construction or operation of facilities along Big Break, Dutch Slough, and Marsh Creek could cause loss of or disturbance to special status species or their habitat.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.4-D1	The DESC Managing Agency would conduct surveys for special status plant species in wetland habitats along Big Break in the DESC boardwalk and pier area. Special status species populations would be avoided to the extent possible during construction.	Contract a qualified biologist to survey wetland habitats for special status species. Design the Project and carry out construction in such a way as to avoid special status species and their habitat.	1. Add survey results (record of location of special status species and their habitat) to administrative record. 2. Monitor construction to ensure that special status species and their habitat are avoided and that the Section 7/10a permit, if prepared, is complied with.	DESC managing agency	1,2. Prior to approval of final design plans. 2. Weekly during construction.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.4-D2	Prior to finalizing the pipeline alignment across Marsh Creek and Dutch Sough, ISD would have surveys conducted in the creek channel for potential special status plant and animal species. Special status species populations would be avoided during construction.	See Mitigation 3.4-D1.	See Mitigation 3.4-D1.	ISD	See Mitigation 3.4-D1.
	See also measure 3.4-B2, regarding mitigation of potential impacts to wetland habitats, including Marsh Creek.	See listed mitigation.	See listed mitigation.	See listed mitigation.	See listed mitigation.

3.4-E: Effluent discharge to the San Joaquin River could impact water quality and aquatic resources.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.4-E1	All effluent discharged to the San Joaquin River would meet all criteria in the District's NPDES permit and in the adopted *Water Quality Control Plan for Inland Surface Waters*, or alternate applicable SWQCB standards.	Obtain NPDES permit for effluent discharge. Monitor quality of discharge as required in NPDES permit.	If direct river discharge is selected, then: 1. Add the permit to the administrative record. 2. Monitor water quality and report to CVRWQCB as required by permit. 3. Check to verify that discharge is monitored as required in NPDES permit; add monitoring reports to administrative record.	ISD	1. Prior to commencement of new discharge. 2. During operation as required by permit. 3. Annually.

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3.5 TRAFFIC AND CIRCULATION

3.5-J: The public would access the DESC and EBRPD trailhead area through the entrance to the ISD WWTP and around the perimeter of the WWTP and effluent disposal area. The interaction between visitor traffic and ISD plant operation traffic and/or plant operations could pose a public safety hazard.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.5-J1	The District, the DESC managing agency, or the EBRPD would upgrade, complete and maintain the perimeter access road to the DESC/trailhead to provide adequate two-way vehicle access.	Survey the access road to determine necessary repair/maintenance. Complete the road and upgrade as necessary. Regularly survey and maintain road.	1. Add record of road survey to administrative record. 2. Check that road is upgraded and completed. 3. Check to verify that road is maintained as appropriate.	ISD, the DESC Managing Agency, or the EBRPD	1,2. Prior to commencement of operation of the DESC facilities. 3. Annually, or as needed.
3.5-J2	The District or the DESC managing agency would fence the treatment facilities and the effluent irrigation area to prevent the general public from entering the plant. Alternatively, the EBRPD trails would be fenced.	Construct the fence	Check to ensure that fence is erected and maintained and that it is successful in preventing the public from entering unsafe areas.	ISD or DESC managing agency	Erect fence prior to commencement of operation of the DESC facilities. Inspect fences annually and repair as necessary.

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3.5-J3	The District, the DESC managing agency, or the EBRPD would provide adequate road signs to safely guide DESC/trailhead visitors around the ISD WWTP and effluent disposal area.	Erect the signs	Ensure that road signs are erected and maintained.	ISD, DESC managing agency or the EBRPD	Erect road signs prior to commencement of operation of the DESC. Inspect signs annually and maintain as necessary.

3.7 AIR QUALITY

3.7-A: Project-related earth moving and construction activities would result in localized and temporary increases in ambient concentrations of dust.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.7-A1	All unpaved construction areas would be sprinkled with water as needed to reduce dust emissions.	Include requirement for dust control program (which specifically lists this mitigation) in construction contract.	1. Check construction contract to verify that appropriate dust control program is included. 2. Verify that provisions of dust control program are carried out.	ISD	1. Prior to approval of construction contract. 2. Daily, during construction.
3.7-A2	Trucks hauling dirt, debris and other dust-generating material would be covered as needed to reduce dust emissions.	See mitigation 3.7-A1.	See mitigation 3.7-A1.	See mitigation 3.7-A1.	See mitigation 3.7-A1.

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3.7-A3	A person or persons would be designated to oversee the implementation of dust control measures and to increase watering and minimize visible dust emissions as needed.	See mitigation 3.7-A1.	1. Verify that a person has been designated to oversee dust control. 2. Include inspection reports for dust control in file.	ISD	1. Prior to commencement of construction. 2. Weekly during construction.

3.7-D: The proposed WWTP facilities and sludge air drying facilities are potential sources of odor which could adversely affect existing and/or planned residential land uses near the plant.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.7-D1	A minimum buffer zone of 1,000 feet would be maintained between the WWTP facilities and ISD property boundaries to the east and west where residential development is existing or planned on adjacent parcels. The proposed location for the new WWTP facilities provides this buffer zone.		Review any future ISD facility expansion plans to ensure that any future development on ISD property does not infringe upon the 1000 foot buffer between the WWTP and property boundaries.	ISD	When considering expansion and development plans.

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3.8 PUBLIC HEALTH/HAZARDOUS MATERIALS

3.8-A: Expanding and upgrading the ISD WWTP would involve increased handling and storage of hazardous materials and generation of hazardous wastes at the plant.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.8-A1	ISD would update and continue to apply provisions of its Hazardous Materials Management Plan to plant operations during and after the plant expansion.		1. Verify that plan is updated and added to ISD files. 2. Name an employee responsible for overseeing implementation of the HMMP. 3. Verify that provisions of the HMMP are carried out.	ISD	1,2. Prior to operation under upgraded conditions. 3. During operation as required by the plan (e.g., monthly and annual reviews).
3.8-A2	ISD would ensure that an up-to-date Hazardous Materials Management Plan and Hazardous Materials Inventory Statement are prepared (or updated) for the upgraded treatment facilities and submitted to the County.		Include in file the transmittal of updated plan to County.	ISD	Prior to operation of new facilities.

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3.8-A3	ISD would require that all personnel working with hazardous chemicals have health and safety training.	Include this mitigation in HMMP. Provide health and safety training to all personnel.	1. Check HMMP to verify inclusion of this mitigation. 2. Add health and safety training records for all personnel to administrative record.	ISD	1. Before final approval of HMMP. 2. Annually during operation.

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MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.8-A4	ISD would ensure that any hazardous wastes generated by the plant upgrade are disposed of according to federal, state, and local regulations.		1. Check HHMP to verify inclusion of this mitigation. 2. Monitor to verify that wastes are disposed of properly. 3. Add chain of custody records to administrative record.	ISD	1. Before final approval of HHMP. 2. Monthly, during operation. 3. As records are generated.
3.8-A5	The WWTP would be surrounded by a chain-linked fence.		See Mitigation 3.5-J2.	See Mitigation 3.5-J2.	See Mitigation 3.5-J2.

3.8-C: Project construction or operation could occur in areas where there are a few small known sites of minor soil contamination or where there may be as-yet-undiscovered hazardous contamination which could pose a threat to humans or to the environment.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.8-C1	In the event that remediation is required, a site remediation plan would be prepared by ISD that would clean up the wastes, dispose of the wastes, and protect worker and public health in accordance with federal, state, and local requirements.		1. Add plan to administrative record. 2. Verify submission of remediation plan and County's approval. 3. Inspect work at site to verify that it is carried out in compliance with remediation plan.	ISD	1, 2. Prior to commencement of remediation. 3. Daily, during remediation.
MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.8-C2	Any activity performed at a contaminated site would be preceded by preparation of a separate site health and safety plan for the protection of workers and the public.		1. Add plan to administrative record. 2. Verify submission of remediation plan and County's approval. 3. Inspect work at site to verify that it is carried out in compliance with remediation plan.	ISD	1, 2. Prior to commencement of remediation. 3. Daily, during remediation.

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3.9 CULTURAL RESOURCES

3.9-A: Any prehistoric site which may exist on western Jersey Island could be adversely affected by effluent irrigation, sludge application and associated agricultural practices.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.9-A1	Prior to commencement of land application of effluent on Jersey Island, the existence of the western Jersey Island prehistoric burial site should be verified (the site boundary would be established and field-verified). If it still exists, the site would then be examined by a qualified archaeologist to determine whether or not the site is still important and has not, in fact, been degraded below minimum standards of importance under CEQA. If the site is found to exist and to be an important resource, it would then be determined if the application of treated effluent would be likely to adversely impact the site. If effluent irrigation is determined to be potentially harmful, then the site would be excluded from the effluent disposal area.	Contract a qualified archeologist to field-verify whether the prehistoric burial site does in fact exist, and, if it does exist, to delineate its boundaries and to determine its current importance. Have an analysis conducted of the potential impact of application of treated effluent on or in the vicinity of the prehistoric site, if the site has not been degraded below minimum standards of importance under CEQA. If it is concluded that application would have a significantly adverse impact, have the boundaries of the site clearly marked in the field and exclude the marked area from irrigation.	1. Add documentation of cultural resource survey and assessment to administrative record. 2. If it is determined that the site should be excluded, monitor to ensure that effluent is not applied in the excluded area.	ISD	1. Prior to commencement of land application of effluent or sludge. 2. Monthly during application.

3.9-B: Project construction could disturb additional as-yet-undiscovered significant cultural resource sites.

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.9-B1	Prior to construction, the likelihood of the presence of significant cultural resources will be evaluated by an on-site inspection, and if the presence of significant cultural resources is probable, a qualified cultural resources specialist will be consulted/contracted to monitor all construction activities in all the areas where presence of such resources is likely.		1. Add report of inspection to administrative record. 2. Check to verify presence of qualified archeologist in appropriate monitoring locations during construction, if necessary.	ISD	1. Prior to construction. 2. Archeologist should monitor construction in sensitive areas.

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MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE
3.9-B2	If cultural resources are encountered during any portion of the project, construction in the immediate vicinity should cease immediately and a qualified cultural resource consultant should evaluate the situation.	As in mitigation 3.9-B1, ensure that a qualified archeologist is accessible by telephone during construction, if deemed necessary. Include requirement in construction contract that construction be halted if cultural resources are encountered. Ensure that on-site contractors are aware of indicators of potential cultural resources. Contact archeologist upon discovery of cultural resources.	1. Review construction contract to verify inclusion of mitigation. 2. Verify that on-site contractors are aware of indicators of cultural resources. 3. Monitor to ensure that archaeologist is contacted on the appropriate occasions; file archaeologist reports.	ISD	1. Prior to approval of contract. 2. Prior to construction start-up. 3. Throughout construction.

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MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

3.9-B3	If human remains are encountered, excavation in the immediate vicinity would be halted, and the County Coroner would be notified. The County Coroner shall be responsible for notifying the Native American representative designated by the Coroner for this purpose.	Include requirement in construction contract that construction be halted if human remains are encountered. Contact County Coroner upon discovery of cultural resources.	1. Review construction contract to verify inclusion of mitigation. 2. Monitor to ensure that archeologist is contacted on the appropriate occasions; file any archaeologist reports and correspondence with County Coroner.	ISD	1. Prior to approval of contract. 2. Monthly during construction.

3.9-C: The Project operation could cause degradation of cultural resources which will not be discovered during the construction of the Project, but which may be discovered during the operation of the Project.

MEASURE NUMBER	MITIGATION MEASURE	IMPLEMENTATION PROCEDURE	MONITORING AND REPORTING ACTIONS	MONITORING RESPONSIBILITY	MONITORING SCHEDULE

MITIGATION MONITORING AND REPORTING PROGRAM (Continued)

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3.9-C-1	The likelihood of significant cultural resources will be evaluated by an inspection of the Project Site. Personnel will be instructed to report indicators of such resources during operation of the Project. Upon such a report, land application of effluent or sludge in the immediate vicinity would be ceased immediately and a qualified cultural resource consultant would evaluate the situation. The applicable portions of Measures 3.9-B2 and 3.9-B3 would also be implemented to address this impact.	Ensure that personnel responsible for operation of the Project are aware of the indicators of cultural resources. See mitigations 3.9-B2 and 3.9-B3.	See mitigations 3.9-B2 and 3.9-B3.	ISD	See mitigations 3.9-B2 and 3.9-B3.