

# Holtville-Alamo River Wetlands (AR30) Project Final Initial Study/Mitigated Negative Declaration



May 2006

*Prepared for:*  
Salton Sea Authority  
78-401 Highway 111, Suite T  
La Quinta, California 92253

*Prepared by:*  
Tetra Tech, Inc.  
180 Howard Street, Suite 250  
San Francisco, California 94105



## **Comments and Responses for the Draft Initial Study/Mitigated Negative Declaration for the Holtville-Alamo River (AR30) Wetland Project**

The Draft Initial Study/Mitigated Negative Declaration (IS/MND) was available for review from December 27, 2005 to January 27, 2006.

Three public agencies provided 46 individual comments on the Draft IS/MND. These comments resulted in revisions to the document but did not identify any new potentially significant impacts. Revisions to the biological analysis were done in consultation with the US Fish and Wildlife Service and the California Department of Fish and Game. The responses to these comments are reflected in revisions in the attached Final IS/MND.

### **Comment #1 – US Fish and Wildlife Service**

Section 1.2. Description of the Proposed Project, p. 1-1. The Service has gone on record on numerous occasions recommending that treatment functions and habitat functions in these types of wetlands be separated to the extent possible. Given that we still don't have definitive results as to the ecological risk associated with these wetlands in the Imperial Valley in the long term, it is still appropriate to consider this concern in the design of the proposed wetland system.

**Response:** The following sentence has been removed:

~~Additional benefits include creation of fish and wildlife habitat and recreational areas for the citizens of Imperial County.~~

### **Comment #2 – US Fish and Wildlife Service**

Section 1.3. Sediment Basins, p. 1-4: The design should take into consideration the fact that the Alamo River has tended to have higher selenium concentrations than the New River. This should include design aspects that minimize the attractiveness to wildlife of the sediment basin "compartment" of the wetland where it is hoped that much of the selenium removal will occur.

**Response:** The text has been revised as follows:

To reduce surface evaporation and to reduce the potential for attracting wildlife the basins are designed to be narrow and deep. Additionally, no dense planting of any trees (willows and cottonwoods) is proposed. The lack of such trees is believed to decrease the attractiveness of the site to wildlife.

### **Comment #3 – US Fish and Wildlife Service**

Section 1.3. Sediment Basins, p. 1-6. While the conclusion regarding emergent cells not being harmed by shutting down flows for several days may be correct, it should be possible to calculate the water needs of these cells in advance so that we have a greater certainty as to whether contingency plans may be needed.

**Response:** Sediment removal would occur without reducing water levels in either the sediment basins or in the emergent marsh cells. The only change that would occur is the shut off of the inflow/outflow so that flow through the wetlands is stopped. This prevents the flow of disturbed sediments from flowing in to the emergent marshes and back into the Alamo River. The plants within the emergent marsh cells would not experience a decrease in available water, and would not be affected. To provide additional protection to nesting birds that may be using the site, the text has been changed as follows, including the addition of Mitigation Measure 1-2:

The proposed periodic sediment removal activities could have the potential to disturb nesting birds at the site. Implementing Mitigation Measure 1-4 would reduce the impact

of sediment removal activities on any nesting birds at the site to a less than significant level.

**Mitigation Measure 1-2.** Sedimentation removal activities at the site shall occur outside of the nesting season (February through September) to avoid direct (visual, noise, air quality) and indirect (temporary suspension of water flow) impacts to any nesting birds.

**Comment #4 – US Fish and Wildlife Service**

Section 1.3. Emergent Marsh Plant Beds. P. 1-7. While the Alamo River itself may not be considered impaired by nutrient concentrations, the Salton Sea downstream is. Therefore, nutrient removal is a concern for water quality improvement in the Alamo River and should be considered in the design of the wetland.

**Response:** The text has been revised as follows:

Observations of the high rate of vegetation growth at the Imperial and Brawley constructed wetlands sites have indicated that wetlands in this region can quickly become overgrown and pose a large maintenance problem. For this reason ~~in addition to efforts to avoid attracting wildlife~~, the initial planting area sizes and ratio of emergent plants to open water have been reduced from previous designs. An ultimate target ratio of approximately 70 percent open water to 30 percent emergent vegetation is expected to be reached in several years as plants spread into adjacent water depths that they can tolerate. ~~A It is believed that a larger ratio of plant area is not thought to be necessary because nutrient removal in the Alamo River is not expected to be a concern for water quality improvement would attract more wildlife to the site. Due to the high selenium levels in Alamo River waters, wildlife attraction to the site is not an objective of the project.~~

**Comment #5 – US Fish and Wildlife Service**

Section 1.3. Wildlife Habitat. P. 1-7. No information is provided about the water quality monitoring schedule for the wetland in terms of sampling frequency and extent in the long term. These are important considerations in developing a budget for the program and identifying the long-term operational responsibilities.

**Response:** The text has been revised as follows:

~~Limited monitoring would continue at the Holtville site as well as other constructed wetlands sites in the area.~~

IID is preparing a monitoring plan at this time. Monitoring is expected to occur twice per year (once during the winter and once during the summer) and would include testing water, sediment, and plants for nutrients, metals, selenium, pesticides and organics. Monitoring would be conducted over the long term and the frequency of such events would be adjusted according to results.

**Comment #6 – US Fish and Wildlife Service**

Section 1.3. Land Ownership and Acquisition. P. 1-8. Have grant monies already been obtained? If not, how likely is it that grant funds will be available for acquisition? How will the long-term operation including monitoring be funded? Would Imperial Irrigation District (IID) take over the wetland if grant funding is not available in the long-term to maintain the lease? Please address these issues in the final document.

**Response:** The text has been revised as follows:

The lands on the project site are a combination of Imperial Irrigation District (IID)-owned land and privately owned land. ~~IID plans to purchase the privately owned portions of the project site. IID has been approached by the New River Task Force about purchasing privately owned portions of the site. IID staff anticipates that IID will purchase said lands using Reclamation grant funds. The final decision must be made by the IID Board of Directors and is expected by early February, 2006. The City plans to annex the land in 2006 (Peacher 2005) and lease them from IID obtain an easement from the IID using grant funding from Reclamation. The City would operate the wetland once construction is complete. The property is owned by IID, but sections are also on lands owned by the Central Valley Cemetery District and several private citizens. Reclamation and the local agencies that maintain and operate the wetlands would purchase private lands on the site using grant funding from the Wildlife Conservation Board. The Citizens Congressional Task Force on the New River expects that for wetlands owned by IID and the county, the land would be leased a right-of-way easement would be issued to the agencies that would operate and maintain them. Reclamation would provide continued funding for long-term water quality monitoring as required by the Salton Sea Reclamation Act of 1998.~~

**Comment #7 – US Fish and Wildlife Service**

Section 1.3.3. Operation, Maintenance, and Monitoring. P 1-8. As raised previously, please provide the particulars as to the monitoring program including constituents to be monitored, sampling schedule, and long-term extent of sampling.

**Response:** See response to comment #5.

**Comment #8 – US Fish and Wildlife Service**

Section 2.4.1. Biological Resources, Environmental Setting. P. 2-3. A single field survey conducted in November is not adequate to reveal the breadth of wildlife using the site. An additional survey during the breeding season at a minimum is required.

**Response:** The text has been revised as follows including the addition of the mitigation shown:

...the biological reconnaissance survey (November 2005) was not conducted during the breeding season and is insufficient to make a determination as to the use of the site by bird species. The addition of Mitigation Measure 1-3 along with moving wetland construction outside of the nesting season (proposed October/November start time frame), would reduce the impact of project construction on bird species to a less than significant level.

**Mitigation Measure 1-3.** Reclamation shall conduct a nesting survey at the site during the breeding season (between February and September) and preferably during the months of May or June. Results of the survey shall be submitted to the USFWS and the CDFG for review prior to the commencement of construction activities. If necessary, a pre-construction bird survey will be performed close to the start of construction to ensure that active nests and/or chicks are not within the construction area.

**Comment #9 – US Fish and Wildlife Service**

Section 2.4.1 Biological Resources, Fauna Observed in the Project Area—Birds. p. 2-7. Although the birds listed in Appendix C may not have any special status under State and Federal law, these birds are protected by the Migratory Bird Treaty Act and are therefore of concern to the Service.

**Response:** Text has been revised as follows:

None of the birds ~~are~~ species listed in this appendix have legal status as designated species of concern to any regulatory agencies.

**Comment #10 – US Fish and Wildlife Service**

Section 2.4.1. Biological Resources. Critical Habitat. P. 2-7. Although occupied desert tortoise (*Gopherus agassizii*) habitat occurs east of the site, it is separated from the site by several miles of agriculture, housing, and agricultural and other infrastructure. Given this isolation current use of the site by desert tortoise is unlikely.

**Response:** The text has been revised as follows:

**Critical Habitat**

~~The project site is within known habitat for the state and federal listed as threatened desert tortoise.~~ No designated or proposed designated critical habitat has been identified at the project site.

**Comment #11 – US Fish and Wildlife Service**

Section 2.4.1. Biological Resources, Regulatory Requirements, p. 2-8. Although not “sensitive” under State or Federal law, most native birds are protected by the Migratory Bird Treaty Act. Surveys should include searching for any nesting birds, and active nests should be avoided until after the chicks have fledged (based on observations of a qualified biologist).

**Response:** Please see the response to Comment #8.

**Comment #12 – US Fish and Wildlife Service**

Section 2.4.1. Biological Resources, Checklist Item C, p. 2-9. Given that the project discussion identified the U.S. Army Corps of Engineers as an agency required to approve the project as a result of their jurisdiction under section 404 of the Clean Water Act, it is not clear how the conclusion regarding the lack of wetland impacts was reached. Please clarify the rule of the U.S. Army Corps of Engineers if not for permitting of impacts to wetlands.

**Response:** The text has been revised as follows:

No wetlands have been identified on the project site, and none would be affected by the proposed project. Reclamation consulted with ACOE regarding whether or not a wetland delineation would be required at the site. ACOE did not require a wetland delineation for approval of the 404 Waters of the U.S. permit for this project.

**Comment #13 – US Fish and Wildlife Service**

Section 2.4.1. Biological Resources, text provided in response to Checklist Item A, p. 2-9 and 2-10. You have addressed those species that may be impacted by the construction of the project but you have not addressed those species that may be impacted by the operation of the wetland. Although the preliminary results for the existing two wetlands along the New River suggest relatively low risk of impacts from selenium contamination, concentrations of selenium in the Alamo River have tended to be higher than the New River. Risks associated with this water may be higher, and this aspect needs to be considered in the design and implementation of the project. This is of particular importance given that sensitive species (e.g., Yuma clapper rail, *Rallus longirostris yumanensis*) may be attracted to and take up residence in the wetland.

**Response:** The following text has been added:

The long-term operation of the proposed project could have impacts on species in the project area due to the elevated selenium levels in Alamo River waters. Preliminary results for the existing two wetlands along the New River suggest relatively low risk of impacts from selenium contamination; however, concentrations of selenium in the Alamo River have tended to be higher than the New River. This potentially higher risk

to wildlife has been taken into consideration in the design of the wetland. The proposed sedimentation basins are narrower and deeper than in the previous New River wetlands, and the emergent marsh beds have a lower plant-to-water ratio. Additionally, no dense planting of any trees (willows and cottonwoods) is proposed. The lack of such trees is believed to decrease the attractiveness of the site to wildlife. These design features are expected make the wetlands less attractive to wildlife and reduce any impacts to less than significant levels. Another design feature is that the ratio of sediment basins to treatment (emergent marsh habitat) wetlands is approximately 2/3 to 1/3 with the intent to sequester selenium attached to sediment particles in the deep, anoxic waters of the sediment basins, thus removing the amount of selenium entering the marsh habitat.

**Comment #14 – US Fish and Wildlife Service**

Section 2.17. Mandatory Findings of Significance, Item A. p. 2-25. The Service cannot concur with your conclusion to this item because you have not considered adequately the potential for impacts from contaminants that may become concentrated in the wetland. Surveys of wetland use and monitoring of the biota for contaminants should be incorporated into the project to ensure that this is addressed appropriately. The Service has expertise in this arena and can assist you in developing the appropriate monitoring.

**Response:** The following text has been added:

The project has the potential to increase the exposure of local wildlife to the high levels of selenium present in Alamo River waters. The monitoring plan for the site that covers long term monitoring of water, sediment and plant tissue for selenium levels would include trigger points for wildlife tissue sampling. If wildlife tissue selenium levels were to approach unhealthy levels, the Task Force would consider options for altering or terminating the wetland operations. The monitoring plan would be submitted to and reviewed by the Task Force members, including the USFWS. This approach would ensure that the project would not have an adverse effect on wildlife in the project area.

**Comment #1 – Imperial Irrigation District**

Page 1-4, paragraph 6. Prior to stating that “The Imperial Irrigation District (IID) indicated that its maintenance crews can remove sediment...”, suggest adding text to explain that this is only an example of a local agency’s maintenance standard. As written, the current statement could be misinterpreted to suggest that the IID would conduct these maintenance operations at the site.

**Response:** The text has been revised as follows:

~~The Imperial Irrigation District (IID) indicated that its m-~~ Existing practices by IID maintenance crews has shown that maintenance crews should be able to ~~can~~ remove sediment in this size of earthen canals at an average rate of approximately a quarter mile per day.

**Comment #2 – Imperial Irrigation District**

Page 1-6, paragraph 3. Change “reduced sediment removal” to “increased sediment removal”.

**Response:** This sentence has been removed.

**Comment #3 – Imperial Irrigation District**

Page 1-7, paragraph 1. Strike last sentence. Although nutrients are not listed by the Regional Board as an impairment to the Alamo River, nutrient removal is indeed a goal of the wetlands.

**Response:** This sentence has been removed.

**Comment #4 – Imperial Irrigation District**

Page 1-8, paragraph 1. It was stated that the “IID plans to purchase the privately owned portions of the project site.” While the IID has been approached by the New River Task Force about this matter, and staff anticipates that the IID will purchase said lands using Bureau of Reclamation grant funds, the final decision must be made by the IID Board of Directors. This decision is expected to be made by early February, 2006.

**Response:** The text has been revised as follows:

IID plans to purchase the privately owned portions of the project site. The proposed project site is on unincorporated county land that is zoned as A2U, General Agriculture, and A1U, Limited Agriculture. The lands on the project site are a combination of Imperial Irrigation District (IID)-owned land and three parcels of privately owned land. IID will purchase the privately owned parcel adjacent to their property on the west end of the proposed wetland area using Reclamation provided grant funding. The City of Holtville will obtain easements from IID for use of this land for the wetland and operation and maintenance of the wetland. The City of Holtville will also obtain easements from the remaining private land owners for the use of this property as a wetland and for operation and maintenance of the wetland.

**Comment #5 – Imperial Irrigation District**

Page 1-8, paragraph 1. Change “lease them from IID” to “obtain an easement from the IID”. Change “the land would be leased to” to “a right-of-way easement would be issued to”.

**Response:** The text has been revised as suggested.

**Comment #6 – Imperial Irrigation District**

Page 1-8, paragraph 2. Change “would begin in March 2006” to “beginning in November 2006”.

**Response:** The text has been revised as suggested.

**Comment #7 – Imperial Irrigation District**

Page 1-8, paragraph 3. Delete “irrigation” from first sentence to prevent confusion as to the type of water that will be used. Typically irrigation water is considered to be canal water rather than drain or river water.

**Response:** The text has been revised as suggested.

**Comment #8 – Imperial Irrigation District**

Page 1-9, section 1.4. Suggest including IID encroachment permit if appropriate in this section.

**Response:** Reference to an “encroachment permit or right of entry” has been added to the list as suggested.

**Comment #9 – Imperial Irrigation District**

Page 1-10, paragraph 1. Shouldn't identify SSA plan as “Project” in a document that has been prepared for the Wetlands Project as it's confusing.

**Response:** This is a major project in the area that is separate from the single wetland being addressed in this document. CEQA requires the inclusion of this work in the cumulative project analysis. No change required.

**Comment #10 – Imperial Irrigation District**

Page 1-10, paragraph 4. Change “100,000 acre feet” to “100,000 to 110,000 acre feet”.

**Response:** The text has been revised as suggested.

**Comment #11 – Imperial Irrigation District**

Page 1-10, paragraph 6. Change “300,000 acre feet” to “303,000 acre feet”.

**Response:** The text has been revised as suggested.

**Comment #12 – Imperial Irrigation District**

Page 1-11, section 1.8. The IID was not included in the list of agencies mentioned.

**Response:** Section 1.8 has been revised as follows:

*Imperial Irrigation District.* The proposed project is within the service area of the Imperial Irrigation District. The Mission Statement for IID is “to provide the highest quality service at a fair and competitive price”.

Findings. The proposed project would not conflict with this mission statement.

**Comment #13 – Imperial Irrigation District**

Page 1-12, paragraph 1. Sentence stating “It does not have specific surface water objectives for the Alamo River”, referring to the Regional Board, is not correct. The RWQCB has developed a siltation/sedimentation TMDL for the Alamo River and lists pesticides, silt, and selenium as the River’s “pollutants of impairment”.

**Response:** The text has been revised as follows:

The Colorado River Basin RWQCB is responsible for protecting water quality in the Colorado River Hydrologic Region. ~~It does not have specific surface water objectives for the Alamo River, but~~ The Salton Sea Transboundary Watershed, which contains the Alamo River, is the RWQCB’s priority watershed. The RWQCB has developed a siltation/sedimentation total maximum daily load (TMDL) for the Alamo River and lists pesticides, silt, and selenium as the River’s “pollutants of impairment”. The RWQCB also seeks to reduce eutrophication of the Salton Sea so that beneficial uses, such as providing habitat for fish and migrating birds, can continue (RWQCB 2003).

**Comment #14 – Imperial Irrigation District**

Page 2-3, section 2.4.1. Change “100-foot-wide buffer area” to “30-foot-wide buffer area”.

**Response:** The text has been revised as suggested.

**Comment #15 – Imperial Irrigation District**

Page 2-4, Table 1. Yuma clapper rail should be included and discussed for the project.

**Response:** Yuma clapper rail has been added to Table 1 and a discussion on this species has also been added in the text as follows:

Yuma Clapper Rail (*Rallus longirostris yumanensis*) is federally endangered and a state threatened species. They historically have been restricted to the region of the lower Colorado River, the Colorado River delta, and to appropriate habitats surrounding the Salton Sea and in the Whitewater River north of the Sea. Yuma clapper rails are found in marsh habitats of cattails (*Typha domingensis*) and bullwhip/California bulrush (*Scirpus californicus*). Common reed (*Phragmites communis*) is also used as habitat. Habitat for breeding and foraging must not be too dry. Water depth appears to be an important habitat characteristic. Threats and limiting factors include water diversions, salt cedar infestations, habitat manipulation for flood control, and chemical contamination, especially anything that might threaten the water supply. Currently there is little if

any adequate habitat available to sustain a viable population of this species. However, habitat may occur after the project is implemented.

**Comment #16 – Imperial Irrigation District**

Page 2-6, paragraph 5. California ground squirrels are not present in the Imperial Valley. Also, FYI – IID staff observed an owl and an active owl burrow on the north portion of the site during a survey in 2005.

**Response:** A burrowing owl survey was included in the reconnaissance survey. Text revised as follows:

No burrowing owls or burrows were observed at the site during the reconnaissance survey; however, In addition, no California ground squirrels (*Spermophilus beecheyi*), whose burrows serve as nesting sites for burrowing owls, were observed at the site. more recently, IID staff observed an owl and an active owl burrow on the north portion of the site during a survey in 2005. As a result, the site is known to not be suitable habitat for burrowing owl nesting and may also serve as a forage area for any owls found in adjacent areas.

Owl mitigation is already discussed in the document.

**Comment #17 – Imperial Irrigation District**

Page 2-8, last paragraph. The project proponent “should, not “may” contact the ACOE for their jurisdictional decision on this project since ACOE has claimed jurisdiction in the past.

**Response:** The text has been revised as follows:

The site may also be subject to Section 404 and 401 of the Clean Water Act. As a result, the proponent may should be required to negotiate with the ACOE and the California RWQCB for an individual Section 404 Waters of the U.S. permit and a Section 401 water quality certification/waiver, respectively. A formal delineation of waters of the US is not being may be required by the ACOE as part of this permitting.

**Comment #18 – Imperial Irrigation District**

Appendix A and B. It is confusing to have two sections labeled “Appendix A” and two sections labeled “Appendix B” that are not in sequence. Suggest rearranging appendices, which are currently ordered: Appendix A – Technical Drawings, Appendix B – Biological Reconnaissance Survey Report, Appendix A – Figures, Appendix B – Photographs. In addition, Appendix C is not listed in the Table of Contents.

**Response:** Appendix C is an Appendix of the biology report, and not of the IS/MND; therefore, Appendix C is listed in the Table of Contents for the biological report, and not the Table of Contents for the IS/MND. The text has been revised as follows to clarify the location of the appendix:

These birds are listed in the Flora and Fauna Compendium in Appendix C of the attached biological survey (Appendix B of this report). None of these birds are species of concern to any regulatory agencies.

**Comment #1 – Imperial County Planning**

The Initial Study’s “Project Description” discusses annexation, e.g. “...The City plans to annex the land in 2006 (Peacher 2005) and lease them from IID using grant funding from Reclamation. The City would operate the wetland once construction is complete. The property is owned by IID, but sections are also on land owned by the Central Valley Cemetery District and several private

citizens. Reclamation and the local agencies that maintain and operate the wetlands would purchase private lands on the site using grant funding from the Wildlife Conservation Board. The Citizens Congressional Task Force on the New River expects that for wetlands owned by IID and the county, the land would be leased to the agencies that would operate and maintain them.

The required annexation process should be discussed with the Executive Officer of LAFCO, Jurg Heuberger, AICP/CEP (760) 482-4236, ext. 4310. The annexation should be listed under "Other Agency Approvals" in any future project documents. When will the annexation process commence? Under the section "Construction", it states that "...Construction would be done by Reclamation crews, would begin in March 2006, and is projected to take approximately four and a half months to complete..." Since one of the required permits from the County is a "grading permit", when is the grading permit to be submitted to our Department for review and approval?

**Response:** Section 1.3.2 has been revised to reflect the updated projected onset of construction as November 2006. A permit application for grading will be submitted to Imperial County. The text in the document has been revised to reflect this.

### **Comment #2 – Imperial County Planning**

Since the U.S. Bureau of Reclamation is the "Project Sponsor" and will construct the 31-acre complex of sedimentation ponds/wetlands adjacent to the Alamo River on the west side of Holtville, and is providing funding to the proposed project, has a NEPA Environmental Assessment been prepared, or is this CEQA IS/MND to be utilized as a NEPA-equivalent document for federal funding purposes? Is the Army Corps of Engineers involved in or reviewing this project? The document indicates on page 1-8, that the "...City of Holtville will be responsible for operation, maintenance, and water monitoring. Reclamation would provide for the initial planting and two to three years of vegetation maintenance at the wetlands, depending on future budgets. After that time, the City of Holtville would take on all operation and maintenance..." Will the funding for this activity be provided from the U.S. Bureau of Reclamation to the City on a continuous basis as long as the wetlands project is operating? What is the duration of this wetlands project? What if "future budgets" do not allow for a continuation of this wetlands project, who will provide the funds to restore the site to its original condition? Who is ultimately responsible for this 31-acre project and its restoration?

**Response:** Reclamation is filing a Categorical Exclusion under NEPA. The ACOE has reviewed the IS/MND and has received the 404 permit application for the site. Reclamation is turning over ownership of the wetlands to the City of Holtville upon termination of the planting contract. Should the City become unable to continue operating the site then all efforts would be made by the Citizens Congressional Task Force on the New River to identify a way to keep the wetland operational; however, if there is no source of funding or agency that can take over O&M of the wetland, the inflows to the wetlands can be shut off and the project not operated. In the highly unlikely course that no agency or entity can be found to operate and maintain the wetland then attempts will be made to identify funding to close the site. Since the intent for the wetland is that it will be operational for perpetuity, decommissioning funds have not been established. Appropriate measures will be taken should ultimate closure of the site be necessary. Since the City will own the wetland, it will be their ultimate decision as to the fate of the site.

### **Comment #3 – Imperial County Planning**

The environment document states "...Ongoing water and sediment monitoring at the site will determine if sediment are trending towards toxic levels. If this trend is observed, then the wetland will be deactivated..." On page 2-17, it states that "...The Alamo River is considered to be highly polluted as it contains high levels of selenium, suspended solids, and organochlorine pesticides. Selenium in the Alamo River (approximately 7-8 parts per billion) originates in Colorado River waters, which is used to irrigate agricultural fields in the Imperial Valley..." If the 31-acre Holtville wetland area is deactivated in the future due to high "toxic levels", what mitigation measures are proposed to restore the site to background levels, i.e. will it require partial/full excavation of the entire site and/or only the 13.4 area that holds the proposed 77.6 acre-feet of water, how will

disposal of on-site vegetation/materials be handled and by what entity, if re-grading is necessary who will pay for this, will transportation of any toxic vegetation/wastes be taken to the Westmorland hazardous waste site and what HW transportation company will be hired to do so, and what are potential costs for such a reclamation/restoration project? Will the Bureau of Reclamation provide any necessary reclamation//restoration funding or will the City of Holtville have to provide all or a portion thereof? What benefits does this project have for the City of Holtville, and what fiscal impacts would this have, i.e. how many new employees would be needed by the for the operation, maintenance and water monitoring of this wetlands project, or will existing employees have to include this work as part of their existing workload?

**Response:** Should toxic levels of selenium or other constituents start to be detected the site will be evaluated based up on what constituent/s is elevated. Based upon the assessments if the project cannot be managed in a way to avoid negative impacts to the environment, i.e., if elevated selenium levels are detected in the sediment basins, that may not be of concern as the depth of the sediment basins keeps the bottom few feet without oxygen so there is no chance of invertebrate uptake of the selenium and then secondary ingestion by birds; if toxic levels of selenium is detected in the sediments within the emergent marsh cells then perhaps the wetlands can be dried out in the breeding season to avoid negative impacts to breeding birds, etc., then other arrangements will be made. It will be at that point when a decision will be made to close the site or not. We would not know prior to then what costs would be associated with site closure and cleanup, if required. It is not anticipated that all of the wetland cells would require cleanup. Efforts would be made to identify the location of the contamination and remediate only the contaminated areas. Since only 13.4 acres of wetted sediment basins and emergent marsh habitat will be created from the total 31 acres of land, no more than a 13.4 acre footprint would require remediation. Once the site is turned over to the City, the City would be ultimately responsible for the site. The New River Task Force would try to assist them however possible; however, the wetlands will be owned, maintained and operated by the City.

The City would like to create a river-walk pathway along the Alamo River which would incorporate the wetlands as well as historic areas located along the River. This wetland will provide an area for educational trips for students, fishing, bird watching, etc. It is anticipated that no additional personnel would be needed for O&M of the wetland. Oversight of the wetland could fit neatly into a person whose job it is to visit the City parks daily to check on their status. Quarterly water quality and sediment sampling will be included as part of the monitoring program for the Imperial and Brawley Pilot wetland sites so the City would not be responsible for sample collection and analysis.

#### **Comment #4 – Imperial County Planning**

The document states that "...The clearinghouse will send copies of the document to the Salton Sea reviewing and funding agencies for review and will publish a notice with the county clerk-recorder's office and in the local newspaper, announcing the intent to adopt the MND and the availability of the document for public review..." The typical process for publishing a notice in the local newspaper is for the CEQA "Lead Agency" to submit the public notice to the I.V. Press for publication. It is unclear as to whether this public noticing process has been completed to date, and if not, the noticing by the Salton Sea Authority should do so as soon as possible.

**Response:** This was a typographical error and has been corrected. The clearinghouse does not publish public notices; this is done by the Salton Sea Authority. A public Notice of Availability and Notice of Intent to Adopt were published at the beginning of the public review period in the Imperial Valley Press.

## Notice of Removal of Mitigation Measures

During review of the Draft IS/MND, it was discovered that two typographical errors led to the incorrect identification of two potentially significant impacts and related recommended mitigation. These two mitigation measures have been removed from the Final IS/MND, with approval from the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

The first error is found on page 2-4 of the IS/MND in *Table 1 Sensitive Species that Could Occur within the Project Area*. Table 1 inadvertently labels the western yellow bat (*Lasiurus xanthinus*) as having a designated status of a Species of Concern (CSC) from the California CDFG. Further review of both USFWS and CDFG species lists for threatened, endangered, and species of concern indicate that the western yellow bat is not in fact listed as a CSC in the State tables.

The biological impact analysis and proposed mitigation in the Draft IS/MND was based on this initial typographical error. Based on the erroneous status for this species, the IS/MND inappropriately calls for a protocol survey prior to construction (Mitigation Measure 1-2). The USFWS and CDFG do not have protocol surveys available or recommended for the western yellow bat.

In a related matter, the Colorado river toad (*Bufo alvarius*), which is actually a CDFG Species of Concern, also has a protocol survey recommended as a mitigation measure (Mitigation Measure 1-1). As with the western yellow bat, the USFWS and CDFG do not have protocol surveys for the Colorado river toad, and surveys are generally not initiated for Species of Concern. Mitigation Measure 1-1 has also been removed.

These errors were inadvertently made in the Biological Reconnaissance of the Alamo River AR 30 (Appendix B of the IS/MND) and were carried over to the biological analysis in the IS/MND. Tetra Tech has consulted with USFWS and CDFG and received approval for the removal of the mitigation for both the western yellow bat and the Colorado river toad. As stated above, the USFWS and CDFG do not have protocol surveys for Species of Concern so the recommendation for these in the IS/MND is atypical. In addition to the mistaken status listing, the fact that the proposed project action may alter the habitat on-site for a temporary period, but overall is expected to improve the habitat on-site over the long-term, is also a reason that surveys are not recommended.



## Mitigated Negative Declaration

1. **Project Title:** Holtville-Alamo River Wetlands (AR30) Project
2. **Lead Agency Name and Address:**  
Salton Sea Authority  
78-401 Highway 111  
Suite T  
La Quinta, California 92253
3. **Contact Person and Phone Number:** Dan Cain (760) 564-4888
4. **Project Location:** Holtville, California
5. **Project Sponsor's Name and Address:**  
Bureau of Reclamation  
Lower Colorado Regional Office  
PO Box 61470  
Boulder City, Nevada 89006
6. **General Plan Designation:** A2U, General Agriculture, and A1U, Limited Agriculture
7. **Zoning for Adjacent Lands:** A2U, General Agriculture, and A1U, Limited Agriculture
8. **Description of Project:**

The objective of the proposed project is to improve water quality in the Alamo River. The New and Alamo Rivers drain the Imperial and Mexicali Valleys from the Mexican border to the Salton Sea. These rivers are polluted from agricultural runoff, effluent from wastewater treatment plants, and poorly treated domestic and industrial wastewater from a variety of sources. These polluted waters contribute to deteriorating conditions in the Salton Sea ecosystem. The site would remove contaminants and sediments and thus improve the water quality of the Alamo River and the Salton Sea. Additional benefits include creation of fish and wildlife habitat and recreational areas for the citizens of Imperial County, California.

Reclamation proposes to construct a 31-acre wetland adjacent to the Alamo River on the west side of Holtville, in Imperial County, California. The total water surface area at this site would be 13.4 acres, which would hold 77.6 acre-feet of water and would have a maximum design flow rate of 6 cubic feet per second.

The wetland would be constructed on the southwest overbank of the Alamo River adjacent to Alamo River Drop 12. The proposed site extends westward from Drop 12 for approximately half a mile. The riverbank heights in this area range from 8 to 10 feet.

Perimeter containment berms and sediment basin berms will serve as maintenance roads and as trails for park users. These roads will be 24 feet wide to accommodate large maintenance equipment and will be surfaced with a six-inch aggregate base.

9. **Surrounding Land Uses and Setting: Briefly describe the project's surroundings:** The project site is undeveloped and adjacent to the City of Holtville, including residential areas, industrial areas cultivated agricultural lands.
10. **Other public agencies whose approval is required:** Colorado River Basin Regional Water Quality Control Board, Imperial County, US Army Corps of Engineers, and the California Department of Fish and Game.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agriculture Resources              | <input type="checkbox"/> Air Quality            |
| <input type="checkbox"/> Biological Resources          | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology/Soils          |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality            | <input type="checkbox"/> Land Use/Planning      |
| <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Population/Housing     |
| <input type="checkbox"/> Public Services               | <input type="checkbox"/> Recreation                         | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems     | <input type="checkbox"/> Mandatory Findings of Significance |   |

DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a “potentially significant impact” or “potentially significant unless mitigated.” An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

---

Gary Wyatt  
President  
Salton Sea Authority Board of Directors

---

Date



---

# TABLE OF CONTENTS

Section	Page
<b>1. PROJECT DESCRIPTION .....</b>	<b>1-1</b>
1.1 Introduction .....	1-1
1.2 Project Objectives .....	1-1
1.3 Proposed Project .....	1-1
1.3.1 Land Ownership and Acquisition.....	1-8
1.3.2 Construction .....	1-8
1.3.3 Operation, Maintenance, and Monitoring .....	1-8
1.4 Other Agency Approvals .....	1-9
1.5 Cumulative Projects .....	1-9
1.6 Scope of the Document.....	1-11
1.7 Public Involvement .....	1-11
1.8 Plans, Policies, and Findings .....	1-12
<b>2. ENVIRONMENTAL CHECKLIST .....</b>	<b>2-1</b>
2.1 Aesthetics .....	2-1
2.1.1 Environmental Setting.....	2-1
2.2 Agricultural Resources.....	2-2
2.3 Air Quality .....	2-2
2.3.1 Environmental Setting.....	2-2
2.4 Biological Resources .....	2-3
2.4.1 Environmental Setting.....	2-3
2.5 Cultural and Paleontological Resources .....	2-13
2.5.1 Environmental Setting.....	2-13
2.6 Geology and Soils .....	2-14
2.6.1 Environmental Setting.....	2-14
2.7 Hazards And Hazardous Materials .....	2-17
2.8 Hydrology and Water Quality .....	2-18
2.8.1 Environmental Setting.....	2-18
2.9 Land Use and Planning.....	2-20
2.9.1 Environmental Setting.....	2-20
2.10 Mineral Resources.....	2-21
2.11 Noise Resources .....	2-21
2.11.1 Environmental Setting.....	2-22
2.12 Population and Housing .....	2-23
2.13 Public Services .....	2-23
2.14 Recreation .....	2-24
2.15 Transportation/Traffic .....	2-24
2.16 Utilities and Service Systems .....	2-25
2.17 Mandatory Findings of Significance .....	2-26
<b>3. REFERENCES.....</b>	<b>3-1</b>
<b>4. LIST OF PREPARERS .....</b>	<b>4-1</b>

---

## LIST OF FIGURES

Figure	Page
1-1 Project Location.....	1-2
1-2 Site Vicinity Map .....	1-3
1-3 Proposed Wetland Configuration .....	1-5

---

## LIST OF TABLES

Table	Page
Table 1 Sensitive Species that Could Occur within the Project Area .....	2-5
Table 2 Plant Species Recorded Within the Project Area .....	2-6

---

## LIST OF APPENDICES

Appendix	Page
A Technical Drawings	
B Biological Reconnaissance of Alamo River AR30	

# SECTION 1

## PROJECT DESCRIPTION

---

### 1.1 INTRODUCTION

This initial study/mitigated negative declaration (IS/MND) has been prepared to address the environmental effects of creating a 31-acre wetland along the Alamo River near the town of Holtville, in Imperial County, California (Figure 1-1). The project would begin in late February 2006. The purpose of the project is to remove contaminants and sediments and thus improve the water quality of the Alamo River. The Bureau of Reclamation (Reclamation) would construct the wetland.

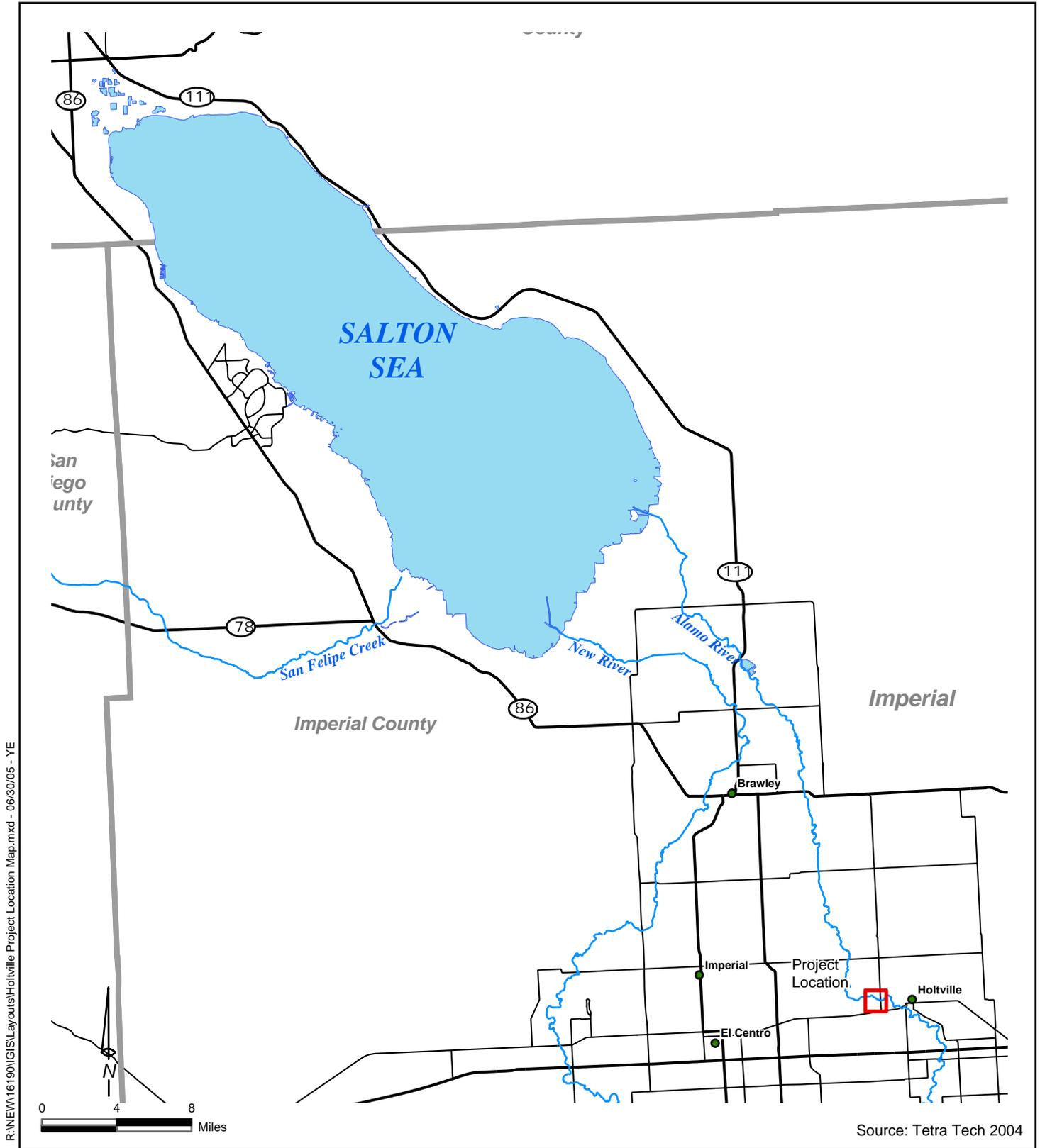
This IS/MND has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970, Cal. Pub. Res. Code §21000 et seq. The CEQA lead agency for this project is the Salton Sea Authority.

### 1.2 PROJECT OBJECTIVES

The objective of the proposed project is to improve water quality in the Alamo River and the Salton Sea. The New and Alamo Rivers drain the Imperial and Mexicali Valleys from the Mexican border to the Salton Sea. These rivers are polluted from agricultural runoff, effluent from wastewater treatment plants, and poorly treated domestic and industrial wastewater from a variety of sources. These polluted waters contribute to deteriorating conditions in the Salton Sea ecosystem. The Holtville site was identified by the Citizen's Congressional Task Force on the New River as being suitable for a constructed wetland for the purpose of water quality improvements. The site would remove contaminants and sediments and thus improve the water quality of the Alamo River and the Salton Sea. ~~Additional benefits include creation of fish and wildlife habitat and recreational areas for the citizens of Imperial County.~~

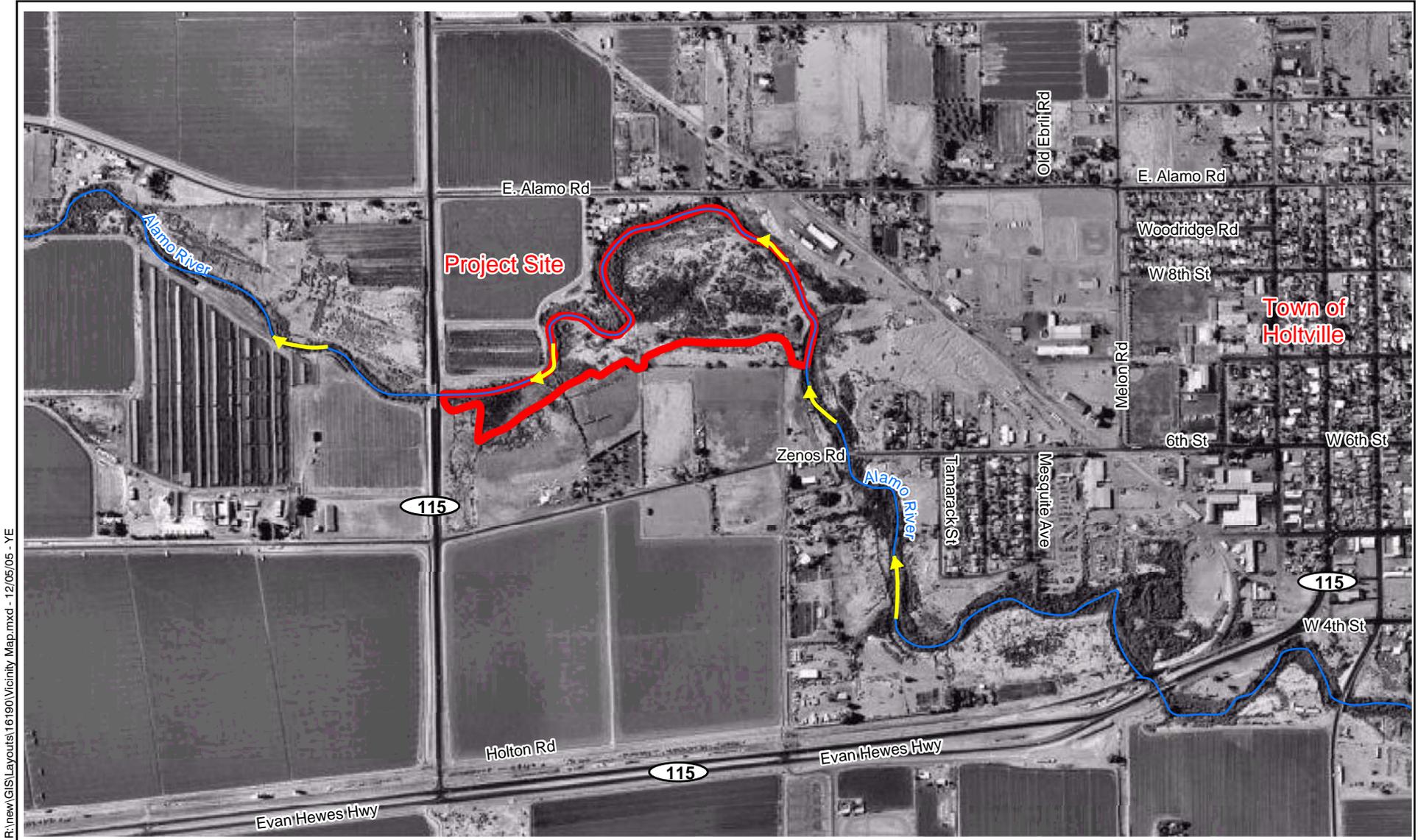
### 1.3 PROPOSED PROJECT

Reclamation proposes to construct a 31-acre complex of sedimentation ponds/wetlands adjacent to the Alamo River on the west side of Holtville, in Imperial County, California (Figure 1-2). The total water surface area at this site would be 13.4 acres, which would hold 77.6 acre-feet of water and would have a maximum design flow rate of 6 cubic feet per second.



# Project Location Map Holtville

Southeastern California



R:\new\GIS\Layouts\16190\Vicinity Map.mxd - 12/05/05 - YE

**Site Vicinity Map**

Holtville, California

The wetland would be constructed on the southwest overbank of the Alamo River adjacent to Alamo River Drop Structure 12 [1] (Figure 1-3). The proposed site extends westward from Drop 12 for approximately half a mile. The riverbank heights in this area range from 8 to 10 feet, but wetlands would be constructed where the river drops off downstream. Detailed technical drawings of the proposed wetlands are provided in Appendix A.

**Containment Berms and Roads.** Perimeter containment berms and sediment basin berms would serve as maintenance roads and as trails for park users. These roads would be 24 feet wide to accommodate large maintenance equipment and would be surfaced with a six-inch aggregate base.

Burrowing muskrats have caused erosion, short circuiting [2], and other damage at wetlands sites in the area. The proposed project is to construct wider berms to limit the ability of these animals to burrow from one section of the wetland to another. However, as a precaution against the possibility of a breach in an outer containment berm due to burrowing, a galvanized wire mesh fence would be buried along and below the toe of the outer berm slopes.

A 30-foot-wide corridor of vegetation between the river bank and the perimeter of the wetlands would be left undisturbed to provide bank erosion control and to help maintain the original river channel during high flows.

**Sediment Basins.** The State Water Quality Control Board considers sedimentation/siltation, selenium, and pesticides to be the pollutants of concern in the Alamo River. For this reason sediment basins have been enlarged in the designs to comprise approximately a third of the total water volume. To reduce surface evaporation and to reduce the potential for attracting wildlife the basins are designed to be narrow and deep. Additionally, no dense planting of any trees (willows and cottonwoods) is proposed. The lack of such trees is believed to decrease the attractiveness of the site to wildlife. The 10-foot depth would decrease the available oxygen at the bottom to reduce available selenium in the aquatic uptake cycle. Flow would be trained to stay near the bottom by the use of remixing pipes. Two large pipes would be used at each remixing crossover to keep flow velocities and turbulence to a minimum. The long aspect ratio of the basins would provide for a maximum siltation fallout time.

Sediment basins would be a maximum of 100 feet wide between the inside edges of the maintenance roads. This would allow for sediment to be excavated from both sides of the basins, which is the most common and economical method in the region. ~~The Imperial Irrigation District (IID) indicated that its m-~~ Existing practices by IID maintenance crews has shown that maintenance crews should be able to ~~can~~ remove sediment in this size of earthen canals at an average rate of approximately a quarter mile per day.

---

1 Drop 12 is a “drop structure”, which is a weir that is used to restrict water flow and cause a pooling of water upstream of the weir and a rapid drop in the surface gradient for water flowing over the structure. Drop structures are used to improve habitat conditions for aquatic life and to increase the oxygen content of water.

2 Water flowing through the berms to the adjacent cell instead of taking the route around the berms, as designed.



### Proposed Wetland Configuration

Holtville, California

The Holtville sediment basin length is 3,172 feet, which equates to about two and a half days. During removal, the wetland flow would be shut off at the inlet diversion structure, and the sediment basin outlet would be closed to keep the disturbed sediments from flowing into the emergent marsh cells [3]. After the sediment is removed and the sediment basins have stilled, the water flow would resume. It is not anticipated to be a critical factor if the emergent marsh cells are without a flow for several days during these operations.

The sediment basins and the emergent marsh cells would have a freeboard (distance between normal water surface and the top of the bank) of two feet at normal water surface elevations.

***Sediment Disposal Areas.*** ~~Sediment would need to be removed from the basins on a more frequent schedule than from a normal earthen canal, due to the reduced sediment removal efficiency and potential hazards of contaminant buildup.~~ On-site disposal areas for sediment would be provided to increase the longevity of the wetlands sites and to economize removal operations. To reduce the possibility of sediments being washed back into the river by surface runoff, no sediment disposal areas would be located between the wetlands and river banks. The disposal areas would be 24 feet wide and two feet deep and would be adjacent to the sediment basins so the sediment could be excavated and dropped in one movement of the equipment.

***Sediment Basin Outlets.*** Basin outlets would be precast concrete boxes with removable flashboards (boarding placed along the top of a dam to increase its height) so the outlet flow would always come from the upper six inches of the basin water column before it flows into the emergent marsh cells.

***Emergent Marsh Cells.*** The emergent marsh cells would have a normal water surface elevation one foot below the sediment basin water surface and would be six feet deep in the open water areas. Two cells similar in surface area and water volume would be constructed. The overall flows required were calculated using a nominal seven-day hydraulic detention time for half of the flow going through each cell. The hydraulic control boxes could handle the total flow through each cell for flushing. The cell outlet pool areas have been enlarged from previous designs and would be protected from floating detritus and other debris by a six-inch-deep vegetation filter plant bed.

***Emergent Marsh Plant Beds.*** The planted areas in the emergent marsh cells would consist of emergent vegetation on a series of one-foot-deep plant beds that extend out into the cells in an alternating pattern. This would create a meandering deep water channel from cell inlet to outlet. This design would better facilitate cell draining and would help distribute the flow throughout the cells, reducing areas of stagnant water and possible concentrations of sediment and pollutants. A width of 30 feet for these beds is intended to accommodate large harvesting equipment, such as thrashers, while not being so expansive as to produce dead flow zones and large areas of detritus buildup where dissolved oxygen is diminished. Maintenance equipment

---

3 Emergent marsh cells are the areas of the proposed wetlands where vegetation would be planted. These areas are separate from the sediment basins, yet together comprise the “wetlands”.

operators would access the beds from seven percent sloped ramps where the beds would meet the containment berm/maintenance roads.

Observations of the high rate of vegetation growth at the Imperial and Brawley constructed wetlands sites have indicated that wetlands in this region can quickly become overgrown and pose a large maintenance problem. For this reason in addition to efforts to avoid attracting wildlife, the initial planting area sizes and ratio of emergent plants to open water have been reduced from previous designs. An ultimate target ratio of approximately 70 percent open water to 30 percent emergent vegetation is expected to be reached in several years as plants spread into adjacent water depths that they can tolerate. ~~It is believed that a larger ratio of plant area is not thought to be necessary because nutrient removal in the Alamo River is not expected to be a concern for water quality improvement would attract more wildlife to the site. Due to the high selenium levels in Alamo River waters, wildlife attraction to the site is not an objective of the project.~~

**Wildlife Habitat.** The wetland is expected to be attractive to wildlife as soon as it begins to hold water. Although selenium uptake by wildlife along the Alamo River is not yet considered to be a critical threat, the concentration of sediments and restricted flows in wetlands ponds could cause selenium to become more prevalent in the aquatic cycle. The designers of the wetland have acknowledged that this is one of the most important issues in providing a feature that is of benefit to water quality and wildlife. The sediment basins have been designed to be deep so that they would decrease available oxygen and reduce available selenium in their waters. It is believed that small amounts of selenium change chemical form in the bottom of such sediment cells where oxygen levels are much lower than at the surface. In the proposed wetlands, it is expected that some additional selenium would be changing form and be removed from the water column through settling on the pond bottom. Ongoing water quality monitoring (including water, sediment and tissue sampling) would be conducted to ensure wildlife is protected from possible future toxic levels of selenium as well as other possible contaminants.

Certain features in the emergent marsh would become habitat. The access ramps to the alternating plant beds may be used as feeding flats and nesting areas, and birds would be attracted to the large expanses of open water near the wetland's outlet. Sediment basins are located upstream of these features to provide some initial water quality improvement. Willows would be planted along shoreline areas in the marsh cells but not in the sediment basins. To increase flow distribution throughout the marsh cells, alternating plant beds would be provided to reduce areas of stagnation and siltation. ~~Limited monitoring would continue at the Holtville site as well as other constructed wetlands sites in the area.~~

IID is preparing a monitoring plan at this time. Monitoring is expected to occur twice per year (once during the winter and once during the summer) and would include testing water, sediment, and plants for nutrients, metals, selenium, pesticides and organics. Monitoring would be conducted over the long term and the frequency of such events would be adjusted according to results.

**City Park Component at Holtville.** The City of Holtville has expressed interest in developing a city park as an integral part of the wetlands, which would be within city limits. To accommodate this plan, an area would be provided after construction of the wetlands that the city could later develop as a parking area for visitors. Recreationists would be restricted to driving only on the road along the southern perimeter of the site. This would be the wetlands access road and would connect to Zenos Road at one end. The City may install other park features, which may include a double unit, composting vault toilet, picnic tables, interpretive signage, benches, and fire rings. The City of Holtville would operate and maintain the park facilities, including all roads and trails.

### 1.3.1 Land Ownership and Acquisition

~~IID plans to purchase the privately owned portions of the project site. The proposed project site is on unincorporated county land that is zoned as A2U, General Agriculture, and A1U, Limited Agriculture. The lands on the project site are a combination of Imperial Irrigation District (IID)-owned land and three parcels of privately owned land. IID will purchase the privately owned parcel adjacent to their property on the west end of the proposed wetland area using Reclamation provided grant funding. The City of Holtville will obtain easements from IID for use of this land for the wetland and operation and maintenance of the wetland. The City of Holtville will also obtain easements from the remaining private land owners for the use of this property as a wetland and for operation and maintenance of the wetland.~~

### 1.3.2 Construction

Construction would be done by Reclamation crews, ~~would begin in March~~ beginning in November 2006, and is projected to take approximately four and a half months to complete. Construction equipment would include scrapers, bulldozers, graders, dump trucks and water trucks. Up to 10 construction workers would be on the site at any given time to operate the construction equipment.

Infrastructure to be installed with the wetlands includes water inlet gates to bring ~~irrigation/~~river water into the wetland sites, and water drop control structures or gate valves to move water between cells within the wetland system. The access or maintenance roads/berms would be constructed around the outside perimeter of the wetlands. These features could be as high as six feet above the existing grade, depending on the location. The berms closest to the river would be higher than those at the south end of the project site, where the topography rises. The only outside materials that would be brought to the site for construction would be gravel for the road base, and water pipe and rip rap, all of which would be obtained from commercial suppliers.

Project plans would incorporate all Imperial County Air Pollution Control District (APCD) dust suppression guidelines.

### 1.3.3 Operation, Maintenance, and Monitoring

The City of Holtville will be responsible for operation, maintenance, and water monitoring. Reclamation would provide for the initial planting and two to three years of vegetation maintenance at the wetlands, depending on future budgets. After that time, the City of Holtville would take on all operation and maintenance.

During operation, flows from the Alamo River into the wetlands are expected to be up to six cubic feet per second. The flow rate would be adjusted according to the retention time needed to maximize water quality improvement. Water quality monitoring data would determine the final maintenance flow needed.

Maintenance would involve regular inspection of the water control boxes for maintenance flows, debris removal, and possibly repair of damage resulting from vandalism. Vegetation maintenance, sediment removal and mosquito monitoring/control would also be part of the operation and maintenance responsibilities.

#### 1.4 OTHER AGENCY APPROVALS

The following agency approvals would be required:

- County of Imperial or City of Holtville grading permit;
- Imperial Irrigation District encroachment permit or right of entry;
- US Army Corps of Engineers 404 Waters of the US permit;
- California Department of Fish and Game 1602 Streambed Alteration Agreement;
- California Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification; and
- California RWQCB General Construction Stormwater Permit.

No other agency approvals would be required, but the project plans would incorporate all Imperial County APCD dust suppression guidelines, as required by the APCD.

#### 1.5 CUMULATIVE PROJECTS

***Alamo and New River Wetlands.*** Several other wetland creation projects similar to the proposed project have been implemented, are in the planning phase, or are expected to occur along the Alamo and New Rivers. Reclamation plans to construct a 50-acre wetland in 2007 along the Alamo River near Brawley. The New River already has one 6-acre and one 22-acre wetlands along its banks. A further 30-acre site is planned for construction.

***Mexicali Wastewater Treatment Plant.*** Untreated or partially treated wastewater from Mexicali, Mexico, is currently discharged into the New River, which flows north into the United States and ultimately empties into the Salton Sea. The United States and Mexico, through the International Boundary Water Commission (IBWC), are planning short- and long-term improvements to the Mexicali wastewater system. These improvements include, among others, rehabilitating and expanding the Mexicali I wastewater treatment plant and constructing a Mexicali II wastewater treatment plant. These projects are to improve sanitation in Mexicali and to improve the quality of water discharged to the New River. After improvements, Mexicali may opt to redirect some or all of the treated wastewater for uses south of the border instead of discharging to the New River, potentially affecting the quantity of inflows to the Salton Sea.

**Salton Sea Restoration Project.** The Salton Sea Restoration Project has been identified as a project within the Salton Sea over the ~~proposed three-year project period~~ next ten years. In September and October 2003, extensive geotechnical work began in an effort to determine the best location for dikes in the Salton Sea. Though the Salton Sea Authority (SSA) endorsed moving forward on a derivation of a plan originally developed by US Filter, all proposed plans that meet the established restoration components are being scrutinized (Salton Sea Authority 2005). Those restoration components include the following:

- Water quality improvements;
- Shallow water wetlands (bird habitat);
- Healthy deep-water fishery;
- Air quality/dust mitigation;
- New water generation; and
- Economic development.

~~Under the SSA's plans, the entire present Project area would be dry and would no longer lie at the edge of the Sea's shore.~~ None of the locations proposed for the above-listed components would be near or conflict with the Project.

**Vertical Tube Evaporation Pilot Project.** The Vertical Tube Evaporation (VTE) pilot project is a 5,000 gallon per day desalination pilot project being undertaken by Reclamation at Cal Energy's Unit One geothermal plant located at the south end of the Sea. The VTE system will be powered by geothermal excess steam and will desalinate 5,000 gallons per day of Salton Sea water through a multi-step condensing system within a vacuum. The purpose is to test the success of powering a VTE system using geothermal excess steam which is very corrosive and could harm the equipment. Removal of selenium will be tested as well as the removal of sulfates from the brine stream. This removal would enable the stream to be injected into the geothermal aquifer, thus helping to replenish it and reduce salt waste from the desalination process.

This project will be up and running by autumn 2005 and will operate for six months. The desalinated water will be mixed with the brine and returned to the Sea for a minimal loss of water to the Sea.

**Water Conservation Agreement.** A water conservation agreement was signed in 1998 between IID and the Los Angeles Metropolitan Water District (MWD) to transfer 100,000 to 110,000 acre feet of water from the Imperial Valley to MWD. This loss of water to the Valley is being realized at the Sea today. Ongoing water conservation practices continue to be implemented in the Valley.

**Shallow Habitat Pilot Project.** The Bureau of Reclamation proposed to construction of 113.4 acres of shallow habitat areas along the southeastern shore of the Salton Sea, southwest of

Niland. Construction of these ponds is currently underway and they would be operated for a period between two and five years.

**Quantification Settlement Agreement (QSA).** The QSA is a multiparty agreement which quantified the Imperial Irrigation District and Coachella Valley Water District rights to Colorado River water and allows for transfers up to ~~300,000~~ 303,000 acre feet of conserved water from IID to other California users. The QSA was signed in 2003 and is expected to be fully implemented by 2016. As part of the QSA, a 15-year period is in place that ensures that any water transfers out of the Imperial Valley do not result in reduced inflows to the Salton Sea.

No other cumulative projects within the proposed installation areas were identified through consultation with Imperial County.

## 1.6 SCOPE OF THE DOCUMENT

This IS/MND identifies, evaluates, and documents the environmental effects of the proposed project. Section 2, Environmental Checklist, is a description of resource conditions and includes the environmental effects of the proposed project. Section 3 is the references used to prepare this IS/MND, and Section 4 is a list of the preparers of the report and their disciplines.

This document is an analysis of direct impacts (those caused by an action and occurring at the same time and place) and indirect impacts (those caused by an action but occurring later or farther away but at a reasonably foreseeable time or place). Actions that could lessen impacts are identified, where appropriate.

## 1.7 PUBLIC INVOLVEMENT

Opportunities for public participation in the CEQA process are provided to promote open communication and better decision-making. All persons and organizations having a potential interest in the proposed project, including minority, low-income, and Native American groups, are urged to participate in the CEQA environmental analysis process.

The Citizens Congressional Task Force on the New River has conducted regular public meetings since 1998. Meeting dates and locations have been advertised in the local newspapers prior to each meeting. The proposed action is one of the projects that have been a central part of these task force meeting discussions since that time.

Following internal review of a preliminary draft of this IS/MND, the Salton Sea Authority (SSA) sent the Draft IS/MND with the intent to adopt a MND to the California State Clearinghouse on December 29, 2005. The clearinghouse sent copies of the document to the Salton Sea reviewing and funding agencies for review and a notice was published with the county clerk-recorder's office and in the local newspaper, announcing the intent to adopt the MND and the availability of the document for public review. In addition, copies of this Final IS/MND are provided to the local library and have been mailed to individuals and representatives of organizations and government agencies who request copies. The review period ended 30 days after the California State Clearinghouse received the document on January 27, 2006. After

closure of this review period, the SSA prepared written responses to all comments and has sent a copy of these responses to the commenters. The SSA has prepared an agenda item for the SSA Board of Directors that includes the Final IS/MND, the comments, and responses to the comments for the committee's approval. Following committee approval, the notice of determination will be filed with the county clerk-recorder.

## 1.8 PLANS, POLICIES, AND FINDINGS

This section is a summary of the major applicable plans and policies of federal, state, regional, and local government agencies. These agencies include the California RWQCB (Region 7, Colorado River Basin), the Salton Sea Authority, the Imperial Irrigation District, and Imperial County. Consultation with regulatory agencies will ensure that the proposed project is consistent with the applicable plans and policies of those agencies.

***Colorado River Basin RWQCB.*** The Colorado River Basin RWQCB is responsible for protecting water quality in the Colorado River Hydrologic Region. ~~It does not have specific surface water objectives for the Alamo River, but~~ The Salton Sea Transboundary Watershed, which contains the Alamo River, is the RWQCB's priority watershed. The RWQCB has developed a siltation/sedimentation total maximum daily load (TMDL) for the Alamo River and lists pesticides, silt, and selenium as the River's "pollutants of impairment". The RWQCB also seeks to reduce eutrophication of the Salton Sea so that beneficial uses, such as providing habitat for fish and migrating birds, can continue (RWQCB 2003).

The Colorado River Basin RWQCB Water Quality Control Plan identifies the following general water quality objective for surface water:

All waters shall be free from substances attributable to wastewater of domestic or industrial origin or other discharges which adversely affect beneficial uses not limited to:

- Settling to form objectionable deposits;
- Floating as debris, scum, grease, oil, wax, or other matter that may cause nuisances; and
- Producing objectionable color, odor, taste, or turbidity.

Findings. The proposed project would be consistent with the goals of the RWQCB since it would improve water quality in the Alamo River, one of two major water sources of the Salton Sea.

***Salton Sea Authority.*** The SSA is a Joint Powers Authority whose goal is the restoration of the Salton Sea. The SSA identifies the following restoration objectives:

- Stabilize salinity;
- Preserve the shoreline and control elevation;

- Promote economic development;
- Maintain an agricultural water depository; and
- Promote a healthy fish and wildlife habitat.

The SSA also identifies the following restoration components:

- Water quality improvements;
- Shallow water wetlands (bird habitat);
- Healthy deepwater fishery;
- Air quality/dust mitigation; and
- New water generation.

Findings. The proposed project would be consistent with the restoration goals and components of the Salton Sea Authority. The proposed project is part of the SSA-identified restoration component of water quality improvements and would help to create conditions for the healthy deepwater fishery component.

**Imperial Irrigation District.** The proposed project is within the service area of the Imperial Irrigation District. The Mission Statement for IID is “to provide the highest quality service at a fair and competitive price”.

Findings. The proposed project would not conflict with this mission statement.

**Imperial County.** The proposed project is within unincorporated Imperial County. The water element of the Imperial County General Plan contains the following goals:

- The County will secure the provision of safe and healthful sources and supplies of domestic water adequate to ensure the implementation of the County General Plan and the long-term continued availability of this essential resource.
- Long-term viability of the Salton Sea, Colorado River, and other surface waters in the county will be protected for sustaining wildlife and a broad range of ecological communities.
- The county will secure the provision of safe and healthful sources and supplies of agricultural irrigation water adequate to ensure the continuation of agricultural land uses as established by the County General Plan and the long-term continued availability of this essential resource.
- The county will adopt and implement ordinances, policies, and guidelines that ensure the safety of county groundwater and surface water from toxic or hazardous materials and wastes.

- The county will manage water resources effectively and efficiently through interagency and interjurisdictional coordination and cooperation.

Findings. The proposed project would be consistent with the goals and policies of the Imperial County General Plan. The project would improve the quality of water in the Alamo River and the Salton Sea.

## SECTION 2

# ENVIRONMENTAL CHECKLIST

This environmental checklist is a description of the environmental setting of the project area and the potential environmental effects of the proposed project described in Section 1.3.

### 2.1 AESTHETICS

#### 2.1.1 Environmental Setting

Landscape in the project area is generally flat and largely agricultural. The Alamo River is lined with shrubs and small trees. The area proposed for wetland creation is arid and sparsely vegetated with scrub brush. There are no scenic vistas, scenic highways, or any other identified visual resources in the vicinity.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the proposal:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock, outcroppings and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. The project area is not within view of a scenic vista.
- b. The project area is not within view of a scenic highway.
- c. The project would alter the visual character of the proposed site, but this is not considered to be a degradation of the character or quality of the site or its surroundings.
- d. No lights would be installed. The project would not create a new source of glare or nighttime light.

**2.2 AGRICULTURAL RESOURCES**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-c. Although the project site is within an area zoned as A2U, General Agriculture, and A1U, Limited Agriculture, it is not designated as prime farmland or farmland of state importance. Additionally, the project site is not cultivated or irrigated. There would be no impact on agricultural resources.

**2.3 AIR QUALITY**

**2.3.1 Environmental Setting**

The Salton Sea Air Basin is designated as nonattainment for the federal ozone and inhalable particulate matter (PM<sub>10</sub>) standards and as unclassifiable or in attainment for the other federal criteria pollutant standards. Imperial County is designated unclassifiable for the federal carbon monoxide standard. With respect to the state ambient air quality standards, the Salton Sea Air Basin is in nonattainment for the state ozone and PM<sub>10</sub> standards, and is in attainment or unclassifiable status for all other state criteria pollutant standards.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-e. Implementing the proposed action would increase fine particulate matter (PM<sub>10</sub>) due to construction-related fugitive dust and diesel exhaust emissions. APCD-recommended measures (*Imperial County APCD Rule 800 – Fugitive Dust Requirements for Control of Fine Particulate Matter [PM<sub>10</sub>]*) have been incorporated into the project plans to reduce fugitive dust emissions during earth-moving activities. These measures would reduce this impact to a less than significant level.

The project would not conflict with or obstruct implementation of any air quality plan and would not violate any air quality standard. The project would not contribute substantially to an existing or projected air quality violation, would not expose any sensitive receptors to substantial pollutant concentrations, and would not create objectionable odors.

## 2.4 BIOLOGICAL RESOURCES

### 2.4.1 Environmental Setting

The biological resources discussed in this section are vegetation, sensitive habitats, wildlife, and special status species. The focus of this analysis is the project footprint, 31-acre plus associated staging, and a surrounding ~~400~~ 30-foot-wide buffer area. The ROI is an undeveloped plot of land adjacent to the Alamo River. Biological resources data have been collected from various sources, including a search of the California Natural Diversity Database (CNDDDB 2005) for the Holtville USGS 7.5-minute quadrangle, findings from a site survey, and a literature review. A field survey was conducted at the site on November 2, 2005. The report from this field survey is available in Appendix B. Dominant plant species and natural communities were identified and wildlife was observed by sight, sound, tracks, and other signs. Special status, or sensitive, species include those species that the USFWS or the CDFG lists or has proposed for listing as

endangered, threatened, or candidate species. Plants that the California Native Plant Society (CNPS) lists as rare or threatened are also considered sensitive. Potential sensitive species were identified from USFWS, the California Natural Diversity Data Base (CNDDDB), and CNPS. Vascular plants listed as rare or endangered by the CNPS but which have no designated status or protection under federal or state endangered species legislation, are defined with the CNPS criteria as follows:

- List 1A, plants believed to be extinct;
- List 1B, plants that are rare, threatened, or endangered in California and elsewhere;
- List 2, plants that are rare, threatened, or endangered in California but that are more numerous elsewhere;
- List 3, plants about which we need more information, a review list; and
- List 4, plants of limited distribution, a watch list.

The site is in the northwest quarter of Section 19, T 2S, R 5E, San Bernardino Baseline and Meridian. Based on the topographic map, the property is at approximately 50 feet below mean sea level. The topographic gradient is generally southerly with the western parcel sloping generally to the north. The site is mapped as Quaternary nonmarine terrace deposits (Geologic Map of the San Diego-El Centro Quadrangle, California Division of Mines and Geology, 1962). The AR 30 site is likely a floodplain feature associated with the Alamo River. On the northwestern side of the Alamo River, soils found on the site are composed of very fine-textured soils. Soils on the northwestern portion of the site are composed of very fine sand Vint loam soil, while soils on the southeastern portion of the site are the Imperial-Glenbar silty clay loam series (United States Department of Agriculture 1981). Salt forming a crust on the surface of the soils was observed throughout the site. In a number of areas, organic material had accumulated on the surface of the soil suggesting a soil with a high salt content. In conjunction with field observations plus the presence of salt-tolerant plants, soils associated with the site are likely classified as saline-sodic.

The site is ~~associated with~~ located within the Colorado Desert, which is a subdivision of the Sonoran Desert and is the warmest desert in California (Schoenherr 1992). Most precipitation falls in the winter, and summer thunderstorms are common. The vegetation at the site is dominated by tamarisk (*Tamarix ramosissima*), with mesquite (*Prosopis glandulosa*) and suaeda (*Suaeda moquinii*) mixed habitat.

Table 1 is a compilation of all of the sensitive species that are known to occur or that could potentially occur in the immediate project vicinity ~~or and~~ in a buffer area consisting of a large surrounding area, either according to the CNDDDB database, and/or based on individual species' habitat requirements.

**Table 1**  
**Sensitive Species that Could Occur within the Project Area**

Common Name	Scientific Name	Federal Status	State Status	CNPS Status (Plants Only)
<b>Plants</b>				
Sand food	<i>Pholisma sonora</i>	-	-	1B
<b>Amphibians</b>				
Colorado river toad	<i>Bufo alvarius</i>	-	CSC	-
<b>Reptiles</b>				
Flat-tailed horned lizard	<i>Phrynosoma mcalli</i>	=	CSC	=
<b>Birds</b>				
Burrowing owl	<i>Athene cunicularia</i>		CSC	-
Ferruginous hawk	<i>Buteo regalis</i>		CSC	-
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	<u>E</u>	<u>T, P</u>	=
<b>Mammals</b>				
Western yellow bat	<i>Lasiurus xanthinus</i>	-	CSC	-

Source: Species were found in the California Department of Fish and Game CNDDDB for the Holtville West USGS 7.5-Minute Quadrangle (November 11, 2005) and could occur in the project vicinity due to their habitat requirements.

**Notes:**

**Federal Status:**

**E** Federally listed as endangered

**T** Federally listed as threatened

**C** Federal candidate for listing

**State Status:**

**E** State listed as endangered

**T** State listed as threatened

**CSC** California Department of Fish and Game species of concern

**P** California Department of Fish and Game protected species (fully)

**California Native Plant Society (CNPS)**

**List:**

**1A** Presumed extinct in California

**1B** Rare or endangered in California or elsewhere

**2** Rare or endangered in California, more common elsewhere

**3** Review list

**4** Watch list

### Plant Communities

The desert community at the site is composed largely of tamarisk with mesquite and suaeda. Tamarisk was found throughout the survey area, with a concentration in the southwestern portion. Mesquite trees were observed on the eastern side of the site, with a concentration of suaeda in the northern portion. Two types of saltbush (*Atriplex canescens* and *A. lentiformis*) mixed with broom baccharis (*Baccharis sarothroides*) and tamarisks were observed in a narrow strip immediately adjacent to the Alamo River (Tetra Tech 2005). Table 2 is a complete list of all plant species identified on-site.

The community type at the site is a Tamarisk-Mesquite-Suaeda series, with a relatively high density of tamarisk over the site. There was evidence that the site had been subjected to a fire at some time in the past. Trash had been dump along the perimeter of the site. A number of the mesquite trees/shrubs were observed to be parasitized by desert mistletoe (*Phoradendron californicum*), suggesting a reduction in plant vigor. As with many desert riparian areas, the invasive nonnative tamarisk has dominated the plant communities at the site (Tetra Tech 2005).

**Sensitive Plant Species.** Sand food (*Pholisma sonora*) is a parasitic plant found in sandy dune areas. It is classified as a List 1b plant by the California Native Plant Society but is not currently listed by the US Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG). This sensitive plant parasitizes *Eriogonum* sp., *Tiquilia* sp., *Ambrosia* sp., and

*Pulchea* sp. plants. None of these host plants were observed at the site, and in addition ~~where~~ ~~there~~ are no dune sand formations found at the site. As a result, this sensitive plant is not expected to be found at the site.

**Table 2**  
**Plant Species Recorded Within the Project Area**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Taxonomic Group</b>
Date palm*	<i>Phoenix dactylifera</i>	Palm family
California date palm	<i>Washingtonia filifera</i>	Palm family
Broom baccharis	<i>Baccharis sarothroides</i>	Aster family
Horseweed	<i>Conyza canadensis</i>	Aster family
Four-winged saltbrush	<i>Atriplex canescens</i>	Goosefoot family
Big saltbrush	<i>A. lentiformis</i>	Goosefoot family
Russian thistle*	<i>Salsola tragus</i>	Goosefoot family
Bush seepweed	<i>Suaeda moquinii</i>	Goosefoot family
Mesquite	<i>Prosopis glandulosa</i>	Legume family
Tamarisk*	<i>Tamarix ramosissima</i>	Tamarisk family
Desert mistletoe	<i>Phoradendron californicum</i>	Mistletoe family

\*Nonnative plant

Source: Tetra Tech 2005

### **Fauna Observed In Project Area Wildlife**

The project area was surveyed for general wildlife and sensitive animals and birds, ~~and~~; all observations were recorded. The following paragraphs describe the ~~animals and birds~~ wildlife encountered, as well as those species considered to potentially occur based on the presence of suitable habitat. A ~~a~~ determination of the suitability of the site to support sensitive species is also given.

***Amphibians.*** Colorado River toad (*Bufo alvarius*) is listed as a California state species of concern by the CDFG but is not federally listed by the USFWS. This special status toad is a nocturnal amphibian commonly associated with permanent streams and washes with creosote bush (*Larrea tridentata*) and mesquite tree habitat. The one amphibian observed at the site was most likely an American bullfrog (*Rana catesbeiana*) as the observation was made during the day. The site is a likely habitat for the Colorado River toad because there is permanent stream flow onsite.

***Reptiles.*** The flat-tailed lizard (*Phrynosoma mcallii*) is listed as a California state species of special concern by the CDFG but is not federally listed by the USFWS. Flat-tailed horned lizard is restricted to to habitat structures consisting of windblown sand. It is found only on dunes and sandy flats in the lower deserts, from the Coachella Valley south to the head of the Gulf of California and into extreme northeastern Baja and southeastern Arizona. The flat-tailed horned lizard is described as being found from below sea level up to around 600 feet elevation. There

are no windblown sand areas on the project site, so as a result, this lizard is not expected to be present. No reptiles were observed at the site during the reconnaissance, and no signs of reptiles were observed in the form of tracks at the site.

***Birds.*** The western burrowing owl (*Athene cunicularia*) is a California state species of special concern and is also identified as a bird species of conservation concern (USFWS 2002), indicating it is in need of conservation to avoid future federal listing. It is also protected by the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). This species is migratory in northern portions of its range, such as Canada, but is a permanent resident of central and southern California. It inhabits open dry grasslands, agricultural and range lands, desert, ponderosa, and pine habitats (CDFG 1995) and is also found in grass, forbs, and open shrub stages of pinyon-juniper and ponderosa pine habitats. Although the breeding season is believed to stretch from February through August (CDFG 1995), the peak in activity is from mid-April to mid-July (California Burrowing Owl Consortium [CBOC] 1993). Nesting takes place in the ground, often in former small mammal burrows. Burrowing owls feed primarily at dawn and dusk, although they can be active during the day, especially during the breeding season when they have young to feed. This species feeds mainly on insects but is also known to eat small mammals, reptiles, birds, and carrion (CDFG 1983). Western burrowing owl is declining in Imperial County and throughout its range, in part as a result of urban development and other physical disturbances to owl burrows (York et al. 2002; Trulio 1995). No burrowing owls or burrows were observed at the site during the reconnaissance survey, however. In addition, no California ground squirrels (*Spermophilus beecheyi*), whose burrows serve as nesting sites for burrowing owls, were observed at the site. more recently, IID staff observed an owl and an active owl burrow on the north portion of the site during a survey in 2005. As a result, the site is known to not be suitable habitat for burrowing owl nesting and may also serve as a forage area for any owls found in adjacent areas.

The Ferruginous hawk (*Buteo regalis*) is listed as a California state species of special concern ~~by the CDFG~~ and is also protected under the MBTA Migratory Bird Treaty Act of 1918. The range of the hawk is typically the plains and prairies in southwest Canada, but it winters in the southwestern United States and northern Mexico. These raptors were formerly more widespread in the southwestern United States due to habitat losses but have been reported as increased in population in California (Fagan 2005). The ferruginous hawk was not observed at the site. Based on the lack of roosting structures and nesting sites, either on the project footprint of in the adjacent buffer area, the site is not a likely area for nesting but may serve as a forage area for these raptors.

Yuma Clapper Rail (*Rallus longirostris yumanensis*) is a federally endangered and a California state Fully Protected and threatened species. They historically have been restricted to the region of the lower Colorado River, the Colorado River delta, and to appropriate habitats surrounding the Salton Sea and in the Whitewater River north of the Sea. Yuma clapper rails are found in marsh habitats of cattails (*Typha domingensis*) and bullwhip/California bulrush (*Scirpus californicus*). Common reed (*Phragmites communis*) is also used as habitat. Habitat breeding and foraging must not be too dry. Water depth appears to be an important habitat character. Threats and limiting factors include water diversions, salt cedar infestations, habitat manipulation for flood control, and chemical contamination especially anything that might threaten the water supply. Currently

there is little if any adequate habitat available in the ROI to sustain a viable population of this species. However, habitat may occur after the project is implemented and therefore, it is possible that over time this species may populate the area.

A number of other birds species which are not state or federal special status species were observed and/or heard at the site during the reconnaissance site visits. These birds are listed in the Flora and Fauna Compendium in Appendix C of the attached biological survey (Appendix B of this report). None of the birds are species listed in this appendix have legal status as designated species of concern to any regulatory agencies.

**Mammals.** Signs in the form of scat and tracks were observed at the site from coyote (*Canis latrans*), domestic dogs (*Canis lupus familiaris*), raccoon (*Procyon lotor*), and cottontail rabbits (*Sylvilagus audubonii*). These animals are common and are not subject to regulatory oversight. No special status mammals are expected to occur in the ROI.

### **Critical Habitat**

~~The project site is within known habitat for the state and federal listed as threatened desert tortoise.~~ No designated or proposed designated critical habitat has been identified at the project site.

### **Jurisdictional Waters**

The Alamo River is found on the northern side of the site. The US Army Corps of Engineers (ACOE) regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and nonwetland bodies of water that meet specific criteria. The ACOE regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or it may be indirect, through a nexus identified in the ACOE regulations. The Alamo River terminates in the Salton Sea to the north and is subject to ACOE jurisdiction. The CDFG defines a stream (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.”

Definable bed to bank plus signs of ordinary high water mark were observed at the AR 30 site. In the absence of information regarding the hydrology in the form of base flood elevations, on-site observations limit ordinary high water mark for ACOE jurisdiction to the boundaries of the flowing water of the Alamo River. No drift lines, sedimentation patterns, or flow lines from possible past flooding events were observed within the survey area. Definite bed to bank characteristics associated with the site as likely waters of the State and jurisdictional to the CDFG were observed as the southern boundary of the site in the form of an abrupt rise in the topography. The northern limit of jurisdictional waters of the state would most likely be the southern bank of the Alamo River that also serves as the limit of the site.

## **Regulatory Requirements**

### **Summary of Biological Resources and Habitat**

*Rare Plants.* The site is not likely habitat for sand food, a CNPS rare plant found in sandy dune soils.

*Sensitive Amphibians.* The site may serve as likely habitat for the Colorado River toad; however, surveys are not required for state Species of Special Concern. Prior to any earthwork or disturbances, a focused survey for this amphibian may be required.

*Sensitive Reptiles.* No suitable habitat exists in the project area to support resident sensitive reptile species. Some, although species, such as the California state listed flat-tailed horned lizard, may use this area for dispersal or foraging.

*Sensitive Birds.* The site is a potential foraging area for burrowing owls or ferruginous hawks that may be found in the area and may serve as potential habitat and foraging area for burrowing owls. Prior to any disturbances or earthwork activities at the site, a focused survey for burrowing owls and ferruginous hawks should be conducted to ensure that none have moved into the site.

*Sensitive Mammals.* No sensitive mammals are known to occur at the site. Although no western yellow bats were observed at the site during the reconnaissance, the site is likely habitat to support these sensitive mammals. Prior to any disturbances that may remove trees adjacent to the river and on-site, a bat survey should be done to determine if western yellow bats are present.

*Jurisdictional Waters.* Any project impacts likely to affect the site may require a streambed alteration agreement between the project proponent and the CDFG. For the streambed alteration agreement, an analysis of environmental impacts from the proposed project is required by CEQA. A formal delineation of waters of the state may also be required as part of the agreement. Mitigations and avoidance measures for impacts on jurisdictional waters include an assessment of impacts on burrowing owls possibly present at the site and any other sensitive animals.

The site may also be subject to Section 404 and 401 of the Clean Water Act. As a result, the proponent may should be required to negotiate with the ACOE and the California RWQCB for an individual Section 404 Waters of the U.S. permit and a Section 401 water quality certification/waiver, respectively. A formal delineation of waters of the US is not being ~~may be~~ required by the ACOE as part of this permitting.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

~~(a) Colorado River Toad and Western Yellow Bats. The subject site is suitable habitat for Colorado River toad and western yellow bats. The Construction of the proposed project could have a potentially significant impact on the habit of these species. Implementation of Mitigation Measures 1-1 and 1-2 would reduce this impact to a less than significant level.~~

~~**Mitigation Measure 1-1.** A qualified biologist would conduct a protocol survey for the Colorado River toad before any ground disturbing activities. The survey would be timed to maximize the probability of identifying Colorado River toads in this area. The survey would be conducted in accordance of the Declining Amphibian Task Force~~

~~Fieldwork Code of Practice (USFWS, undated) in order to prevent the spread of diseases and parasites.~~

~~**Mitigation Measure 1-2.** A qualified biologist would conduct a protocol survey for the western yellow bat before any ground-disturbing activities to determine if western yellow bats are present at the site or use the site as forage.~~

~~*Burrowing Owls and Ferruginous Hawks.* Although no burrowing owls or No ferruginous hawks were observed during the biological survey (November 2005) but burrowing owls have been sighted at the project area. Additional it is possible that such birds may have taken up residence at the site before ground-disturbing activities, proposed for spring 2007. Implementing Mitigation Measure 1-31 would reduce the impact on any new raptor burrows or nests to a less than significant level.~~

**Mitigation Measure 1-31.** ~~Preconstruction dawn or dusk surveys of the region of influence (ROI) would be conducted for birds prior to grubbing (clearing by digging up roots and stumps). This would consist of a survey one week before, and a second survey 48 hours before commencement of grubbing. In addition, a burrowing owl survey is required prior to construction. During grubbing, protocols include destroying any observed burrowing owl nests. If owls are found to have later taken up residence at the site, one-way exclusion doors would be installed. Burrowing owl surveys would be done according to CDFG and California Burrowing Owl Consortium (CBOC) guidelines (CDFG 1995; CBOC 1993) to verify the presence or absence of burrowing owls and to help identify and avoid occupied burrows within the ROI. These surveys are necessary to determine if other burrowing owls have begun using the area (project footprint plus a half-mile buffer) since the on-site survey was conducted in 2004. Burrowing owls may use a site for breeding, wintering, foraging, or migration stopovers, and occupancy of suitable burrowing owl habitat would be verified by detecting a burrowing owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance (CDFG 1995).~~

~~If any owls are sighted during these surveys or other reliable sources are observed, then burrow occupancy surveys (also based on CDFG 1995 and CBOC 1993 guidelines) would be initiated to help identify and avoid occupied burrows within the ROI. Avoidance and monitoring would be performed in consultation with the CDFG to reduce potential impacts. Minimization and avoidance measures would include reducing or eliminating project-related disturbance, such as ground-moving activities in active nesting territories, or within half a mile of the active nest during the nesting cycle (February 1 to August 31).~~

~~The subject site is also a suitable forage area for both burrowing owls and ferruginous hawks. The proposed project would reduce foraging areas for these birds, but the proposed project may improve prey abundance by increasing habitat quality and subsequent carrying capacity (the ability to support species). Therefore, the over all impact of the The project would be that it would have a less than significant impact on foraging areas for the burrowing owl and ferruginous hawks.~~

~~The long-term operation of the proposed project could have impacts on species in the project area due to the elevated selenium levels in Alamo River waters. Preliminary results for the existing two wetlands along the New River suggest relatively low risk of impacts from selenium contamination; however, concentrations of selenium in the Alamo River have tended to be higher than the New River. This potentially higher risk to wildlife has been taken into consideration in the design of the wetland. The proposed sedimentation basins are narrower and deeper than in the previous New River wetlands, and the emergent marsh beds have a lower plant-to-water ratio. Additionally, no dense planting of any trees~~

(willows and cottonwoods) is proposed. The lack of such trees is believed to decrease the attractiveness of the site to wildlife. These design features are expected make the wetlands less attractive to wildlife and reduce any impacts to less than significant levels. Another design feature is that the ratio of sediment basins to treatment (emergent marsh habitat) wetlands is approximately 2/3 to 1/3 with the intent to sequester selenium attached to sediment particles in the deep, anoxic waters of the sediment basins, thus removing the amount of selenium entering the marsh habitat.

The proposed periodic sediment removal activities could have the potential to disturb nesting birds at the site. Implementing Mitigation Measure 1-2 would reduce the impact of sediment removal activities on any nesting birds at the site to a less than significant level.

**Mitigation Measure 1-42.** Sedimentation removal activities at the site shall occur outside of the nesting season (February through September) to avoid direct (visual, noise, air quality) and indirect (temporary suspension of water flow) impacts to any nesting birds.

- (b) The proposed project would result in minor, temporary impacts on riparian habitat along the southern shore of the Alamo River. The only portion of the project that would affect the riparian habitat would be the installation of the proposed inlets and outlets for the proposed wetland. The proposed creation of wetlands would result in a long-term expansion of the riparian zone to include an area lining the edges of the proposed wetlands. The project would result in short-term less than significant negative impacts on riparian habitat and would provide an opportunity for expansion of riparian habitat over existing levels. The project would not affect any other sensitive natural communities that have been identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.
- (c) No wetlands have been identified on the project site, and none would be affected by the proposed project. Reclamation consulted with ACOE regarding whether or not a wetland delineation would be required at the site. ACOE did not require a wetland delineation for approval of the 404 Waters of the U.S. permit for this project.

The project ~~would not~~ is not expected to substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, nor ~~would it~~ is it expected to impede the use of native wildlife nursery sites; however, the biological reconnaissance survey (November 2005) was not conducted during the breeding season and is insufficient to make a determination as to the use of the site by bird species. The addition of Mitigation Measure 1-3 along with moving wetland construction outside of the nesting season (proposed October/November start time frame), would reduce the impact of project construction on bird species to a less than significant level.

**Mitigation Measure 1-3.** Reclamation shall conduct a nesting survey at the site during the breeding season (between February and September) and preferably during the months of May or June. Results of the survey shall be submitted to the USFWS and the CDFG for review prior to the commencement of construction activities. If necessary, a pre-construction bird survey will be performed close to the start of construction to ensure that active nests and/or chicks are not within the construction area.

Development of the site as a wetland would aid in the movement of migratory birds by providing an additional rest stop along the Pacific Flyway.

- (d) The proposed project would not conflict with any local policies or ordinances protecting biological resources.
- (e) The proposed project would not conflict with the provisions of any adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

## 2.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

### 2.5.1 Environmental Setting

Cultural Resources. The area of potential effect (APE) for cultural resources includes the approximately 40 acres of agricultural field within which the wetlands will be developed, as well as a one-mile buffer area around the APE. This area is within the ethnohistoric territory of the Kumeyaay, a term that encompasses the Diegueño groups Ipai and Tipai or Kamia. The Ipai occupied area north of the international border to the west of the APE while the Tipai inhabited areas along the Baja California Sur coastline and inland areas to the east. The Kamia have been identified within the floodplains of the New and Alamo River floodplains, directly associated with the APE. Boundaries between the three groups, however, were somewhat fluid and dependent on current conditions. The report, *Class I Cultural Resources Inventory of Wetlands and Sedimentation Basin Sites, New and Alamo Rivers Project* (Tetra Tech 2003), provides more detail regarding these Native American groups as well as the prehistoric and historic contexts of the project region.

When environmental conditions warranted it, the Kamia would practice agriculture along the floodplains to supplement their subsistence base. “Agriculture depended on the inundation of the land at the time of the high water of the Colorado River in May and June. If flood flows were insufficient, they farmed other locations or created more favorable conditions by damming small soughs” (Tetra Tech 2003: 4-18). Planting areas are known to have existed at the following locations: Xachupai, historically known as “Indian Wells,” on the west bank of the New River and about six miles north of the Mexican border; Wikwinil, along the New River near Xachupai at Blue Lake; Saxnuwai, extending from present-day Brawley to at least Holtville along the Alamo River; and Xatopet in Baja California Sur along the Alamo River before it turns north. During the 1800s, with the combination of Euro-American encroachment in the Imperial Valley and droughts, the remaining Kamia eventually moved eastward out of the valley, settling among the southern riverine groups.

Bureau of Reclamation archaeologist Laureen Perry conducted a cultural resources inventory and survey within the APE or the buffer area. She identified no historic properties, as defined by CEQA and 36 CFR 800, the regulations for implementing the National Historic Preservation Act (NHPA). The modern Terrace Park Cemetery is directly south of the project area on a higher terrace but would not be affected by the proposed project. No traditional cultural properties (TCPs) were identified by the California Native American Heritage Commission (NAHC) or local Native Americans.

Paleontological Resources. Paleontological resources are fossilized remains of other than human organisms and early hominids that have been incorporated into certain geologic formations. The

paleontological sensitivity and likelihood of impacts on paleontological resources can be assessed by identifying the geologic formations present within the project area. Geologic formations within the region are generally formed of Pliocene and Pleistocene sediments and contain a variety of vertebrate and invertebrate remains. There are several formations within the Salton Basin important to the regional paleontology: the Palm Springs Formation, Borrego Formation, Brawley Formation, and Lake Cahuilla Deposits. A more detailed discussion of the paleontological resources of the region is provided in the *Draft Salton Sea Restoration EIS/EIR* (Tetra Tech 2000).

It is unlikely the project would encounter or affect any paleontological resources or unique geological features. The proposed project is on an old floodplain of the Alamo River where there is a thick layer of predominantly Holocene alluvium where fossils do not occur. There is also a notable absence of previously recorded paleontological resources in the project area.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project?				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a. No historical resources have been recorded in or near the APE, so no historical resources would be affected by the proposed project.				
b. No archaeological resources have been recorded in or near the APE, so no archaeological resources would be affected by the proposed project.				
c. No unique geologic features have been identified within the project area, and the project would not affect any paleontological resources.				
d. The project would take place in an active riverine environment, and no human remains would be encountered or disturbed.				

## 2.6 GEOLOGY AND SOILS

### 2.6.1 Environmental Setting

**Soils.** Soils at the project site are composed mostly of the Meloland-Vint-Indio Soil Group, with the southwest portion of the site being of the Imperial-Glenbar-Gilman Soil Group.

The Meloland-Vint-Indio Soil Group is nearly level, well-drained fine sand, loamy very fine sand, fine sandy loam, very fine sandy loam, loam, and silt loam. This map unit consists of very deep, calcareous soils formed in alluvial deposits and in eolian material. Natural soil drainage has been altered by the seepage of water from irrigation canals and by extensive irrigation. Slopes are less than two percent. Elevation is about 230 feet below to 30 feet above mean sea level. The map unit is about 30 percent Meloland soils, 25 percent Vint soils, 20 percent Indio soils, and 25 percent minor soils (RWQCB 2001):

- Meloland soils have a light brown, very fine sandy loam or fine sand surface layer. Underlying this is stratified very pale brown loamy fine sand and silt loam to a depth of about two feet. Below this is pink silty clay.
- Vint soils have a light brown loamy very fine sand, fine sandy loam, or very fine sandy loam surface layer. Underlying this is stratified pink and light brown loamy fine sand.
- Indio soils have a pinkish gray loam or very fine sandy loam surface layer. This is underlain by stratified very pale brown and pink layers of silt loam and loamy very fine sand.
- Minor soils are the somewhat excessively well-drained Holtville, Antho, and Glenbar.

The Imperial-Holtville-Glenbar soil association is nearly level, moderately well-drained and well-drained silty clay, silty clay loam, and clay loam. This map unit consists of very deep calcareous soils formed in alluvial deposits throughout the lake basin. Natural drainage of soils has been altered by the seepage of water from irrigation canals and by extensive irrigation. Slopes are less than two percent. Elevation is about 230 feet below to 30 feet above MSL. The unit is about 40 percent Imperial soils, 20 percent Holtville soils, 20 percent Glenbar soils, and 20 percent minor soils (RWQCB 2001):

- Imperial soils are moderately well drained. They have a pinkish gray silty clay surface layer. Underlying this layer is pinkish gray and light brown silty clay.
- Holtville soils are well drained. They have light brown silty clay loam or silty clay layers about two feet thick. Underlying these are stratified very pale brown silt loam and loamy very fine sand.
- Glenbar soils are well drained. They have a pinkish gray clay loam or silty clay loam surface layer. Underlying this is stratified light brown clay loam and silty clay loam.
- Minor soils are the well-drained Meloland, Indio, and Vint soils, and the somewhat excessively drained Rositas soils.

**Seismicity.** The project site is in the Salton Trough, a seismically active rift valley extending northwestward from the Gulf of California into southern California. Topography across the Salton Trough is relatively flat (USGS 2004). The Salton Trough is characterized by northwest-southeast trending transform fault zones and several crustal rift areas between these fault zones. This region has undergone subsidence, uplift, tilting, folding, and crustal spreading over many millions of years and is considered to be one of the most seismically active areas in the world. The area regularly experiences perceptible earthquakes, both large-scale seismic events and low magnitude swarms (US Department of the Interior and the State of California 1974).

The project site is approximately five miles west of the Boundary Fault, less than five miles east of the Imperial Fault, and approximately 20 miles west of the San Andreas Fault (Imperial County 1993). Potential geologic hazards associated with the Salton Trough include seismic hazards, such as ground rupture, ground acceleration, seiches, liquefaction, and dynamic settlement.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project?				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

available for the disposal of waste water?

a-e. The nearest known earthquake fault is more than three miles away. Fault rupture at the site would not occur. Strong seismic ground shaking could occur in the event of an earthquake, but this risk is common to many areas of the region and California. Seismic-related ground failure and liquefaction are not likely to occur because the soils at the project site are well drained and no structures or human habitation of the site is proposed. There is no risk of landslides at the site because the area is flat. There is little risk of soil erosion because the area is flat and receives minimal precipitation. The project is not on a geologic unit that is either unstable or likely to become unstable as a result of the project. Expansive soils have not been identified at the project site. No septic or alternative waste disposal systems are proposed for the project site.

**2.7 HAZARDS AND HAZARDOUS MATERIALS**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |    |   |                          |                          |                          |                                     |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| f) | For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-d. Because no hazardous sites have been identified in the project area, the proposed action would not likely affect any contaminated soils. Implementing the proposed action could result in potential soil and groundwater contamination from diesel fuel and lubricants that would be present on the project site in association with construction equipment and vehicles. Project plans would incorporate all spill prevention and leak containment best management practices to reduce this potential risk to a less than significant level.

The sediments from the existing pilot wetlands sites on the New River are not toxic now, therefore, the sediment from the Holtville site are not expected to be toxic. The site contains enough additional land that storage of sediments would be contained onsite. Ongoing water and sediment monitoring at the site will determine if sediment are trending towards toxic levels. If this trend is observed, then the wetland will be deactivated.

e, f. The project would not result in any hazard to people residing or working in the project area because the project does not involve the use of hazardous materials beyond those related to standard construction activities (fuel, oil, etc.).

g. The proposed project would not affect implementation of any emergency plans.

h. The proposed project is not in an area with a high fire potential and would not increase fire potential. No inhabitable structures would be constructed as part of the project.

## 2.8 HYDROLOGY AND WATER QUALITY

### 2.8.1 Environmental Setting

The project location is alongside the Alamo River, which exists in a desert environment, and receives nearly all of its waters from agricultural runoff and treated municipal wastewater. The Alamo River is considered to be highly polluted as it contains high level of selenium, suspended solids, and organochlorine pesticides. Selenium in the Alamo River (approximately 7-8 parts per billion) originates in Colorado River waters, which is used to irrigate agricultural fields in the Imperial Valley. Irrigation waters evaporate as they flow to the agricultural drains and finally the Alamo River, concentrating any pollutants dissolved within them, including selenium. Planned water conservation efforts in the Imperial Valley are believed to result in increased future levels of selenium in the river. The Alamo River also contains high levels of organochlorine pesticides that affect local fish and wildlife. Alamo River provides approximately 46% of inflows into the Salton Sea (CRWQCB 1991).

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |    |   |                          |                          |                          |                                     |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| i) | Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) | Inundation by seiche, tsunami, or mudflow?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a and b. The project would not violate any water quality standards or waste discharge requirements.

c. The project would alter drainage patterns but would not result in substantial siltation or erosion either on-site or off-site. The project would include sedimentation basins that would decrease siltation in the Alamo River.

d. The project would be surrounded by berms on the landward sides, altering local drainage patterns. With an average annual precipitation in the project area of 2.7 inches per year, even the largest storms have little effect on water levels in the Alamo River, which normally receives one hundred percent of its stream flow from irrigation drainage and wastewater effluent. Additionally, there are several feet of freeboard on the banks of the river at the project site, allowing for substantial rises in water level without the adjacent land flooding. There is no record of flooding at the project site (Charlton 2005).

e. The project would not create or contribute to runoff. Very little precipitation occurs in the area, and any rain falling at the project site would enter the wetland system and be returned to the Alamo River.

f. The project would not otherwise degrade water quality. The project would improve water quality in the Alamo River.

g. No housing is proposed as part of the project.

h. The project would place berms in a designated 100-year flood hazard area, but there is no recorded history of flooding and flooding is unlikely at the site due to reasons described above in (d). The project would not place structures in a 100-year flood hazard area that would impede or redirect flood flows.

i. The project is not downstream of any levee or dam.

j. There is no risk of inundation of the site by landslide, seiche, tsunami, or mudflow because the area is generally flat and there are no nearby large bodies of water (the Salton Sea is 27 miles away).

## 2.9 LAND USE AND PLANNING

### 2.9.1 Environmental Setting

The project site is an unincorporated area of Imperial County, but this area is planned to be annexed by the City of Holtville in 2006 (Peacher 2005). The site is largely owned by the IID, with smaller portions privately owned. Land use in this area is guided by the Imperial County General Plan and is zoned A2U, General Agriculture, and A1U, Limited Agriculture.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>a. The proposed project would not be within an established community and would not divide any community.</p> <p>b. The proposed project would not conflict with applicable plans, policies, or regulations.</p> <p>c. The project would not conflict with the provisions of any adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.</p>				

**2.10 MINERAL RESOURCES**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>a and b. The proposed project would not deplete or restrict access to known mineral resources of value to the region or residents of the state or to a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.</p>				

**2.11 NOISE RESOURCES**

### 2.11.1 Environmental Setting

Vehicles along the nearby Ninth Street are the primary source of noise in the project area. Sensitive receptors are limited to the residences adjacent to the northwest side of the project area, across the Alamo River.

Would the project result in:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. Construction activities would generate moderate amounts of noise for approximately two months. These noise levels would not exceed standards established in the local general plan or noise ordinance or the applicable standards of any other agencies.

b. The project would not result in groundborne vibrations or noise perceptible at or to the nearest sensitive receptors.

c. No permanent increase in ambient noise levels would result from the proposed project.

d. There would be a moderate increase in ambient noise during construction of the wetland for approximately two months, but construction would be limited to 7 AM until 5 PM, resulting in less than significant impacts.

e. The project is not within an airport land use plan, nor is it within two miles of a public airport or public use airport.

f. The project is not within the vicinity of any private airstrip.

## 2.12 POPULATION AND HOUSING

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. The proposed project would not affect the regional population either by inducing population growth or by substantially altering the distribution of the population.

b. The proposed project would not displace existing housing.

c. The proposed project would not displace people.

## 2.13 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-e. The proposed project would not increase demand for public services.

## 2.14 RECREATION

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. The project would have no impact on recreational resources in the area.

b. The project would include a public use trail atop of berms, the construction of which would not have an adverse physical effect on the environment.

## 2.15 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion/management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Result in inadequate parking capacity?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-b. The project would generate temporary construction traffic. The increase would not be substantial or affect level of service standards for any designated roads or highways.

c. The proposed project would not affect air traffic since no structure taller than the berms is proposed.

d. The project does not involve alterations to any transportation features, nor would it place any vehicles or equipment within transportation routes.

e-g. The project would not affect emergency access or parking capacity and would not conflict with any adopted policies, plans, or programs supporting alternative transportation.

## 2.16 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-g. Implementing this project would not increase the demand for any utilities or services.

**2.17 MANDATORY FINDINGS OF SIGNIFICANCE**

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major period of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. The project has the potential to increase the exposure of local wildlife to the high levels of selenium present in Alamo River waters. The monitoring plan for the site that covers long term monitoring of water, sediment and plant tissue for selenium levels would include trigger points for wildlife tissue sampling. If wildlife tissue selenium levels were to approach unhealthy levels, the Task Force would consider options for altering or terminating the wetland operations. The monitoring plan would be submitted to and reviewed by the Task Force members, including the USFWS. This approach would ensure that the project would not have an adverse effect on wildlife in the project area. The project would not affect any important examples of any major period of California history or prehistory.

b. No substantial or long-term adverse impacts have been identified for this project. No current or future projects have been identified for the project area. No substantial adverse environmental impacts would result from the combination of effects from the proposed project and other cumulative projects.

c. The project would not have any environmental effects that would cause substantial adverse impacts on human beings.



## SECTION 3

### REFERENCES

---

- CBOC (California Burrowing Owl Consortium). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines, April 1993. Internet Web site: [http://www.dfg.ca.gov/hcpb/species/stds\\_gdl/bird\\_sg/boconsortium.pdf](http://www.dfg.ca.gov/hcpb/species/stds_gdl/bird_sg/boconsortium.pdf). Accessed on December 1, 2005.
- CDFG (California Department of Fish and Game). 1983. California's Wildlife, Birds, Burrowing Owl. California Wildlife Habitat Relationships System. Internet Web site: <http://www.dfg.ca.gov/whdab/B269.html>. Accessed on February 09, 2004.
- \_\_\_\_\_. 1995. Staff Report on Burrowing Owl Mitigation. October 17, 1995. Internet Web site: [http://www.dfg.ca.gov/hcpb/species/stds\\_gdl/bird\\_sg/burowlmit.pdf](http://www.dfg.ca.gov/hcpb/species/stds_gdl/bird_sg/burowlmit.pdf). Accessed on April 27, 2005.
- CRWQCB (California Regional Water Quality Control Board, Colorado River Basin, Region 7). 1991. Issue Paper on Salton Sea Water Quality, Prepared by the Regional Board Staff for the November 20, 1991 Public Workshop. Internet website: <http://www.sci.sdsu.edu/salton/SaltonSeaWaterQuality.htm>. Accessed December 14, 2005.
- Charlton, Steve. 2005. Imperial Irrigation District. Personal communication with Andrew Gentile, Tetra Tech, Inc. August 17, 2005.
- Fagan, D. 2005. Ferruginous hawk (*Buteo regalis*). <http://www.desertusa.com>
- Imperial County. 1993. County of Imperial General Plan.
- Peacher, Gerald. 2005. Public Works Manager, City of Holtville. Personal communication with Andrew Gentile, Tetra Tech, Inc. June 23, 2005.
- \_\_\_\_\_. 2001. California Environmental Protection Agency, Regional Water Quality Control Board, Colorado River Basin. Sedimentation/Siltation Total Maximum Daily Load for the Alamo River. Draft Report. April 4, 2001.

- RWQCB (Regional Water Quality Control Board). 2003. Colorado River Basin Regional Water Quality Control Board. Water Quality Control Plan, Colorado River Basin – Region 7.
- Schoenherr, Allan A. 1992. A Natural History of California. Berkeley: University of California Press.
- Tetra Tech, Inc. 2000. Draft Salton Sea Restoration Project Environmental Impact Statement/Environmental Impact Report. January 2000.
- \_\_\_\_\_. 2003. Class I Cultural Resources Inventory Wetlands and Sedimentation Basin Sites, New and Alamo Rivers Project, Imperial County, California – Final. Written by Kevin T. Doyle, Jay VonWerlhof, and Fred E. Budinger, Jr. August 2003.
- \_\_\_\_\_. 2005. Biological Reconnaissance of Alamo River AR30 Holtville, Imperial County, California. November 2005.
- Trulio, L. A. 1995. “Passive Relocation—A Method to Preserve Burrowing Owls on Disturbed Sites. Journal of Field Ornithology,” 66 (1): 99-196. Winter 1995.
- US Department of Agriculture. 1981. Soil Survey of Imperial County California Imperial Valley Area. United States Department of Agriculture in cooperation with the University of California Agricultural Experiment Station and Imperial Irrigation District.
- US Department of the Interior and the State of California. 1974. Draft Environmental Impact Statement, Proposed Salton Sea Project, Imperial and Riverside Counties, California. May 1974.
- USGS (US Geological Survey). 2005. Note 17. Generalized Geologic Map of California. Internet Web site: [www.consrv.ca.gov/CGS/information/publications/cgs\\_notes/note\\_17/note\\_17.pdf](http://www.consrv.ca.gov/CGS/information/publications/cgs_notes/note_17/note_17.pdf). Accessed on December 6, 2005.
- USFWS (US Fish and Wildlife Service). 2002. Birds of Conservation Concern 2002 List.
- \_\_\_\_\_. 2005. Species Within the Jurisdiction of the Carlsbad Fish and Wildlife Office. Internet Web site: <http://www.fws.gov/carlsbad/Rules/BCC/CFWO%20Birds%20Concern%20Carlsbad%20Master%20List.pdf>. Accessed on December 1, 2005.
- \_\_\_\_\_. Undated. The Declining Amphibian Task Force Fieldwork Code of Practice. Internet Web site: <http://www.fws.gov/ventura/es/protocols/dafta.pdf>. Accessed on December 1, 2005.
- York, M. M., D. K. Rosenberg, and K. K. Sturm. 2002. “Diet and Food-Niche Breadth of Burrowing Owls (*Athene cunicularia*) in the Imperial Valley, California.” Western North American Naturalist 62 (3): 280-287. July 2002.

# SECTION 4

## LIST OF PREPARERS

---

### Tetra Tech, Inc.

#### **Andrew Gentile**

MS, Environmental Management

BS, Biochemistry

Years of Experience: 5

#### **Derek Holmgren**

MPA, Environmental Policy and Natural Resources Management

MSES, Water Resources Specialization

BS, Environmental Science

BA, International Studies

Years of Experience: 8

#### **Stephanie Pacheco**

MS, Soil Science

BS, Environmental Resources in Agriculture

Years of Experience: 15

#### **Ann Zoidis**

M.S., Physiology and Behavioral Biology

B.A., Geology

Years of Experience: 17

#### **Jeanette Weisman**

BS, Zoology

Years of Experience: 6

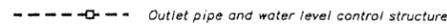
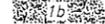
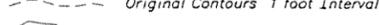
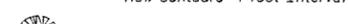
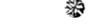
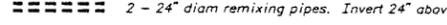


---

---

**APPENDIX A  
TECHNICAL DRAWINGS**

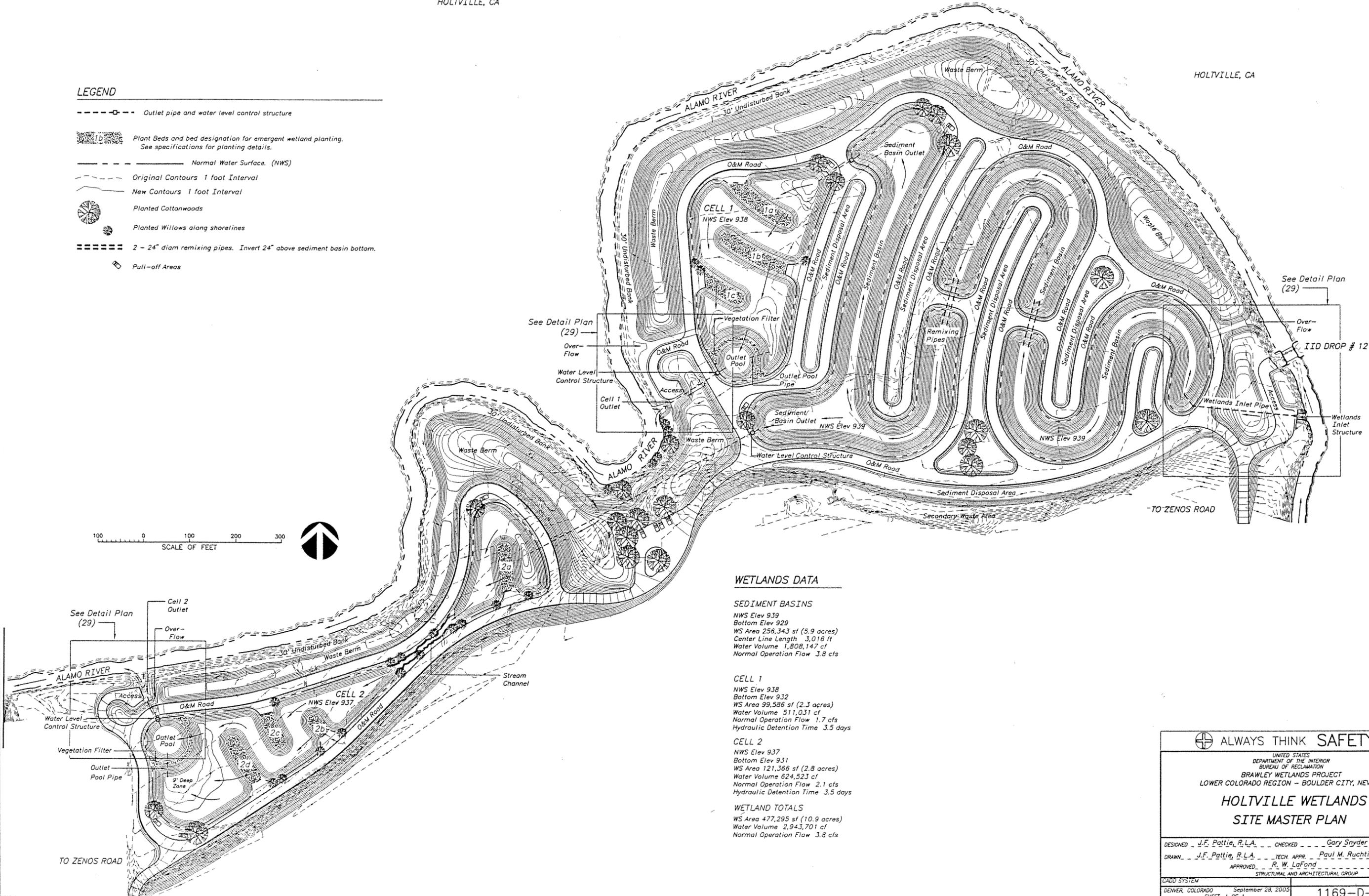
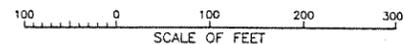
LEGEND

-  Outlet pipe and water level control structure
-  Plant Beds and bed designation for emergent wetland planting. See specifications for planting details.
-  Normal Water Surface. (NWS)
-  Original Contours 1 foot Interval
-  New Contours 1 foot Interval
-  Planted Cottonwoods
-  Planted Willows along shorelines
-  2 - 24" diam remixing pipes. Invert 24" above sediment basin bottom.
-  Pull-off Areas

Highway 115

B

A



WETLANDS DATA

SEDIMENT BASINS

NWS Elev 939  
 Bottom Elev 929  
 WS Area 256,343 sf (5.9 acres)  
 Center Line Length 3,016 ft  
 Water Volume 1,808,147 cf  
 Normal Operation Flow 3.8 cfs

CELL 1

NWS Elev 938  
 Bottom Elev 932  
 WS Area 99,586 sf (2.3 acres)  
 Water Volume 511,031 cf  
 Normal Operation Flow 1.7 cfs  
 Hydraulic Detention Time 3.5 days

CELL 2

NWS Elev 937  
 Bottom Elev 931  
 WS Area 121,366 sf (2.8 acres)  
 Water Volume 624,523 cf  
 Normal Operation Flow 2.1 cfs  
 Hydraulic Detention Time 3.5 days

WETLAND TOTALS

WS Area 477,295 sf (10.9 acres)  
 Water Volume 2,943,701 cf  
 Normal Operation Flow 3.8 cfs

ALWAYS THINK SAFETY

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF RECLAMATION  
 BRAWLEY WETLANDS PROJECT  
 LOWER COLORADO REGION - BOULDER CITY, NEVADA

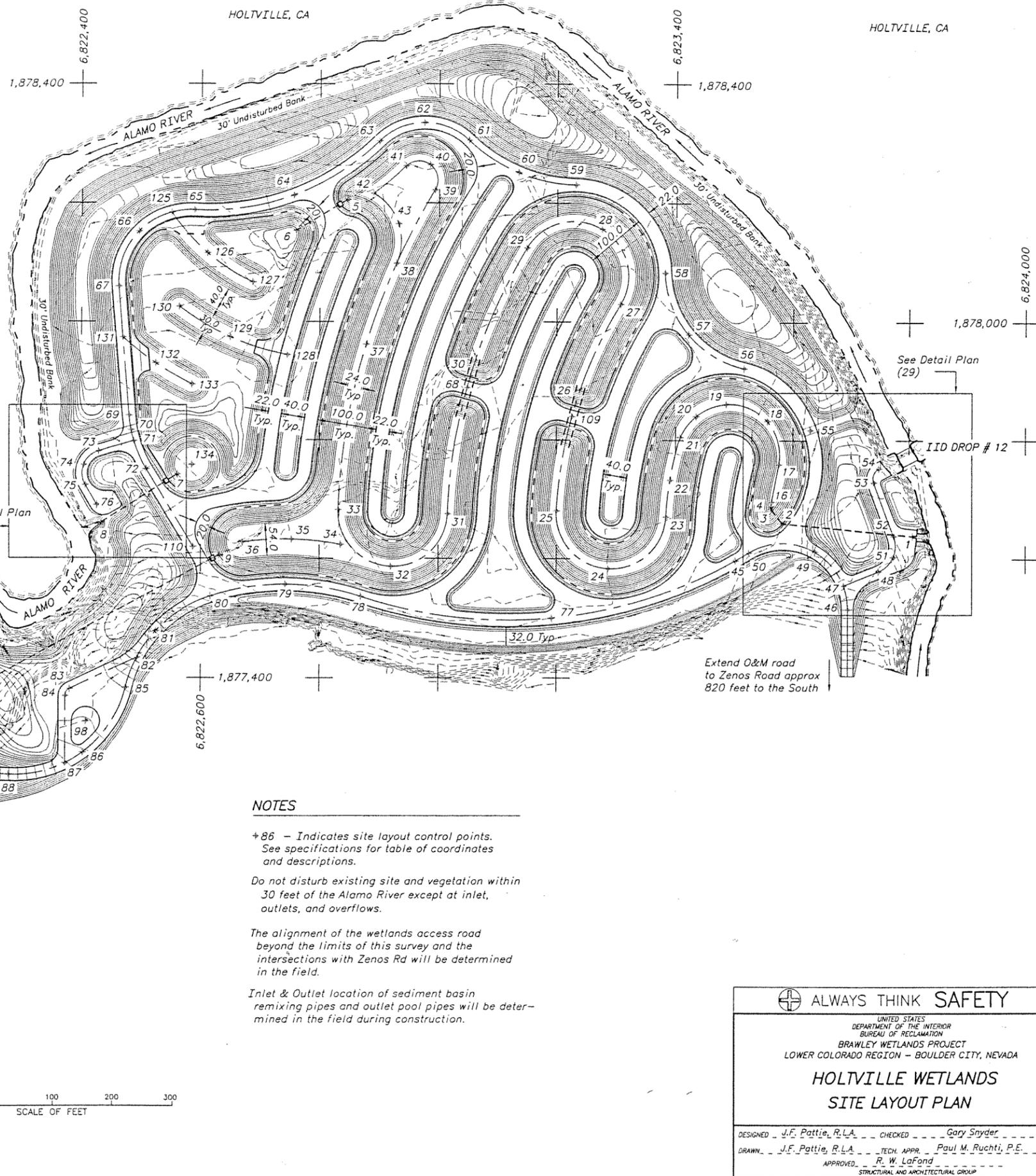
**HOLTVILLE WETLANDS  
 SITE MASTER PLAN**

DESIGNED - J.F. Pattie, R.L.A. CHECKED - Gary Snyder  
 DRAWN - J.F. Pattie, R.L.A. TECH. APPR. - Paul M. Ruchti, P.E.  
 APPROVED - R. W. LaFond  
 STRUCTURAL AND ARCHITECTURAL GROUP

LA00 SYSTEM  
 DENVER, COLORADO September 28, 2005  
 SHEET 1 OF 1 1169-D-26

HOLTVILLE, CA

HOLTVILLE, CA



Highway 115

6,821,000

1,877,200

See Detail Plan (29)

6,821,600

1,877,600

1,877,800

6,822,200

See Detail Plan (29)

1,877,400

6,822,600

6,823,400

1,878,400

1,878,000

6,824,000

See Detail Plan (29)

IID DROP # 12

Extend O&M road to Zenos Road approx 820 feet to the South

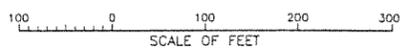
NOTES

+86 - Indicates site layout control points. See specifications for table of coordinates and descriptions.

Do not disturb existing site and vegetation within 30 feet of the Alamo River except at inlet, outlets, and overflows.

The alignment of the wetlands access road beyond the limits of this survey and the intersections with Zenos Rd will be determined in the field.

Inlet & Outlet location of sediment basin remixing pipes and outlet pool pipes will be determined in the field during construction.



Extend O&M road to Zenos Road approx 485 feet to the South

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION BRAWLEY WETLANDS PROJECT LOWER COLORADO REGION - BOULDER CITY, NEVADA

HOLTVILLE WETLANDS SITE LAYOUT PLAN

DESIGNED - J.F. Pattie, R.L.A. CHECKED - Gary Snyder  
 DRAWN - J.F. Pattie, R.L.A. TECH. APPR. - Paul M. Ruchti, P.E.  
 APPROVED - R. W. LaFond  
 STRUCTURAL AND ARCHITECTURAL GROUP

CADD SYSTEM DENVER, COLORADO September 28, 2005 SHEET 1 OF 1 1169-D-27

AutoCAD Rev. 15.05  
 CAD FILENAME  
 SITE LAYOUT PLAN.DWG  
 DATE AND TIME PLOTTED  
 SEPTEMBER 6, 2005 15:  
 PLOTTED BY  
 PHILIP

NOTES

- 941.2 Indicates elevation of finish grade surface.
- - - Original Contours 1 foot Interval
- New Contours 1 foot Interval

Survey data by Davey-Cairo Engineering, Inc. April 14, 2005.

Elevation data given on the site survey used for this design does not match the elevations shown on as built drawings provided by the Imperial Irrigation District (IID) for Drop #12. Due to this discrepancy the elevation datum to be used for construction shall be the top of the existing drop structure walls as shown on the site survey and on these drawings.

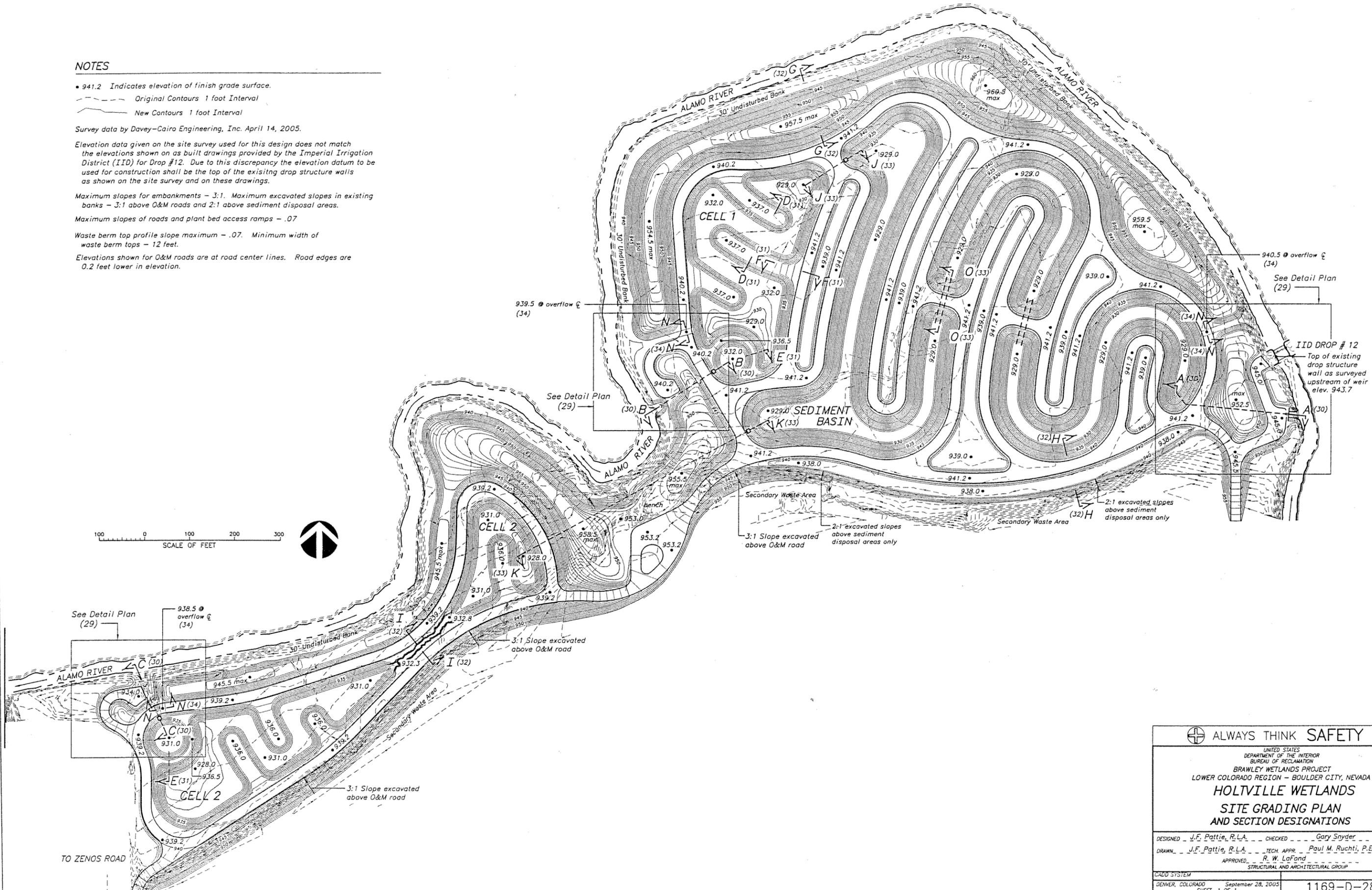
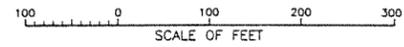
Maximum slopes for embankments - 3:1. Maximum excavated slopes in existing banks - 3:1 above O&M roads and 2:1 above sediment disposal areas.

Maximum slopes of roads and plant bed access ramps - .07

Waste berm top profile slope maximum - .07. Minimum width of waste berm tops - 12 feet.

Elevations shown for O&M roads are at road center lines. Road edges are 0.2 feet lower in elevation.

Highway 115



See Detail Plan (29)

938.5 overflow (34)

ALAMO RIVER

945.5 max

CELL 2

931.0

3:1 Slope excavated above O&M road

3:1 Slope excavated above O&M road

3:1 Slope excavated above O&M road

2:1 excavated slopes above sediment disposal areas only

2:1 excavated slopes above sediment disposal areas only

940.5 overflow (34)

See Detail Plan (29)

IID DROP #12

Top of existing drop structure wall as surveyed upstream of weir elev. 943.7

ALWAYS THINK SAFETY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
BRAWLEY WETLANDS PROJECT  
LOWER COLORADO REGION - BOULDER CITY, NEVADA  
**HOLTVILLE WETLANDS**  
**SITE GRADING PLAN**  
**AND SECTION DESIGNATIONS**

DESIGNED - J.F. Pattie, R.L.A. CHECKED - Gary Snyder

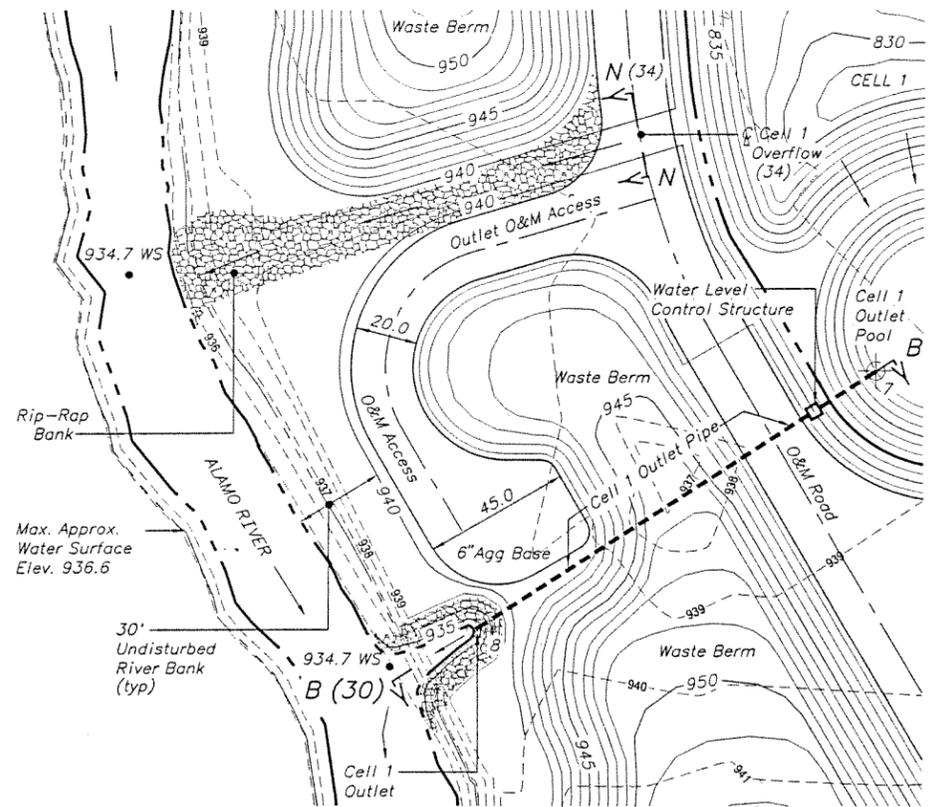
DRAWN - J.F. Pattie, R.L.A. TECH. APPR. - Paul M. Ruchti, P.E.

APPROVED - R. W. LaFond

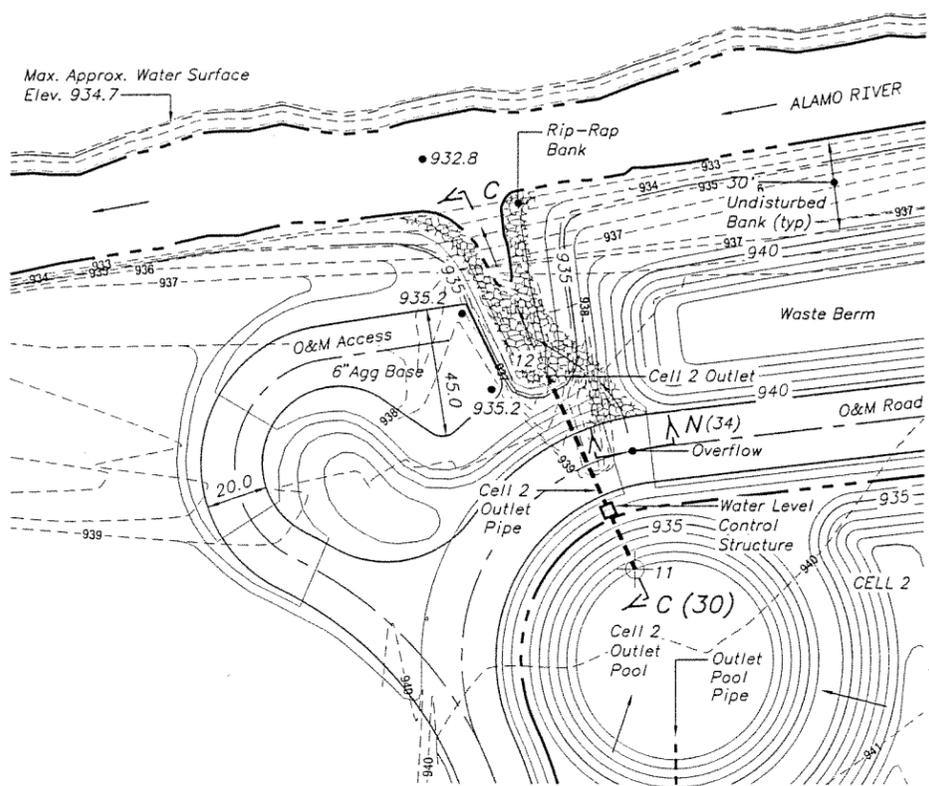
STRUCTURAL AND ARCHITECTURAL GROUP

CADD SYSTEM DENVER, COLORADO September 28, 2005 SHEET 1 OF 1 1169-D-28

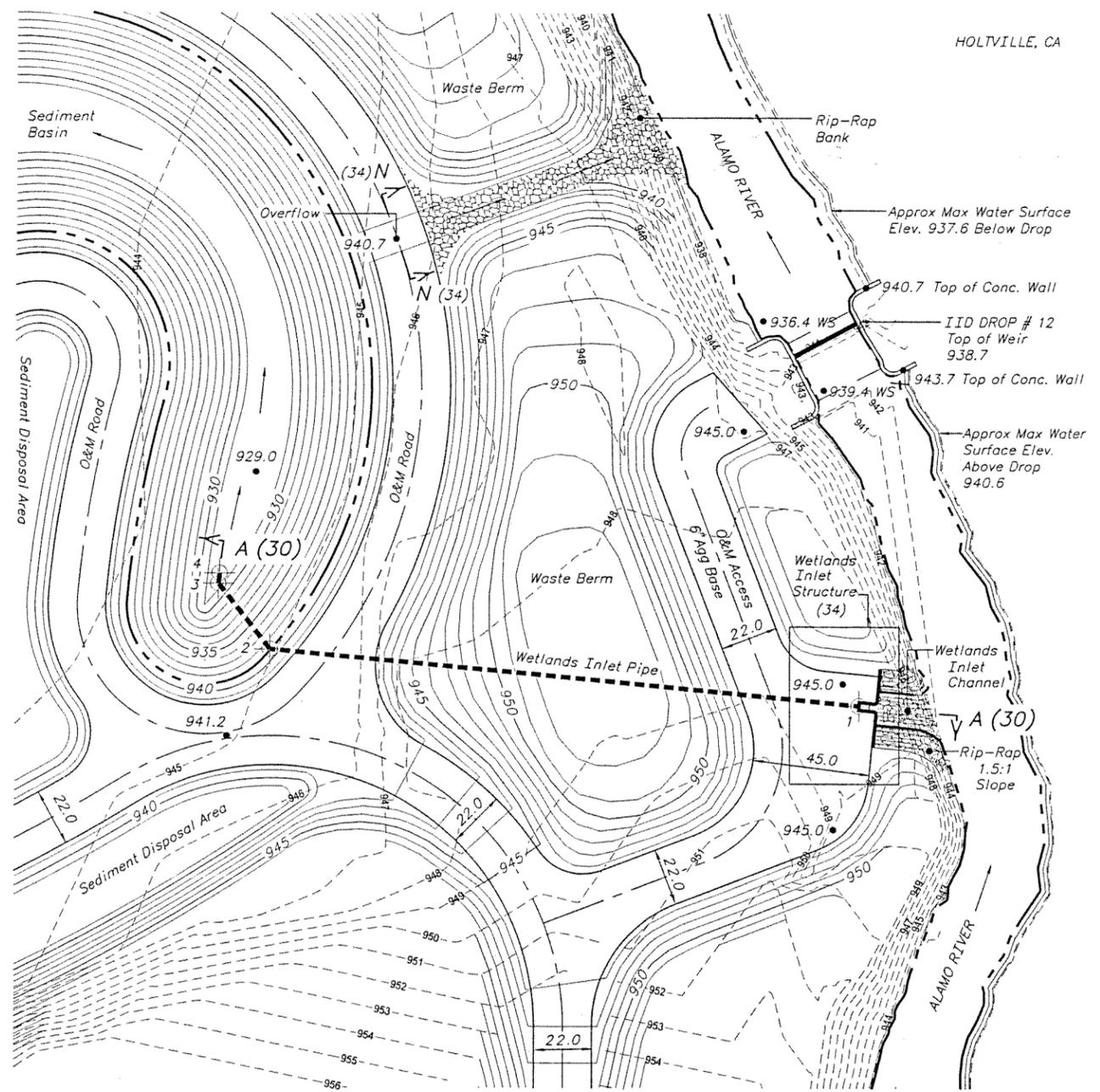
AutoCAD Rev. 16.0b  
 S&W FILENAME PLANNING  
 DATE AND TIME PLOTTED:  
 AUGUST 22, 2005 09:15  
 PLOTTED BY  
 JPM/HE



DETAIL PLAN (27,28) Holtville Wetlands Cell 1 Outlet Area



DETAIL PLAN (27,28) Holtville Wetlands Cell 2 Outlet Area



DETAIL PLAN (27,28) Holtville Wetlands Wetlands Inlet Area



SCALE OF FEET  
0 30 60 90

NOTES

- 932.8 WS Indicates elevation of Alamo River water surface at time of site topographic survey.
- 932.8 Indicates spot elevation
- Approximate Alamo River maximum water surface line.
- - - Alamo River water surface elevation line at time of site survey.
- ⊕ 12 Indicates horizontal control point. See dwg (27) and specifications.

ALWAYS THINK SAFETY

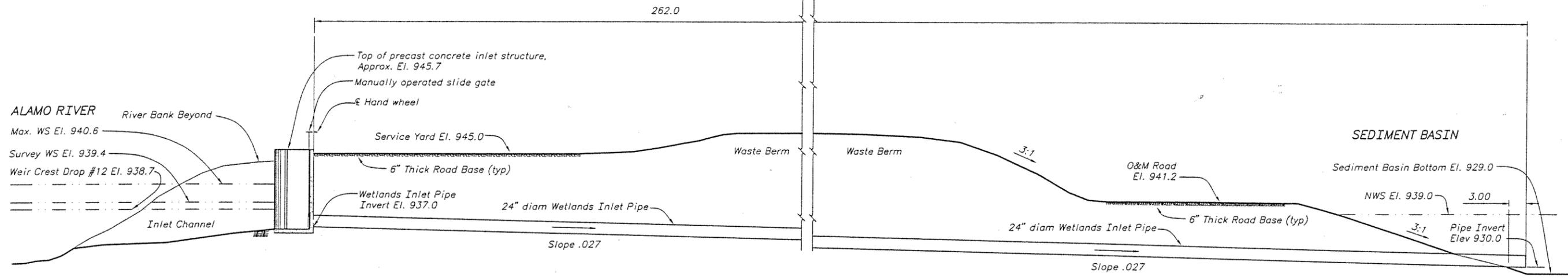
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
BRAWLEY WETLANDS PROJECT  
LOWER COLORADO REGION - BOULDER CITY, NEVADA

HOLTVILLE WETLANDS  
DETAIL PLANS

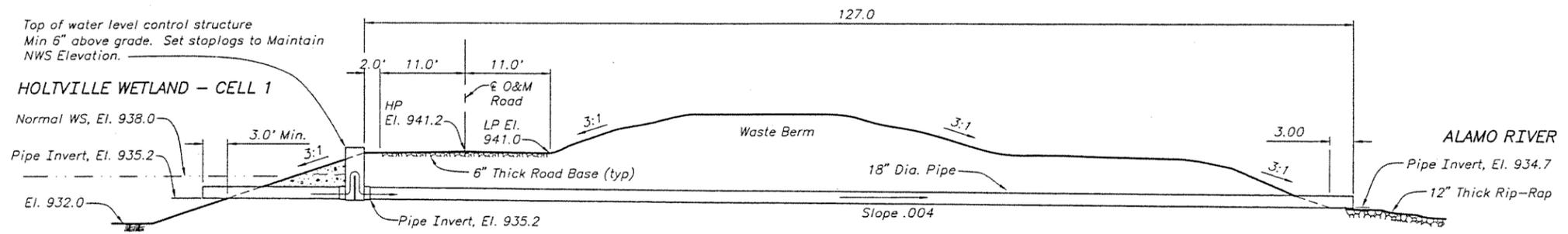
DESIGNED - J.F. Pattie, R.L.A. CHECKED - Gary Snyder  
DRAWN - J.F. Pattie, R.L.A. TECH. APPR - Paul M. Rucht, P.E.  
APPROVED - R. W. LaFond  
STRUCTURAL AND ARCHITECTURAL GROUP

CLADD SYSTEM  
DENVER, COLORADO September 28, 2005  
SHEET 1 OF 1 1169-D-29

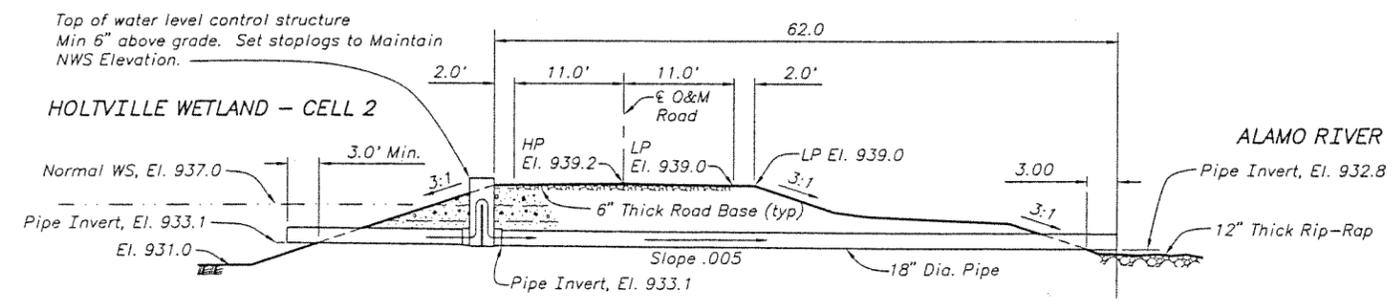
AUGUST 16, 2005  
 CAD FILENAME  
 SITE LAYOUT PLAN.DWG  
 DATE AND TIME PLOTTED  
 SEPTEMBER 8, 2005 1:  
 PLOTTED BY  
 J.PATIE



SECTION A-A (28, 29) - Inlet Structure - Alamo River to Sediment Basin  
(No Scale)



SECTION B-B (28, 29) Water Level Control Structure - Cell 1 to Alamo River  
(No Scale)



SECTION C-C (28, 29) Water Level Control Structure - Cell 2 to Alamo River  
(No Scale)

**ALWAYS THINK SAFETY**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
BRAWLEY WETLANDS PROJECT  
LOWER COLORADO REGION - BOULDER CITY, NEVADA

**HOLTVILLE WETLANDS**  
**SECTIONS A-A to C-C**

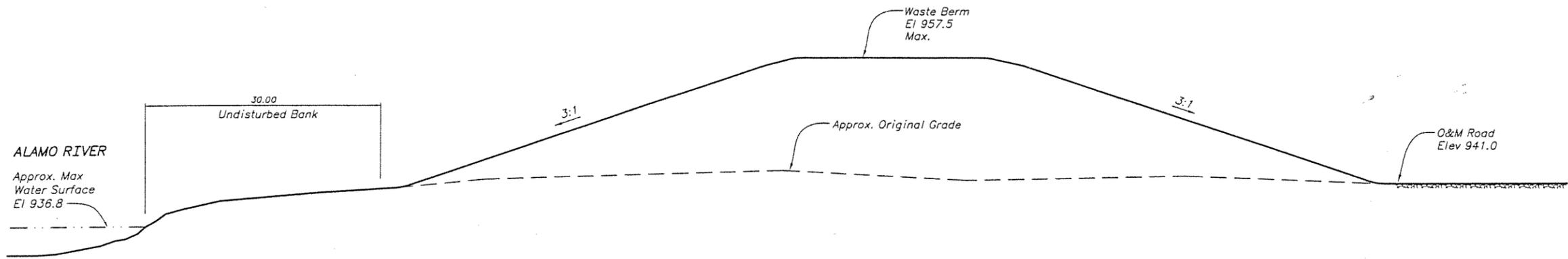
DESIGNED J.F. Pattie, R.L.A. CHECKED Gary Snyder  
DRAWN J.F. Pattie, R.L.A. TECH. APPR. Paul M. Rucht, P.E.  
APPROVED R. W. LaFond  
STRUCTURAL AND ARCHITECTURAL GROUP

CADD SYSTEM  
DENVER, COLORADO September 28, 2003  
SHEET 1 OF 1

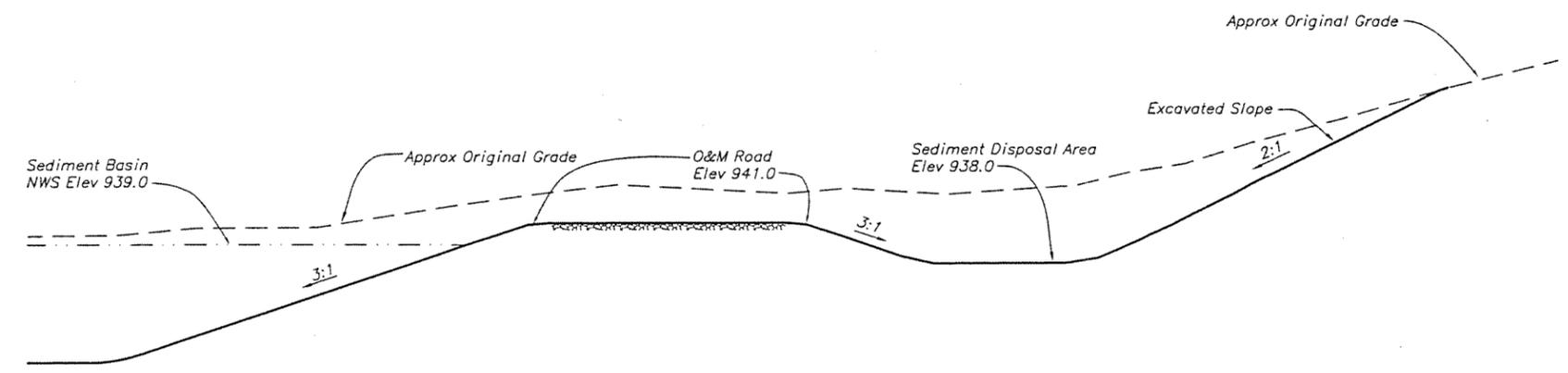
1169-D-30

AUGUST 16, 2003  
 CADD FILENAME  
 1169-D-30 HOLTVILLE WETLANDS SECTIONS A-A TO C-C  
 DATE AND TIME PLOTTED  
 SEPTEMBER 26, 2003 10:  
 PLOTTED BY  
 Not Printed

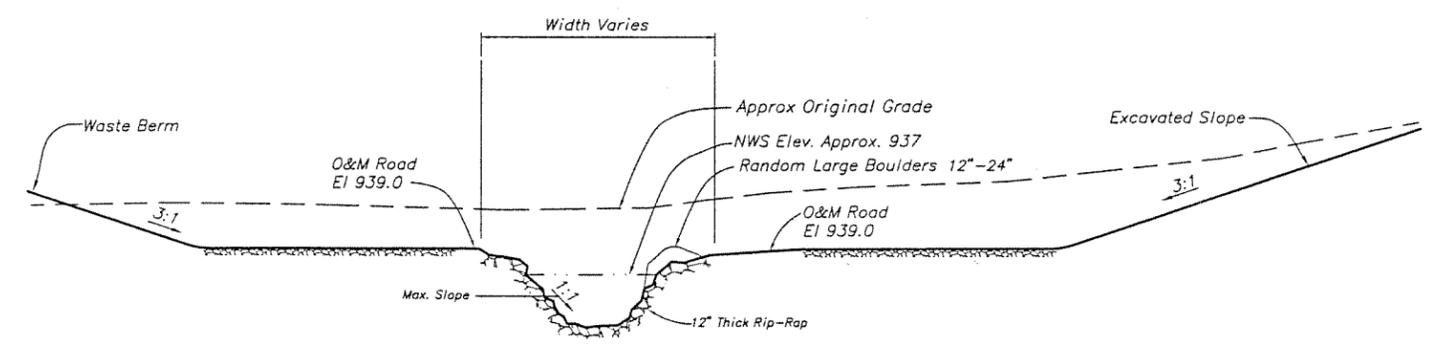




SECTION G-G (28) - Waste Berm  
(No Scale)



SECTION H-H (28) - O&M Road/Sediment Disposal Area  
(No Scale)



SECTION I-I (28) - Cell 2 Stream Channel  
(No Scale)

**ALWAYS THINK SAFETY**

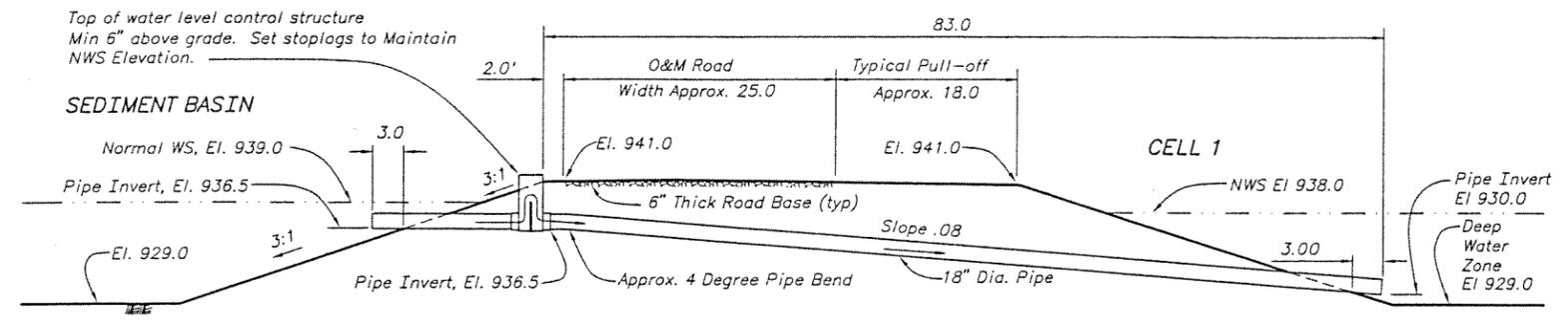
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
BRAWLEY WETLANDS PROJECT  
LOWER COLORADO REGION - BOULDER CITY, NEVADA

**HOLTVILLE WETLANDS**  
**SECTIONS G-G to I-I**

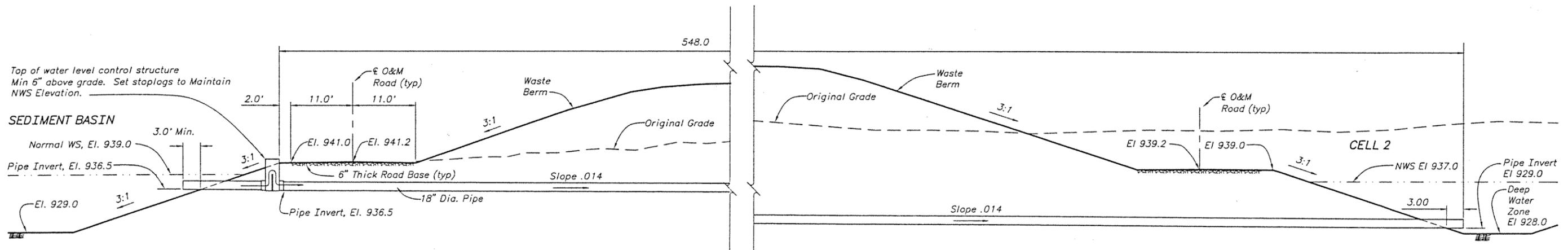
DESIGNED - J.F. Pattie, R.L.A.      CHECKED - Gary Snyder  
DRAWN - M.L. Pierce      TECH. APPR. - Paul M. Ruchti, P.E.  
APPROVED - R. W. LaFond  
STRUCTURAL AND ARCHITECTURAL GROUP

CADD SYSTEM  
DENVER, COLORADO      September 28, 2005      SHEET 1 OF 1      1169-D-32

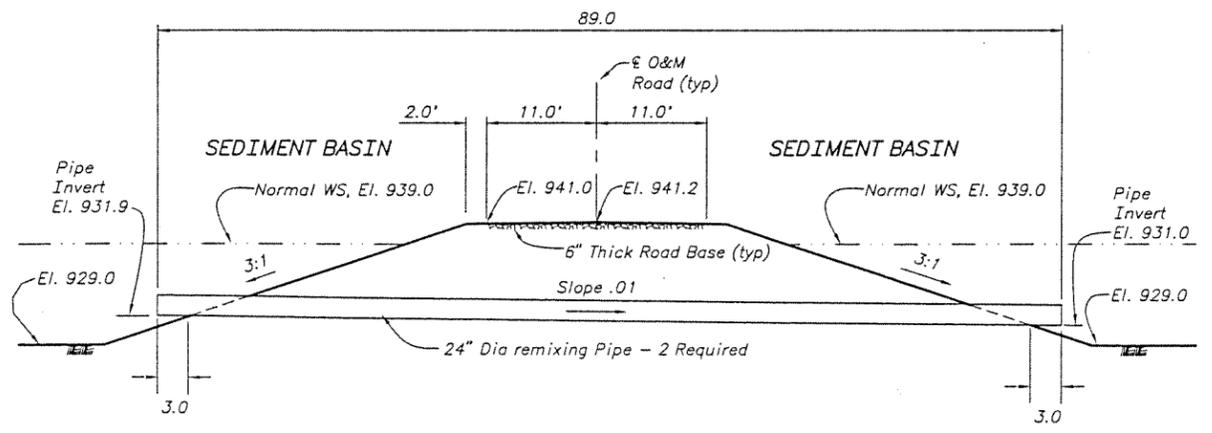
AutoCAD Ver. 16.0s  
 CAD FILENAME  
 1169-D-31 & 32 HOLTVILLE SECTIONS.DWG  
 DATE AND TIME PLOTTED  
 SEPTEMBER 28, 2005 11:14  
 PLOTTED BY  
 RPATLIE



**SECTION J-J (28) Water Level Control Structure - Sediment Basin to Cell 1**  
(No Scale)



**SECTION K-K (28) Water Level Control Structure - Sediment Basin to Cell 2**  
(No Scale)



**SECTION O-O (28) Typical Remixing Pipe - Sediment Basin to Sediment Basin**  
(No Scale)

**ALWAYS THINK SAFETY**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
BRAWLEY WETLANDS PROJECT  
LOWER COLORADO REGION - BOULDER CITY, NEVADA

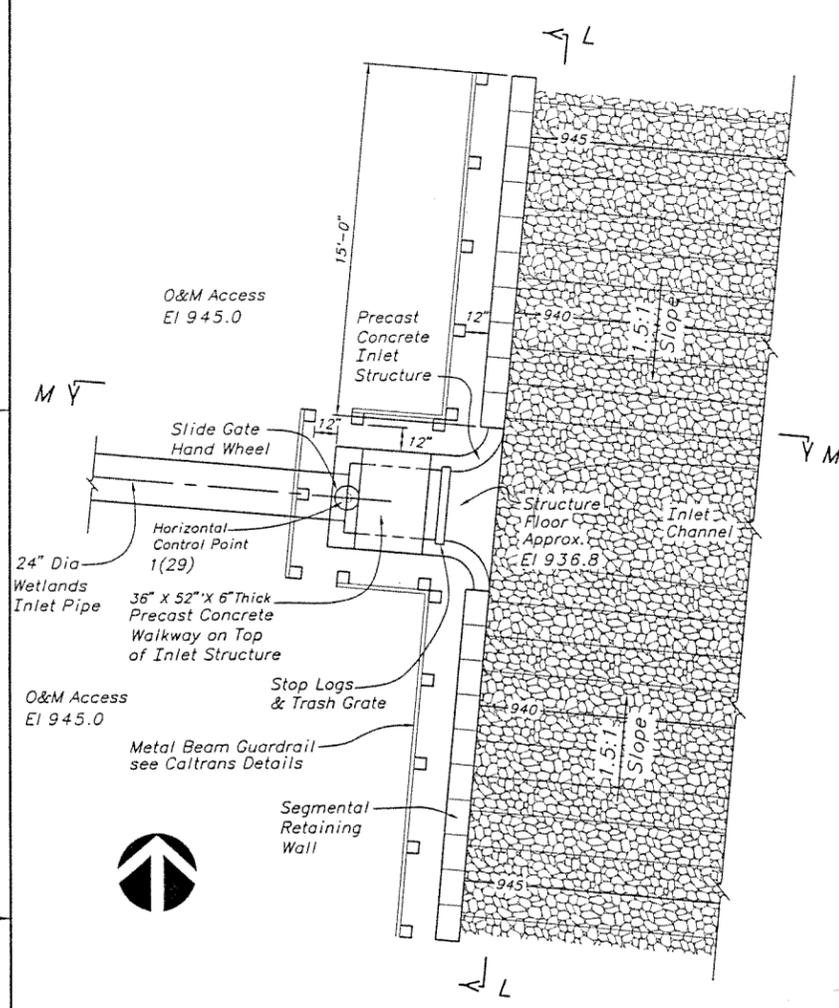
**HOLTVILLE WETLANDS**  
SECTIONS J-J, K-K, and O-O

DESIGNED - J.F. Pattie, R.L.A. - CHECKED - Gary Snyder  
DRAWN - J.F. Pattie, R.L.A. - TECH. APPR. - Paul M. Ruchti, P.E.  
APPROVED - R. W. LaFond  
STRUCTURAL AND ARCHITECTURAL GROUP

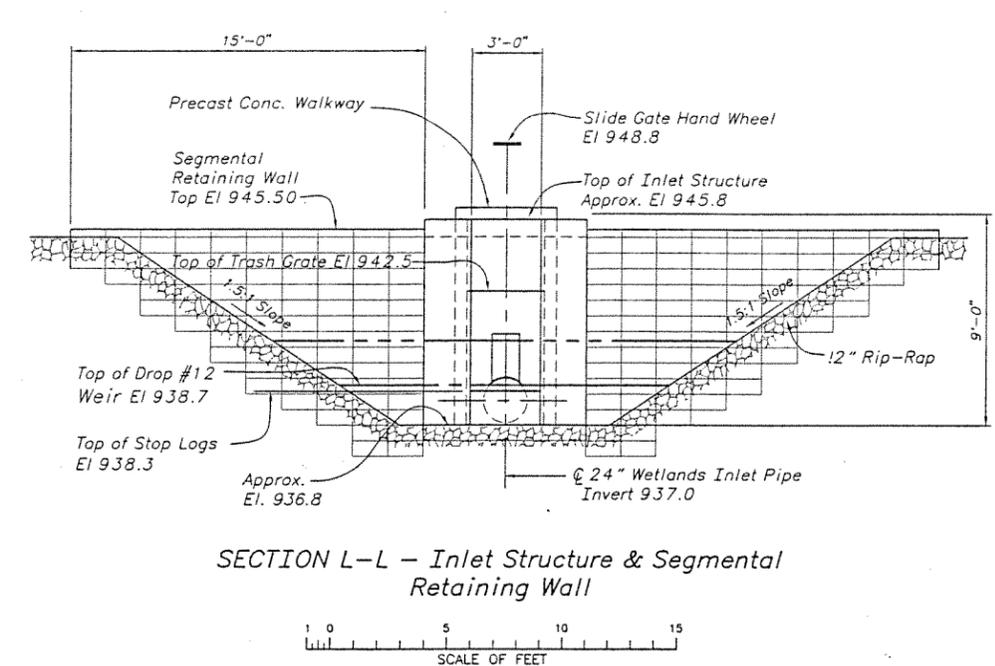
CADD SYSTEM  
DENVER, COLORADO September 28, 2005  
SHEET 1 OF 1

1169-D-33

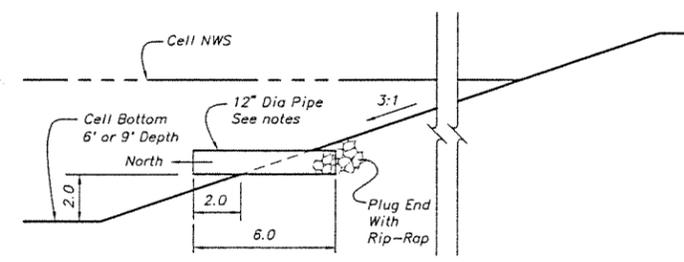
AUGUST 16, 2005  
 CAD FILE NAME: C:\HOLTVILLE\HWP\SECTION\O-O  
 DATE AND TIME PLOTTED: SEPTEMBER 28, 2005 10:10  
 PLOTTED BY: Not Plotted



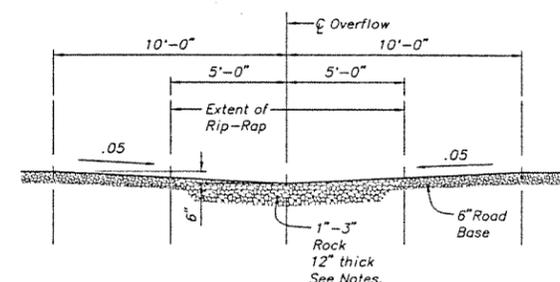
PLAN (29) - Inlet Structure  
SCALE OF FEET



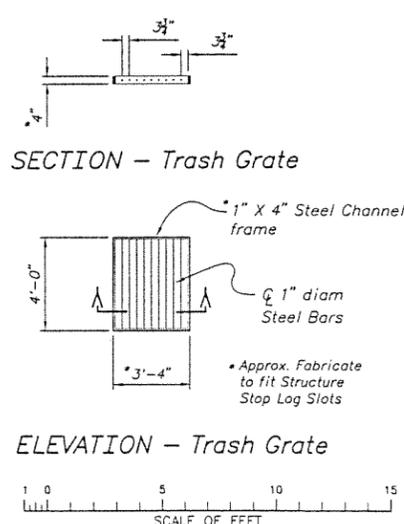
SECTION L-L - Inlet Structure & Segmental Retaining Wall  
SCALE OF FEET



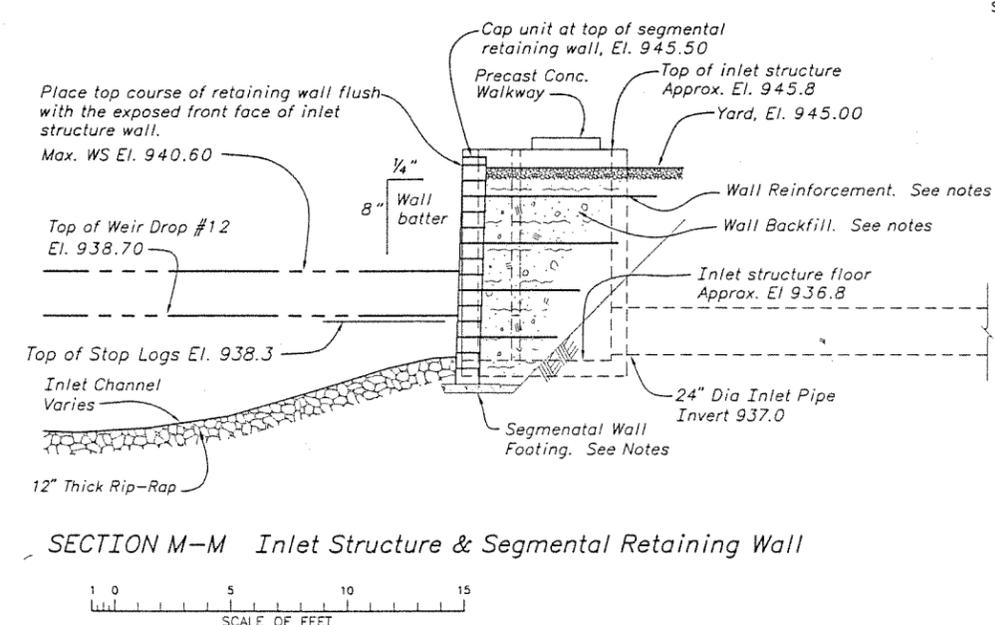
FISH SHELTER - Section (typ)  
6 - Required  
(No Acale)



SECTION N-N (28,29) - Overflow (typ)  
SCALE OF FEET



ELEVATION - Trash Gate  
SCALE OF FEET



SECTION M-M Inlet Structure & Segmental Retaining Wall  
SCALE OF FEET

Caltrans 2002 Dual Unit Standard Plans (Caltrans Details)			
Title	No.	Applicable Details	Applicable Notes
Metal Beam Guard Railing With Wood Post And Blocks Typical Wood Post with Wood Block	A77A	Metal Beam Guard Railing With Wood Post And Blocks Typical Wood Line Post Installation, Rail Element Splice Detail, Section Thru Rail Element	2 thru 5
Metal Beam Guard Railing Standard Hardware	A77B	Terminal Section, Type C Section Thru Rail Element Standard Hardware	x
Metal Beam Guard Railing Wood Post And Wood Details	A77C	150 mm x 200 mm Wood Post 150 mm x 200 mm Wood Block	1, 2
Metal Beam Guard Railing Typical Line Post Installation	A77FA	Installation at Earth Retaining Walls	x

**NOTES**

- Stop logs to be provided by inlet structure manufacturer. Place trash rack on top of stop logs.
- Connect inlet pipe to inlet structure in accordance with inlet structure manufacturer's recommendations.
- Construct, reinforce, and backfill segmental retaining wall in accordance with manufacturer's recommendations.
- 12" diameter pipe for fish shelters may be HDPE, corrugated PE, CMP or any other type approved by the COTR. Place 3 pipes each in north facing slopes of Cells 1 and 2. Do not place shelters in sediment basin or outlet pools.

**ALWAYS THINK SAFETY**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF RECLAMATION  
BRAWLEY WETLANDS PROJECT  
LOWER COLORADO REGION - BOULDER CITY, NEVADA

**HOLTVILLE WETLANDS  
SECTIONS L-L to N-N  
AND DETAILS**

DESIGNED - J.F. Pattie, R.L.A.    CHECKED - Gary Snyder  
DRAWN - J.F. Pattie, R.L.A.    TECH. APPR. - Paul M. Ruchti, P.E.  
APPROVED - R. W. LaFond  
STRUCTURAL AND ARCHITECTURAL GROUP

CADD SYSTEM  
DENVER, COLORADO    September 28, 2005  
SHEET 1 OF 1

1169-D-34

AUTOCAD  
 CAD FILENAME  
 UNKNOWN  
 DATE AND TIME PLOTTED  
 Not Printed  
 PLOTTED BY  
 Not Printed

---

---

**APPENDIX B**  
**BIOLOGICAL RECONNAISSANCE SURVEY REPORT**



# Biological Reconnaissance of Alamo River AR30 Holtville, Imperial County, California



*Prepared For:*

**Tetra Tech, Inc.**

Mr. Andrew Gentile  
180 Howard Street, Suite 250  
San Francisco, CA 94105

*Prepared By:*

**Tetra Tech, Inc.**

348 West Hospitality Lane, Suite 100  
San Bernardino, California 92408

**November 2005**

***Executive Summary of the Biological Reconnaissance Survey of Alamo  
River (AR) 30, Holtville California***

Tetra Tech, Inc. completed a biological reconnaissance of the proposed wetland restoration site identified as AR30, located west of Holtville, California. A biological survey of approximately 29 acres of a likely floodplain located on the southwestern bank of the Alamo River was conducted on 02 November 2005. No plant species of regulatory concern were identified at the site. No supplemental botanical sampling is recommended. The subject site is suitable a suitable forage area for burrowing owls and ferruginous hawks. A clearance survey to determine if these raptors have moved into the site is recommended prior to any ground disturbances or project activities. The subject site is suitable habitat for Colorado River toad and western yellow bats. Protocol surveys for these animals may be required by the CDFG prior to any ground disturbances or project activities. If the project will impact jurisdictional waters, permitting to satisfy Section 404 and 401 of the Clean Water Act plus section 1600 et. seq. of the CDFG code may be require

**TABLE OF CONTENTS**

1 INTRODUCTION.....2  
1.1. PROJECT BACKGROUND.....2  
1.2. ENVIRONMENTAL SETTING.....2  
2 METHODS.....3  
2.1. LITERATURE REVIEW.....3  
2.2. FIELD SURVEY.....3  
3 RESULTS OF DATABASE SEARCH.....3  
3.1. RESULTS OF CNDDDB .....3  
4 RESULTS OF FIELD INVESTIGATION .....4  
4.1. FLORA AND COMMUNITY TYPES IN PROJECT AREA .....4  
4.2. FAUNA OBSERVED IN PROJECT AREA .....5  
4.3. CRITICAL HABITAT .....7  
4.4. JURISDICTIONAL WATERS .....7  
5 REGULATORY REQUIREMENTS .....8  
6 CONCLUSIONS AND RECOMMENDATIONS .....9  
7 CERTIFICATION.....9  
8 REFERENCES.....10

**APPENDICIES**

Appendix A Figures  
Appendix B Site Photographs  
Appendix C Flora and Fauna Compendium

## **1 Introduction**

### *1.1. Project Background*

This report summarizes the findings of a biological survey of approximately 29 acres of a proposed wetland restoration site identified as AR30, located west of Holtville, California. The site is located on Section 26, Township 15S, Range 15E, on the Holtville West U.S. Geological Survey, 7.5-minute topographic series (1979) (Figure 1, Appendix A). This biological survey included two primary aspects: 1) a literature and data review, and 2) a reconnaissance level biological survey that was conducted during a site reconnaissance by biologists from Tetra Tech, Inc. and their subcontractor, Natural Resources Assessment, Inc. The literature review serves as a means to review pertinent information related to the status of local biological surveys, evaluate scientific information about the specific desert habitat in the area, and consider biological information about certain special status species such as the burrowing owl (*Athene cunicularia*). The field-based biological survey provides the means for biologists to evaluate, identify, and characterize the flora and fauna present at the site.

### *1.2. Environmental Setting*

The site is in the northwest one-quarter of Section 19, T 2S, R 5E, San Bernardino Baseline and Meridian (SBBM). Based on the topographic map, the property is located at approximately 50 feet below mean sea level. The topographic gradient is generally southerly with the western parcel sloping generally to the north. The site is mapped as Quaternary non-marine terrace deposits (Geologic Map of the San Diego-El Centro Quadrangle, California Division of Mines and Geology, 1962). The AR 30 site is likely a flood plain feature associated with the Alamo River. Found on the northwestern side of Alamo River, soils found on the site are composed of very fine textured soils. Soils on the northwestern portion of the site are composed of very fine sand Vint loam soil while soils on the southeastern portion of the site are the Imperial-Glenbar silty clay loam series (United States Department of Agriculture 1981). Salt inflorescences forming a crust on the surface of the soils were observed through out the site. In a number of areas, organic material had accumulated on the surface of the soil suggesting a sodic soil condition. In conjunction with field observations plus the presence of salt tolerant plants, soils associated with the site are likely classified as saline-sodic soils.

The site is associated with the Colorado desert which is a subdivision of the Sonoran Desert and is the warmest desert in California (Schoenherr 1992). Most precipitation falls in the winter and summer thunderstorms are common. The vegetation at the site is dominated by tamarisk (*Tamarix ramosissima*) with mesquite (*Prosopis glandulosa*) and suaeda (*Suaeda moquinii*) mixed habitat.

## **2 Methods**

### *2.1. Literature Review*

The California Natural Diversity Data Base (CNDDDB) was queried to search for surveys and/or information that have been collected in the vicinity of the site. The California Natural Diversity Database (CNDDDB) was reviewed for pertinent information. The CNDDDB is a database of threatened and endangered species within California that is compiled and published by the California Department of Fish and Game (CDFG). It includes all federally and state listed plants and animals, all species that are candidates for listing, all species of special concern, and those species that are considered “sensitive” by government agencies and the conservation community.

### *2.2. Field Survey*

A field survey was conducted at the site on 02 November 2005 and was conducted using the following procedures. The project boundaries were located on an aerial image of the site as provided by TerraServer for the Holtville area. Biological resources were recorded on the aerial image and documented with photographs (Appendix B). Dominant plant species and natural communities were identified and wildlife was observed by sight, sound, tracks, and other sign. Surveys for special-status species potentially occurring in the project site and area were conducted concurrently with the biological field survey. Wildlife forage and travel to different places at various times and seasons. Therefore, this survey cannot be considered comprehensive. A formal survey for jurisdictional waters was not conducted in as part of this work effort. Field notes and observations made during the field survey were summarized and entered into Excel spreadsheets for analysis and review.

## **3 Results of Database Search**

### *3.1. Results of CNDDDB*

The available literature on natural resources in and around the project area was consulted including information from the CNDDDB and the California Native Plant Society (CNPS). The potential occurrence of other species was examined by identifying their documented or known habitat preferences.

Plant and wildlife species classified as rare, threatened, or endangered; proposed for listing as endangered or threatened; or candidate species for listing by federal and/or state resource agencies are considered “sensitive.” In addition, other plants identified as sensitive by the CNPS, and wildlife considered species of concern, special animals, or fully protected in the State of California are also considered “sensitive.” The most recent version of the CNDDDB was reviewed for the site and surrounding vicinity. Table 1 presents all of the sensitive species that are known to occur or could potentially occur in

the project vicinity and a large surrounding area according to the CNDDDB and individual species' habitat requirements.

**Table 1 Sensitive Species that Could Occur within the Project Area**

Common Name	Scientific Name	Federal Status	State Status	CNPS Status
<b>Amphibians</b>				
Colorado river toad	<i>Bufo alvarius</i>		CSC	
<b>Plants</b>				
Sand food	<i>Pholisma sonora</i>			1B
<b>Birds</b>				
Burrowing owl	<i>Athene cucicularia</i>		CSC	
Ferruginous hawk	<i>Buteo regalis</i>		CSC	
<b>Mammals</b>				
Western yellow bat	<i>Lasiurus xanthinus</i>			
<b>Reptiles</b>				
Flat-tailed horned lizard	<i>Phrynosoma mcalli</i>		CSC	
<b>Source:</b> Species were found in the California Department of Fish and Game California Natural Diversity Rarefind Database (CNDDDB) for the Holtville West USGS 7.5' Quadrangle (11 November 2005) and could occur in the project vicinity due to their habitat requirements.				

**Notes:**

**Federal Status:**

**FE** Federally listed  
 Endangered  
**FT** Federally listed  
 Threatened  
**C** Federal candidate for listing

**State Status:**

**SE** State listed Endangered  
**ST** State listed Threatened  
**CSC** California Department of  
 Fish and Game Species of  
 Concern  
**P** California Department of Fish  
 and Game Protected Species  
 (Fully)

**California Native Plant Society (CNPS)**

**List:**

**1A** Presumed extinct in California  
**1B** Rare or Endangered in California or  
 elsewhere  
**2** Rare or Endangered in California,  
 more common elsewhere  
**3** Review List  
**4** Watch List

**4 Results of Field Investigation**

*4.1. Flora and community types in project area*

The biological resources survey was conducted on 12 August 2005 at the project site and the associated coverage is shown in Figure 2, Appendix A. A complete flora and fauna compendium for biological resources found at the site is provided in Appendix C. Figure 2 illustrates the range of coverage of the biological survey over the entire site. The weather was clear and warm with temperatures ranging from 80 ° F to 85 ° F. The following details the plants and plant communities observed on the site as well as the likelihood of the site to support sensitive plant species.

**Plant communities.** The desert community at the site is comprised largely of tamarisk with mesquite (*Prosopis glandulosa*) and suaeda. Tamarisk was found throughout the survey area with a concentration in the southwestern portion of the site. Mesquite trees were observed on the eastern side of the site with a concentration of suaeda in the

northern portion of the survey area. Two types of saltbush (*Atriplex canescens* and *A. lentiformis*) mixed with broom baccharis (*Baccharis sarothroides*) and tamarisks were observed in a narrow strip immediately adjacent to the Alamo River. The complete list of all plant species that could be reasonably identified during the early fall biological survey are listed in Table 2. It is noteworthy that a biological survey during the spring season would enable the better identification of perennial species as well as permit a proper assessment of the annual species.

The community type at the site is a Tamarisk-Mesquite-Suaeda series with relatively high density of tamarisk over the site. There was evidence that the site had been subjected to a fire at some time in the past. Trash dumping was observed along the perimeter of the site. A number of the mesquite trees/shrubs were observed to be parasitized by desert mistletoe (*Phoradendron californicum*), suggesting a reduction in plant vigor. As with many desert riparian areas, the invasive non-native tamarisk has dominated the plant communities found at the site.

**Sensitive Plant Species.** Sand food (*Pholisma sonora*) is a parasitic plant found in sandy dune areas and is classified as a List 1b plant by the California Native Plant Society. This plant is not currently listed by the USFWS or the CDFG. This sensitive plant parasitizes *Eriogonum* sp., *Tiquilia* sp., *Ambrosia* sp. and *Pulchea* sp. plants. None of these host plants were observed at the site and no dune sand formations are present at the site. As a result, this sensitive plant is not expected to be found at the site.

**Table 2 Plant Species Recorded within the Project Area**

Common Name	Scientific Name	Taxonomic Group
Date palm	<i>Phoenix dactylifera</i> .	Palm Family
California date palm	<i>Washingtonia filifera</i>	Palm Family
Broom baccharis	<i>Baccharis sarothroides</i>	Aster Family
Horseweed	<i>Conyza canadensis</i>	Aster Family
Four-winged saltbush	<i>Atriplex canescens</i>	Goosefoot Family
Big saltbush	<i>Atriplex lentiformis</i>	Goosefoot Family
Russian thistle*	<i>Salsola tragus</i>	Goosefoot Family
Bush seepweed	<i>Suaeda moquinii</i>	Goosefoot Family
Mesquite	<i>Prosopis glandulosa</i>	Legume Family
Tamarisk*	<i>Tamarix ramosissima</i>	Tamarisk Family
Phoradendron californicum	<i>Desert mistletoe</i>	Mistletoe Family
Notes: * indicates non-native plant		

#### 4.2. Fauna observed in project area

The project area was surveyed for sensitive animals and birds. All observations were recorded. The animals and birds encountered are as follows as well as a determination of the site to support sensitive species likely to be present.

**Amphibians.** Colorado River toad (*Bufo alvarius*) is a toad that is listed as a Species of Concern by the CDFG. It is not listed by the USFWS. This sensitive toad is a nocturnal amphibian commonly associated with permanent streams and washes with creosote bush (*Larrea tridentata*) and mesquite trees habitat. The one amphibian observed at the site was most likely an American bullfrog as the observation was made during the day. The site may serve as likely habitat for the Colorado River toad. Prior to any earthwork or disturbances, a focused survey for this amphibian may be required.

**Reptiles.** Flat-tailed horned lizard (*Phrynosoma mcallii*) is restricted to windblown sand. It is found only on dunes and sandy flats in the lower deserts, from the Coachella Valley south to the head of the Gulf of California and into extreme northeastern Baja and southeastern Arizona. The flat-tailed horned lizard is described as being found from below sea level up to around 600 feet elevation. The flat-tailed lizard is listed as a Species of Special Concern by the CDFG. It is not listed by the USFWS. No windblown sand areas were located on the project site. As a result, this lizard is not expected to be present within the survey area. No reptiles were observed at the site during the reconnaissance. No signs of reptiles were observed in the form of tracks at the site.

**Birds.** The burrowing owl (*Athene cunicularia*) is currently listed as a Species of Special Concern by the CDFG. It is also likely subject to USFWS regulation under the Migratory Bird Act of 1918. Burrowing owls are ground dwelling owls that are often seen during the day standing erect on the ground or on posts. They typically measure 9 to 11 inches in height. The adult tends to be boldly spotted and barred, while the juvenile is more a buff color below (CDFG 2004). Male burrowing owls tend to be paler in color and proportionally larger than females. The head is rounded, there are no ear tufts and the birds have eyebrows, a white chinstrap and the tail is short. The burrowing owl is a yearlong resident of open, dry grassland and desert habitat. They are also found as residents in grass, forbs and open shrub stages of pinyon-juniper and ponderosa pine habitats. Often considered diurnal, burrowing owls tend to be entirely nocturnal or at least crepuscular (active at dawn and dusk). Burrowing owls are considered to be diurnal as they frequently perch in open areas during the early morning and late afternoon at or near the entrance of their burrow or on a nearby low perch.

Burrowing owls are found in varying population sizes throughout Northern America and spend winters south as far as Central America. Their numbers have been drastically reduced in California in the past 60 years due to conversion of grasslands by agriculture and urbanization as well as due to consuming poison bait set for ground squirrels. No burrowing owls were observed at the site during the reconnaissance. In addition, no California ground squirrels (*Spermophilus beecheyi*), whose burrows serve as nesting sites for burrowing owls, were observed at the site. As a result, the site does not serve as

suitable habitat for burrowing owl nesting but may serve as a forage area for any owls found in adjacent areas.

Ferruginous hawk (*Buteo regalis*) is currently listed as a Species of Special Concern by the CDFG. It is also likely subject to USFWS regulation under the Migratory Bird Act of 1918. Their range is typically the plains and prairies found in southwest Canada but winter in the southwestern United States and northern Mexico. These raptors were formally more widespread in the southwestern United States due to habitat losses but have been reported as increased in population in California (Fagan 2005). The ferruginous hawk was not observed at the site. Based on the lack of roosting structures and nesting sites, the site is not a likely area for nesting but may serve as a forage area for these raptors.

A number of birds were observed and heard at the site during the reconnaissance. These birds are listed in the Flora and Fauna Compendium found in Appendix C. None of these birds are species of concern to any regulatory agencies.

**Mammals.** The western yellow bat (*Lasiurus xanthinus*) is currently listed as a Species of Special Concern by the CDFG. This mammal has a range that extends from Baja California, Mexico into the deserts of the southwestern United States. It is known to roost in leafy vegetation of native and non-native trees and forages over water and among trees. No western yellow bats were observed at the site during the reconnaissance. The site may serve as likely habitat to support this sensitive animal. Prior to any disturbances that may remove trees adjacent to the river and on site, a bat survey should be done to determine if western yellow bats are present at the site.

Signs in the form of scat and tracks were observed at the site from coyote (*Canis latrans*), domestic dogs (*Canis lupus familiaris*), raccoon (*Procyon lotor*) and cottontail rabbits (*Sylvilagus audubonii*). These animals are common and are not subject to regulatory oversight.

#### *4.3. Critical habitat*

The project site is located within known habitat for the state and federally threatened desert tortoise. No designated or proposed designated critical habitat has been identified at the project site.

#### *4.4. Jurisdictional Waters*

The Alamo River is found on the northern side of the site. The US Army Corps of Engineers (ACOE) regulates discharges of dredged or fill material into waters of the United States. These waters, or waters of the U.S., include wetlands and non-wetland bodies of water that meet specific criteria. The ACOE regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate commerce. This connection may be direct; through

a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations. The Alamo River terminates in the Salton Sea, found to the north of the site and is subject to ACOE jurisdiction. The CDFG defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.”

Definable bed to bank plus signs of ordinary high water mark were observed at the AR 30 site. In the absence of information regarding the hydrology in the form of base flood elevations, on-site observations limit ordinary high water mark for ACOE jurisdiction to the boundaries of the flowing water of the Alamo River. No drift lines, sedimentation patterns or flow lines from possible past flooding events were observed within the survey area. Definite bed to bank characteristics associated with the site as likely waters of the State and jurisdictional to the CDFG were observed as the southern boundary of the site in the form of an abrupt rise in the topography. The northern limit of jurisdictional waters of the state would most likely be the southern bank of the Alamo River that also serves as the limit of the site.

## **5 Regulatory Requirements**

*Rare Plants.* The site is not likely habitat for sand food, a rare plant found in sandy dune soils.

*Sensitive Amphibians.* The site may serve as likely habitat for the Colorado River toad. Prior to any earthwork or disturbances, a focused survey for this amphibian may be required.

*Sensitive Reptiles.* The subject site not suitable habitat for the San Diego horned lizard.

*Sensitive Birds.* The site is a potential foraging area for burrowing owls or ferruginous hawks that may be found in the area. Prior to any disturbances or earthwork activities at the site, a focused survey for burrowing owls and ferruginous hawks should be conducted to ensure that none have moved into the site.

*Sensitive Mammals.* Although no western yellow bats were observed at the site during the reconnaissance, the site is likely habitat to support these sensitive mammals. Prior to any disturbances that may remove trees adjacent to the river and on site, a bat survey should be done to determine if western yellow bats are present at the site,

*Jurisdictional Waters.* Any project impacts likely to affect the site may require a Streambed Alteration Agreement between the project proponent and the California Department of Fish and Game. For the Streambed Alteration Agreement, an analysis of environmental impacts from the proposed project as required by the California

Environmental Quality Act (CEQA) will be required. A formal delineation of waters of the state may also be required as part of the Streambed Alteration Agreement. Mitigations and avoidance measures for impacts to jurisdictional waters would include an assessment of impacts to burrowing owl possibly present at the site and any other sensitive animals.

The site may also be subject to Section 404 and 401 of the Clean Water Act. As a result, the proponent would be required to negotiate with the ACOE and the California Regional Water Quality Board for an Individual Permit and a Water Quality Certification, respectively. A formal delineation of waters of the U.S. may be required as part of this permitting.

## 6 Conclusions and Recommendations

No plant species of regulatory concern were identified at the site. No supplemental botanical sampling is recommended.

The subject site is suitable a suitable forage area for burrowing owls and ferruginous hawks. A clearance survey to determine if these raptors have moved into the site is recommended prior to any ground disturbances or project activities.

The subject site is suitable habitat for Colorado River toad and western yellow bats. Protocol surveys for these animals may be required by the CDFG prior to any ground disturbances or project activities.

If the project will impact jurisdictional waters, permitting to satisfy Section 404 and 401 of the Clean Water Act plus section 1600 et. seq. of the CDFG code may be required..

## 7 Certification

*“Certification: I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological reconnaissance survey and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.”*

DATE: 15 November 2005 SIGNED: Stephanie Pacheco  
Report Author

Field Work Performed by:

Stephanie Pacheco, Tetra Tech, Inc.

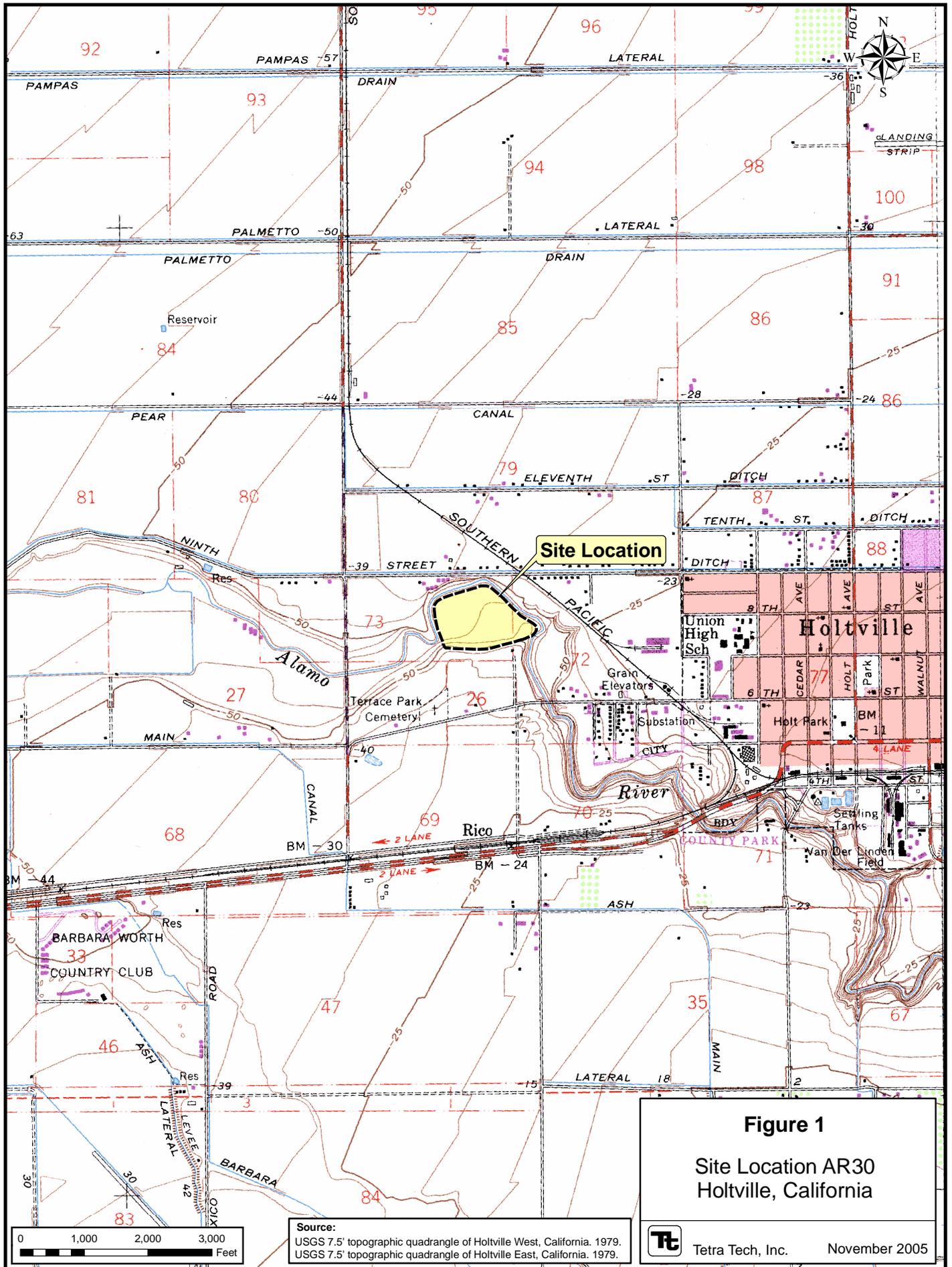
## 8 References

- Baldwin, B.G., *et al.*, (editors). 2002. *The Jepson Desert Manual*. University of California Press, Berkeley, CA.
- California Department of Conservation, Division of Mines and Geology  
1962 Geologic Map of California, San Diego-El Centro Sheet, Olaf P. Jenkins, Editor, revised 1992
- California Department of Fish and Game (CDFG).  
2004 <http://www.delta.dfg.ca.gov/gallery/burowl.asp>  
2005 *Rarefind 3*. Natural Heritage Division. Natural Diversity Database
- Fagan, D.  
2005 Ferruginous hawk (*Buteo regalis*). <http://www.desertusa.com>
- Petersen, T.  
1990 A Field Guide to Western Birds. Houghton-Mifflin Company, New York.
- Stebbins, R.C.  
1985 A field guide to western reptiles and amphibians. Second edition. Houghton Mifflin Company, Boston, Massachusetts. 336 pp.
- United States Department of Agriculture  
1981 Soil Survey of Imperial County California Imperial Valley Area. United States Department of Agriculture in cooperation with the University of California Agricultural Experiment Station and Imperial Irrigation District.
- United States Geologic Survey  
1979 Holtville West, California 7.5-Minute Topographic Series.

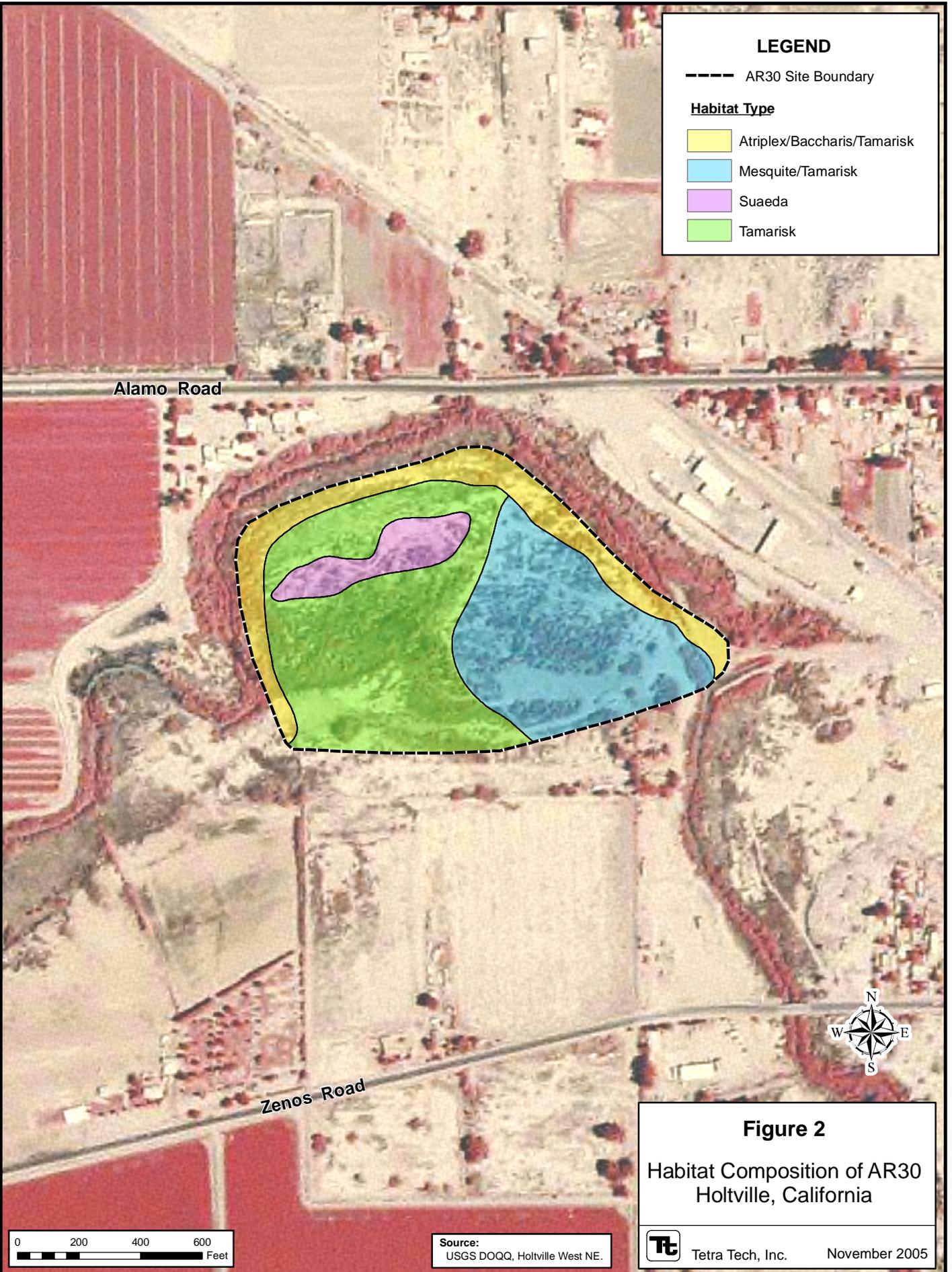








**Figure 1**  
 Site Location AR30  
 Holtville, California



**LEGEND**

--- AR30 Site Boundary

**Habitat Type**

- Atriplex/Baccharis/Tamarisk
- Mesquite/Tamarisk
- Suaeda
- Tamarisk

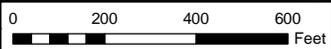
Alamo Road

Zenos Road



**Figure 2**

Habitat Composition of AR30  
Holtville, California



Source:  
USGS DOQQ, Holtville West NE.

**Tt** Tetra Tech, Inc. November 2005







Photo 1 View of AR30 Site from north side of Alamo River.

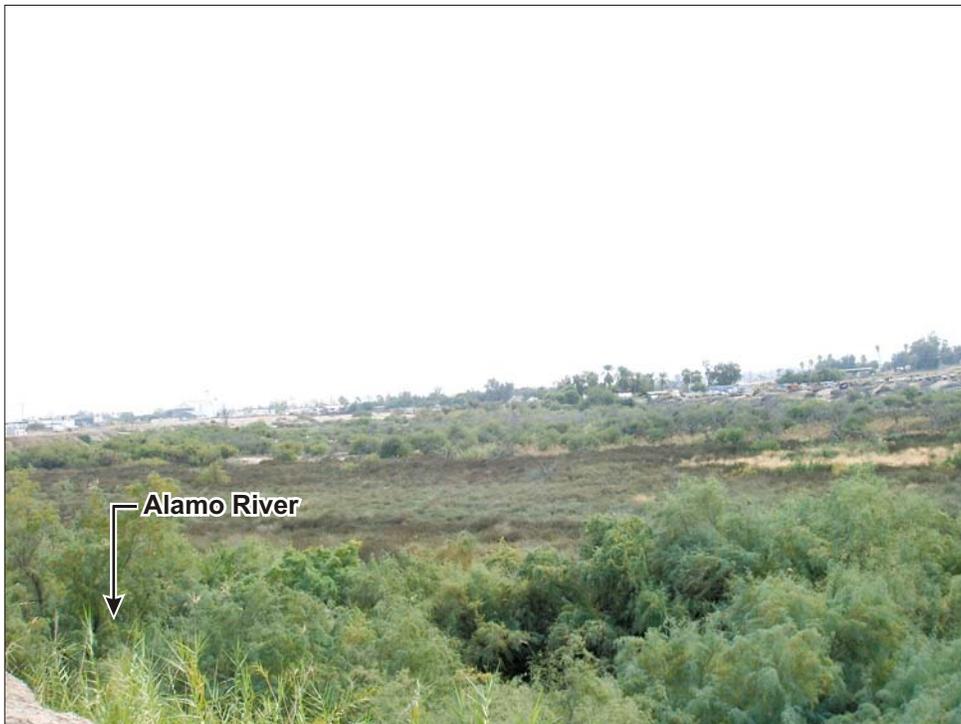


Photo 2 View of the eastern portion of the AR30 Site from north bank of the Alamo River.



Photo 3 View of the western portion of AR30 from the southern side of the site.



Photo 4 View of the western portion of the AR30 Site from the southern side.



**FLORA AND FAUNA OBSERVED DURING GENERAL BIOLOGICAL RECONNAISSANCE  
AR 30 SITE, IMPERIAL COUNTY, CALIFORNIA**

<b>Angiospermae: Monocotyledonae</b>	<b>Monocot Flowering Plants</b>
<b>Areaceae</b>	<b>Palm Family</b>
<i>Phoenix dactylifera</i>	Date palm
<i>Washingtonia filifera</i>	California Fan Palm
<b>Angiospermae: Dicotyledonae</b>	<b>Dicot Flowering Plants</b>
<b>Asteraceae</b>	<b>Aster Family</b>
<i>Baccharis sarothroides</i>	Broom baccharis
<i>Conyza canadensis</i>	Horseweed
<b>Chenopodiaceae</b>	<b>Goosefoot Family</b>
<i>Atriplex canescens</i>	Four-winged saltbush
<i>Atriplex lentiformis</i>	Big saltbush
<i>Salsola tragus</i>	Russian thistle*
<i>Suaeda moquinii</i>	Bush seepweed
<b>Fabaceae</b>	<b>Legume Family</b>
<i>Prosopis glandulosa</i>	Mesquite
<b>Tamaricaceae</b>	<b>Tamarisk Family</b>
<i>Tamarix ramosissima</i>	Tamarisk*
<b>Viscaceae</b>	<b>Mistletoe Family</b>
<i>Phoradendron californicum</i>	Desert mistletoe
<b>Aves</b>	<b>Birds</b>
<b>Columbidae</b>	<b>Pigeons and dove Family</b>
<i>Columbina inca</i>	Inca dove
<i>Zenaida macroura</i>	Mourning dove
<b>Corvidae</b>	<b>Crow and jay Family</b>
<i>Corvus corvax</i>	Raven
<b>Emberizidae</b>	<b>Sparrow Family</b>
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
<b>Falconidae</b>	<b>Caracara and Falcon family</b>
<i>Falco sparverius</i>	American kestrel
<b>Fringillidae</b>	<b>Finch Family</b>
<i>Carpodacus mexicanus</i>	House finch
<b>Laniidae</b>	<b>Shrike Family</b>
<i>Lanius ludovicianus</i>	Loggerheaded shrike
<b>Mimidae</b>	<b>Mockingbird and Thrasher Family</b>
<i>Mimus polyglottos</i>	Northern mockingbird
<b>Ptilonotidae</b>	<b>Silky Flycatcher Family</b>
<i>Phainopela nitens</i>	Phainopela
<b>Amphibia</b>	<b>Amphibians</b>
<b>Ranidae</b>	<b>True Frog Family</b>
<i>Rana catesbeiana</i>	American bullfrog
<b>Mammalia</b>	<b>Mammals</b>
<b>Canidae</b>	<b>Dog Family</b>
<i>Canis latrans</i>	Coyote
<i>Canis lupus familiaris</i>	Domestic dog
<b>Leporidae</b>	<b>Rabbits and Hares</b>
<i>Sylvilagus audubonii</i>	Audubon's cottontail
<b>Procyonidae</b>	<b>Raccoon and Allies Family</b>
<i>Procyon lotor</i>	Raccoon

\* Non-native