

Proposal Full View

Applicant Information

Organization Name *

Tax ID **330883611**

Proposal Name **Alamo River Wetland Near Holtville, CA** *

Proposal Objective **The Salton Sea Authority (the Authority) proposes to work in partnership with the Citizen’s Task Force on the New River (Citizen’s Task Force) to complete the construction of a wetland along the Alamo River. The Citizen’s Task Force was chartered to help improve the quality of water in the New and Alamo Rivers and the Salton Sea. The Authority proposes to complete the construction of a 31-acre complex of sedimentation ponds/wetlands 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 an important step in improving the quality of water flowing in the Alamo River, a principal tributary to the Salton Sea, it would have research value, and it would provide new habitat in the Salton Basin.** *

Budget

Other Contribution	<input type="text" value="\$0.00"/>
Local Contribution	<input type="text" value="\$0.00"/>
Federal Contribution	<input type="text" value="\$480,900.00"/>
Inkind Contribution	<input type="text" value="\$0.00"/>
Amount Requested	<input type="text" value="\$2,371,212.00"/> *
Total Project Cost	<input type="text" value="\$2,852,112.00"/> *

Geographic Information

Latitude* DD(+/-) MM SS

Longitude* DD(+/-) MM SS

Longitude/Latitude Clarification Location **Holtville, CA**

County **Imperial** *

Ground Water Basin **Imperial Valley**

Hydrologic Region **Colorado River**

Watershed **Imperial**

Legislative Information

Assembly District **80th Assembly District** *

Senate District **40th Senate District** *

US Congressional District **District 51 (CA)** *

Project Information

Project Name

Implementing Organization	Salton Sea Authority
Secondary Implementing Organization	Citizen's Task Force on the New River and City of Holtville
Proposed Start Date	1/7/2013
Proposed End Date	12/27/2013
Project Scope	Complete construction of a 31-acre complex of sedimentation ponds/wetlands adjacent to the Alamo River near Holtville, CA
Project Description	The Salton Sea Authority (the Authority) proposes to work in partnership with the Congressional Citizen's Task Force on the New River (Citizen's Task Force) to complete the construction of a wetland along the Alamo River. The Citizen's Task Force was chartered to help improve the quality of water in the New and Alamo Rivers and the Salton Sea. The Authority proposes to complete the construction of a 31-acre complex of sedimentation ponds/wetlands 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 Holtville site is an excellent candidate for this type of project from the hydrologic perspective, and the wetland would provide significant improvement to the visual quality of the area which is in close proximity to the town. The wetland would be an important step in improving the quality of water flowing in the Alamo River, a principal tributary to the Salton Sea, it would have research value, and it would provide new habitat in the Salton Basin.
Project Objective	The project objective is to (1) Improve the quality of water flowing in the Alamo River, a principal tributary to the Salton Sea, (2) Assist in achieving sediment TMDL goals, (3) Create a project that has research value for nutrient reduction and other water quality improvements as well as for developing a better understanding of selenium bioaccumulation, and (4) Provide new habitat in the Salton Basin, and (5) Have recreational value in the Holtville area.
Project Benefits Information	

Project Objective

Budget

Other Contribution	<input type="text" value="0"/>
Local Contribution	<input type="text" value="0"/>
Federal Contribution	<input type="text" value="480900"/>
Inkind Contribution	<input type="text" value="0"/>
Amount Requested	<input type="text" value="2371212"/>
Total Project Cost	<input type="text" value="2852112"/>

Geographic Information

Latitude DD(+/-)	<input type="text" value="32"/>	MM	<input type="text" value="48"/>	SS	<input type="text" value="58"/>
Longitude DD(+/-)	<input type="text" value="115"/>	MM	<input type="text" value="23"/>	SS	<input type="text" value="58"/>

Longitude/Latitude Clarification Location

County Imperial Ground Water Basin Imperial Valley Hydrologic Region Colorado River WaterShed

Legislative Information

Assembly District	80th Assembly District
Senate District	40th Senate District
US Congressional District	District 51 (CA)

Section : Project General Information Questions

Q1 - Project Type

Select the project type from the dropdown list.

Water Quality Improvement

Q2 - Project Description

Briefly summarize the proposed project (4,000 characters limit). Include the following information: project goals and objectives, project location, proposed work to be funded, proposed approach (overview of techniques and methods), anticipated timeframe, and anticipated benefits.

HOLTVILLE WETLAND PURPOSE. The Salton Sea Authority (the Authority) proposes to work in partnership with the Congressional Citizen's Task Force on the New River (Citizen's Task Force) to complete the construction of a wetland along the Alamo River. The Citizen's Task Force was chartered to help improve the quality of water in the New and Alamo Rivers and the Salton Sea. The Authority proposes to complete the construction of a 31-acre complex of sedimentation ponds/wetlands 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 Holtville site is an excellent candidate for this type of project from the hydrologic perspective, and the wetland would provide significant improvement to the visual quality of the area which is in close proximity to the town. The wetland would be an important step in improving the quality of water flowing in the Alamo River, a principal tributary to the Salton Sea, it would have research value, and it would provide new habitat in the Salton Basin. **GOALS AND OBJECTIVES.** The goals and objectives of the project are to (1) Improve the quality of water flowing in the Alamo River, a principal tributary to the Salton Sea, (2) Create a project that has research value for nutrient reduction and other water quality improvements as well as for developing a better understanding of selenium bioaccumulation, (3) Provide new habitat in the Salton Basin, and (4) Have recreational value in the Holtville area. **LOCATION.** The wetland will be constructed in Holtville, CA on the southwest overbank of the Alamo River adjacent to Alamo River Drop Structure 12 (Exhibit 3). To date the site has been cleared and grubbed, but earthwork has not begun. The site extends westward from Drop 12 for approximately half a mile. **PROPOSED WORK TO BE FUNDED AND APPROACH.** The work to be funded will include a data review, site survey, update of plans and specifications, earthwork, installation of hydraulic structures, and planting of vegetation. The project approach will include construction of the following components: o Containment Berms and Roads o Sediment Basins o Sediment Disposal Areas o Sediment Basin Outlets o Emergent Marsh Cells o Emergent Marsh Plant Beds Detailed descriptions of each of these tasks are provided in other sections of this application. **ANTICIPATED TIMEFRAME.** The project is proposed to be completed in one year, roughly broken down as follows: o Data review and surveys: 3 months o Primary construction: 3 months o Planting and baseline data collection: 6 months **ANTICIPATED BENEFITS.** The anticipated benefits will follow closely from the goals and objectives: (1) Water quality improvement in the Alamo River, a principal tributary to the Salton Sea; (2) Research value for nutrient reduction and other water quality improvements as well as for developing a better understanding of selenium bioaccumulation; (3) New habitat in the Salton Basin; and (4) Recreational value in the Holtville area.

Q3 - Applicant Contact Information

Provide contact information (name, organization, phone number, and address) for the individual who would be the primary contact regarding the grant proposal.

The consulting engineer and principal point of contact for the Salton Sea Authority on this project will be Dr. William Brownlie, PE. Dr. Brownlie's contact information is as follows: William R. Brownlie, PhD, PE Chief Engineer Tetra Tech, Inc. 3475 East Foothill Boulevard Pasadena, CA 91107 Direct Line: 626.470.2302 Cell: 626.429.0995 Personal Fax: 626.470.2102
bill.brownlie@tetrattech.com www.tetrattech.com

Q4 - Project Team Qualifications

Identify and describe your project team, including any partnerships with nonprofit groups, citizens' groups, non-governmental organizations, and public or governmental agencies. Identify the proposed Project Manager/Principal Investigator (PM/PI) and key staff as well as the corresponding roles of team members. Provide a brief biographical summary for the PM/PI and each of the key staff members. An organization chart and copies of resumes can be entered in subsequent fields.

WILLIAM BROWNLIE, PHD, PE, PROGRAM MANAGER. Dr. Brownlie received his PhD in Civil Engineering and Water Resources from the California Institute of Technology. He is a California Registered Civil Engineer with more than 30 years of experience in water resource planning and analysis projects. He has been working on projects related to Salton Sea restoration since

1998, for the Salton Sea Authority and the Bureau of Reclamation. He was also Program Manager for the New and Alamo River Wetlands Master Plan Project that was funded by the State Wildlife Conservation Board. Dr. Brownlie has familiarity with the issues and stakeholders through his regular attendance and participation in public meetings throughout the region related to the Salton Sea including Salton Sea Authority Board meetings. He will bring that knowledge and experience to this project. He recently oversaw the Salton Sea shallow habitat demonstration project to demonstrate the feasibility of developing shallow saline habitat near the Salton Sea, next to the Alamo River. Through more than 75 different projects related to Salton Sea restoration, Dr. Brownlie has demonstrated his ability to manage multidisciplinary teams and to complete projects on schedule and within budget. SUJOY ROY, PHD, PRINCIPAL SCIENTIST. Dr. Roy received his PhD in Civil and Environmental Engineering from Carnegie Mellon University, Pittsburgh, Pa in 1995. Specializing in hydrology, groundwater, water resources, and water quality modeling, Dr. Roy has 17 years of experience in designing and preparing focused research projects in southern California, including multiple directly relevant projects at the Salton Sea. He recently managed the operation and maintenance of a 100-acre shallow habitat pilot project at the Sea. Dr. Roy's experience includes focused research on water quality restoration projects, including major projects related to restoration of the Salton Sea and the Everglades in Florida. For the past five years, he has worked with Dr. Brownlie extensively on water quality projects at the Salton Sea. Dr. Roy was the Project Manager of the master plan for treatment wetlands along the New and Alamo rivers and evaluated treatment removal efficiency and potential risk due to bioaccumulative substances. He managed an integrated study of Salton Sea water quality, including field monitoring, modeling, and pilot testing of ozonation to remove hydrogen sulfide. CALEB MOORE, P.E. PROJECT ENGINEER. Mr. Moore has 14 years of civil engineering experience. He has conducted hydraulic studies and supervised the design of storm drain features including natural and concrete channels, pipes, and basins. He has specialized experience in the evaluation and design of embankment protection measures and desilting basins and evaporation ponds. Mr. Moore has also managed the design of liner systems, leachate collection systems, final cover systems, and design of grading, and earthwork improvements. He has overseen the preparation of construction plans and specifications and provided engineering support during the construction phase of numerous projects. Throughout his career, Mr. Moore has managed multi-disciplined design teams, negotiated and interfaced with local regulatory agencies, and coordinated with project stakeholders. RICH HUFFMIRE, CONSTRUCTION MANAGER. Mr. Huffmire has over 30 years of experience as a construction superintendent who oversees construction activities on Tetra Tech projects throughout California. He has been Construction Manager on large excavations, lined cell development projects, and drainage improvements. He is a licensed general contractor and has had special training in stormwater management.

Q5 - Related Experience

Describe your experience with completing this type of project or similar projects within the scheduled timeframe and within the allowable budget. Provide a description of recently completed or ongoing projects that support your team's ability to perform the proposed work.

Tetra Tech is currently under contract with the Salton Sea Authority and will provide the engineering and construction services to the Authority for this project. Tetra Tech is a full-service, multidisciplinary, environmental consulting A-E firm, specializing in water resources engineering and planning, environmental science, and the assessment and mitigation of impacts on human health and the environment. Tetra Tech, founded in 1966, is headquartered in Pasadena, California. The August 2012 Engineering News Record ranked Tetra Tech as the leading provider of environmental sciences in the world and the leading provider of water services. Tetra Tech has 13,179 scientists, engineers, technicians, and support personnel in more than 275 offices. For the past 15 years, Tetra Tech has provided support to the Salton Sea Authority and Bureau of Reclamation on more than 65 separate projects related to the restoration of the Salton Sea. These projects have been performed through a series of contracts and have encompassed a broad spectrum of environmental planning, science, analysis, sampling, design, and construction. Dr. William Brownlie, PE has been the overall program manager for Tetra Tech on these projects and he is the individual who will be responsible for the Holtville Wetland project. Two relevant projects are discussed below. SALTON SEA SHALLOW HABITAT PROJECT. For the U.S. Bureau of Reclamation and USGS Salton Sea Science Office. Tetra Tech designed, permitted, constructed, and operated 100 acres of saline wetlands near the shore of the Salton Sea at the mouth of the Alamo River. The wetlands consisted of four cells, starting with water pumped from both the Salton Sea and from the Alamo River to create an initial salinity of about 20 ppt. Salinity in the four cells in the series became concentrated through evaporation, up to a final concentration of about 80 ppt. Operation activities included pumping water through a fish barrier into the pond system, measuring salinity (specific gravity), water levels, and temperature levels on a daily basis, calculating evaporation rates, and recording pumping rates and flow rates between ponds. The Tetra Tech team provided daily oversight and routine maintenance on the project including the maintenance of the fish barrier, pumps, pipelines, valves, meters, berms, roads, and instrumentation. The work was performed as two separate contracts: 2004-2007-Construction and operation and maintenance for 3 years of the 100-acre shallow habitat pilot project, and 2007-2010-Continued operation and maintenance of the site. NEW AND ALAMO RIVER WETLANDS MASTER PLAN. For the Salton Sea Authority, under a grant from the California Wildlife Conservation Board, Tetra Tech developed a Master Plan for several thousand acres of proposed wetlands along the New and Alamo rivers in California's Imperial Valley. Surface waters in this region are polluted by nutrients, pesticides, coliforms, high suspended solids, as well as selenium. Tetra Tech developed a water quality model of the Imperial Valley and has evaluated the pollutant load reduction benefits of various wetland configurations and areas. An evaluation of data from pilot wetlands demonstrated that the wetlands are highly effective at reducing the loads of nutrients, silt and coliforms. They have the potential to elevate the selenium risks to wildlife, and to address the wildlife risk issue. Tetra Tech conducted a detailed ecological risk assessment of the proposed wetland network. Tetra Tech worked with the California Department of Fish and Game and US Fish and Wildlife Service to collect water, sediment, and biota samples from existing pilot wetlands. The biota sampled included fish, aquatic invertebrates, and bird eggs. A final decision on whether the network of wetlands will be built will depend on the load reduction estimated through modeling as well as the net ecological risk.

Section : Habitat Creation And Enhancement Project

Project Specific - Habitat Creation And Enhancement Project

Q6 - Project Type

Is your Project a Habitat Creation and Enhancement type of project? If it is go to question #2 of this section. If not, go to the appropriate project type section to complete your application.

- 1) Yes
2) No

Q7 - Project Goals and Objectives

State the habitat restoration goals and objectives of the proposed project. These should be simple, objective statements about what the proposed project seeks to accomplish over the near and long term. The objectives should be measurable and consistent with the Program goals identified in the guidelines. Include a description of performance metrics that could be used to measure the effectiveness in achieving the stated goals and objectives.

Habitat will be created in the new wetland in an area that is surrounded by extremely degraded habitat. The project will provide information on the quality of the habitat and an opportunity to evaluate how the quality of habitat can be improved in this environment. The project will provide breeding and foraging habitat for multiple species. Sensitive species that could occur in the project area are listed in the attached CEQA Initial Study and Mitigated Negative Declaration. Because of concerns about selenium, the vegetation plan has been designed to discourage the use of the site by the Willow Flycatcher and certain other sensitive species until it can be determined through the research proposed here that site is safe for use by these species. It is anticipated that the wetland will 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 design of the wetland has addressed this as one of the most important issues for providing a feature that is a benefit to water quality and wildlife. The sediment basins have been designed to be deep so that they will decrease available oxygen and reduce available selenium in their waters. It is believed that some fraction of the dissolved selenium will be microbially reduced to insoluble elemental selenium 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 additional selenium will be removed from the water column through settling on the emergent marsh pond bottom. Regular water quality monitoring (including water, sediment, plant, and tissue sampling) will be conducted to quantify the removal processes described above and to identify potential risks to wildlife from selenium as well as other possible contaminants. In addition to the sensitive species discussed above, a number of bird species which are not state or federal special status species were observed and/or heard at the Shank Road site during site visits. These include such common and widespread species as the cattle egret (*Bubulcus ibis*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), northern flicker (*Colaptes aurata*), American crow (*Corvus brachyrhynchos*), verdin (*Auriparus flaviceps*), Bewick's Wren (*Thryomanes bewickii*), California towhee (*Pipilo crissalis*), song sparrow (*Melospiza melodia*), and red-winged blackbird (*Agelaius phoeniceus*).

Q8 - Proposed Habitat Creation or Enhancement

Describe the habitat proposed for creation or enhancement. Include a description of the anticipated features and characteristics of the created or enhanced habitat (such as acreage, water depth, salinity, vegetation cover) upon completion of project construction as well as the characteristics of the habitat when fully established. Indicate the timeframe for achieving full establishment of the habitat.

When constructed, the project will consist of a 31-acre complex of sedimentation ponds/wetlands 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 habitat areas will include emergent marsh cells and emergent marsh plant beds. A diagram of the site has been included as an attachment to this application.

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

EMERGENT MARSH PLANT BEDS. The planted areas in the emergent marsh cells will consist of emergent vegetation on a series of plant beds one foot below the water surface that extend out into the cells in an alternating pattern. This will create a meandering deep water channel from cell inlet to outlet. This design will better facilitate cell draining and help distribute the flow throughout the cells, reducing areas of stagnant water and possible accumulations of sediment and pollutants. A width of 30 feet for these beds is intended to allow the access of large harvesting equipment, such as thrashers, while not being so expansive as to produce dead flow zones and large areas of detritus build up where dissolved oxygen is diminished.

Maintenance equipment will access the beds from seven percent sloped ramps where the beds will 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.

Q9 - Current Site Conditions

Describe the current conditions at the site proposed for habitat creation or enhancement and the immediate vicinity. Include information on land ownership and characteristics such as land use, topography, soils and sediments, vegetation, wildlife usage, drainage patterns, contaminants, and any other features pertinent to the proposed project. The description should be sufficient to demonstrate that the site is suitable for the proposed project. Indicate whether the site is occupied by State- or federally listed species or species of special concern. Attach a location map and any photos or figures that illustrate the current condition of the site on the "Site Map and Photos" section of the application under the tab labeled "General Information and Attachments."

The site is an excellent candidate location for a wetland. The surrounding area is of degraded habitat and this project would provide excellent benefits to the area. The design plans showing the topography are included as an attachment as are the ownership maps. A location map, site overview map, and photos are also provided as attachments. As discussed for Q7 sensitive species are identified in the attached CEQA Initial Study and Negative Declaration that is included as an attachment. The Holtville site is surrounded on the east and north by the Alamo River, with adjacent owners on the southern boundary (from east to west) being Martinez, who sold a portion of their land for this project and Central Valley Cemetery District, who issued a long term lease of a portion of their property for wetland use. The "Rivers" property within the footprint of the wetland has been deeded to Holtville.

Q10 - Proposed Approach

Generally describe the approach for implementation of the proposed work. Include information on grading, water conveyance, planting, invasive plant removal, erosion control methods, and other key features of the proposed work. Indicate whether the proposed techniques have been successfully implemented at the Salton Sea or in a similar environment. Demonstrate that the best available science has been incorporated into the design. Attach design drawings and other graphical information related to the design on the "Design Drawings and Figures" section of the application under the tab labeled "General Information and Attachments." Also attach a Work Plan, Budget, and Schedule as described on the "General Information and Attachments" tab of this application.

The majority of the site has already been cleared and grubbed. Some additional vegetation removal may be necessary. The design drawings, work plan, budget, and schedule are attached separately. The tasks that remain are earthwork/grading, installing hydraulic structures and planting. Descriptions of the main components of the project that will be constructed are provided below.

CONTAINMENT BERMS AND ROADS. 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 have a six-inch aggregate road base. Burrowing muskrats have caused erosion, short circuiting, and other damage at wetland 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, the Authority will either bury a galvanized wire mesh fence along and below the toe of the outer berm slopes, or place a concrete slurry wall within the berm. A 30-foot-wide corridor of vegetation between the river bank and the perimeter of the wetlands will 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. 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 will decrease the available oxygen at the bottom to reduce available selenium in the aquatic uptake cycle. Flow will be trained to stay near the bottom by the use of remixing pipes. Two large pipes will be used at each remixing crossover to keep flow velocities and turbulence to a minimum. The long aspect ratio of the basins will provide for a maximum siltation fallout time. Sediment basins will be a maximum of 100 feet wide between the inside edges of the maintenance roads. This will allow for sediment to be excavated from both sides of the basins, which is the most common and economical method in the region. Existing practices reported by IID show that maintenance crews should be able to remove sediment in this size of earthen canals at an average rate of approximately a quarter mile per day.

SEDIMENT DISPOSAL AREAS. On-site disposal areas for sediment will be provided to increase the longevity of the wetlands sites and economize removal operations. To reduce the possibility of sediments being washed back into the river by surface run-off, no sediment disposal areas will be located between the wetlands and river banks. The disposal areas will be 24 feet wide and two feet deep and will be adjacent to the sediment basins on the upland side so that the sediment can be excavated and dropped in one movement of the equipment.

SEDIMENT BASIN OUTLETS. Basin outlets will be precast concrete boxes with removable flashboards so the outlet flow will always come from the upper six inches of the basin water column before it flows into the emergent marsh cells.

EMERGENT MARSH CELLS AND EMERGENT MARSH PLANT BEDS. These features are described for Q8.

Q11 - Project Benefits

Describe the anticipated benefits to be provided by the proposed project and explain how the project would further the goals of the Program. Indicate the species that the habitat is intended to support and describe the relative contribution the project would make in supporting the priority fish and wildlife described in the guidelines. If applicable, describe how the proposed project would benefit adjacent habitat or provide connectivity among existing habitats. Also, describe future actions, if any, needed beyond the scope of this project to fully address the overall project goals.

While the project will create a new habitat area, the primary benefit of the project will be in improving water quality of the water flowing into the Salton Sea. Salton Sea restoration can never be fully completed until the quality of the inflow water is improved. The pilot wetlands on the New River have shown that wetlands can be beneficial in water quality improvements. The proposed Holtville wetland along with the recently completed Alamo River wetland at Shank Road will be important steps toward improving the quality of the river water. Wetlands coupled with on-farm best management practices and Total Maximum Daily Load (TMDL) limits on silt and other constituents could result in substantial water quality improvements of the Alamo and New rivers. The type of habitat, fish, bird and other wildlife species that would use the wetland are discussed in the attached CEQA Initial Study. Other the low level of

maintenance discussed for the next question, future activities would include valuable data for future research on water quality and possible expansion of the wetland program to other sites that have already been identified in the Wetland Master Plan for the New and Alamo Rivers.

Q12 - Operations and Maintenance (O&M)

Generally describe how the project would be operated and maintained over time. Include a description of periodic maintenance activities that would be required, an estimate of projected costs, and a description of the frequency and timing of activities such as water management, vegetation management, sediment removal, and other O&M activities relevant to the proposed project. Indicate who would perform long-term maintenance and describe how the O&M would be funded.

The applicant will be expected to prepare a detailed O&M Plan for the project, which should be included as a task component of the Work Plan and Budget.

The project is designed for minimal long term management. The existing pilot wetlands on the New River have been functioning for more than a decade. The Holtville wetland design builds upon the experience gained at these wetlands to be even more effective and lower maintenance. The system is designed as a gravity-fed, low maintenance project. The primary maintenance item will be cleanout of the sediment ponds, which is expected to be on a 10 or more year cycle. The sediment basins have been designed to be more accessible for maintenance than the ones on the New River. Berms are designed to be wider than the New River wetlands to avoid problems associated with burrowing muskrats. The site is located in floodplains and designed to withstand the very infrequent flooding that may occur. Annual maintenance costs, therefore, will be very low, less than 1% of construction costs. There is no energy requirement for operation. We have included in our request, \$50,000 for maintenance which is expected to cover maintenance of plantings for the first five years. This would include funds to be expended after the first year to replace vegetation that does not survive the first season. As indicated in the ownership letter provided as an attachment, the owners have accepted responsibility for site maintenance.

Q13 - Monitoring and Adaptive Management

Generally identify the areas of scientific uncertainty associated with the project and describe the plan to adaptively manage the habitat to achieve the project goals and objectives. Describe the monitoring that would be conducted to measure performance and inform adaptive management adjustments in the future.

The applicant will be expected to prepare a detailed Monitoring and Adaptive Management Plan for the project, which should be included as a task component of the Work Plan and Budget. The plan will be for a minimum of 5 years.

Monitoring reports are to be submitted annually to DFG. Funding for implementation of the first 2 years of monitoring under the plan can be included in the applicant's budget. Indicate the funding source for the monitoring and adaptive management beyond the initial 2 years.

The Long-Term Management Plan is provided as an attachment. Monitoring will be accomplished in accordance with the program in place for monitoring the existing wetlands on the New and Alamo rivers. Funding for the first two years of monitoring is included in the grant request. The Bureau of Reclamation has funded quarterly monitoring of the existing wetlands and this wetland will be added to the monitoring scope.

Q14 - Phasing

Indicate whether and how the proposed work might be phased or reduced if the project is funded at a reduced level. Explain how project benefits and total cost of the project would be affected if portions were deferred to later years. Also, describe the extent to which the proposed habitat could be expanded in the future and the cost effectiveness of those additions.

If the proposed work is a continuation of previously completed work, describe the extent to which the continued success of the prior work is dependent upon the proposed work. If the previous work was funded by a State agency, list the project name and year the grant was awarded.

The project could be phased as follows: PHASE 1: GRADING/EARTHWORK PHASE 2: INSTALL HYDRAULIC STRUCTURES PHASE 3: PLANTING The grant request is for the three phases, but the Authority could complete Phase 1 or preferably Phase 1 and 2 with funds from this grant and seek other funding sources the remaining work. Recently a largely volunteer group did the planting for the Shank Road wetland, so if this grant covered only Phase 1 and 2, a similar arrangement could possibly set up for this new wetland at Holtville. Previous phases of work were funded by the Bureau of Reclamation and IID, which included survey work, design, permitting, preparation of environmental documentation including the CEQA Initial Study and Mitigated Negative Declaration, and clearing and grubbing of the site.

Q15 - Availability of Water

If the proposed project requires water, describe the water requirements (volume and quality) and identify the source(s). Explain the reliability of the water source and describe how the proposed habitat would be influenced by a temporary reduction or interruption of water supply or changes in water quality. Identify the sources of funding for the water supply.

Water will be diverted directly from the Alamo River and returned to the river. The source is steady and reliable. 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. There are no short- or long-term water costs.

Q16 - Adjacent Property Impacts

Describe how the proposed project might affect adjacent property and landowners. Disclose any known concerns or opposition to the project or land access issues.

Adjacent land uses are mostly riparian or undeveloped open space and no conflicts with adjacent uses have been identified. The City of Holtville considers the land use to be complementary to their community and has been very supportive of the construction of the project and will assume maintenance of the site.

Q17 - Sustainability and Climate Change

Describe the resilience of the proposed habitat to changing conditions, such as higher average temperatures, decrease in the surface elevation of the Salton Sea, and increased salinity in the Salton Sea. Indicate the period of time that the proposed habitat would be functional.

Global climate change is unlikely to affect the success of the project. Flows in the Alamo River are fairly constant, relatively large compared to the wetland diversions, and expected to continue for the foreseeable future. To the extent there are some decreases in flow volumes in the Alamo River, the water quality problems in the river may become more severe, and the water quality benefits of wetlands more obvious.

Section : Water Quality Improvement Project

Water Quality Improvement Project

Q6 - Project Type

Is your project a Water Quality Improvement type of project? If it is go to question #2 of this section. If not, go to the appropriate project type section to complete your application.

- 1) Yes
 2) No

Q7 - Project Goals and Objectives

State the goals and objectives of the proposed project. These should be simple, objective statements about what the proposed project seeks to accomplish over the near and long term. The goals should be measureable and consistent with the Program goals identified in the guidelines. Include a description of performance metrics that could be used to measure the effectiveness in achieving the stated goals and objectives.

The goals and objectives of the project are to (1) Improve the quality of water flowing in the Alamo River, a principal tributary to the Salton Sea, (2) Create a project that has research value for nutrient reduction and other water quality improvements as well as for developing a better understanding of selenium bioaccumulation, (3) Provide new habitat in the Salton Basin, and (4) Have recreational value in the Holtville area.

Q8 - Proposed Water Quality Improvements

Describe the proposed water quality improvement project, including physical features of the project, the source and quality of the water to be improved, the water quality issue to be addressed (for example, selenium, nutrients), the anticipated level of improvement, the location of any proposed facilities, the anticipated volume of water with improved quality, the anticipated use of improved water, the amounts and disposition of contaminants removed, and other relevant characteristics of the proposed project. Indicate the timeframe for the project to become fully functional.

Water will be diverted directly from the Alamo River and returned to the river. The source is steady and reliable. 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 (nearly 4 million gallons per day). The pilot wetlands on the New River have demonstrated that wetlands can be used to return water with significant improvements in water quality. Data evaluations in 2006 showed that the New River wetlands removed about 95% of the total suspended solids were removed, 60-80% of the total nitrogen, 60-70% of total phosphorus, and more than 50% of the selenium. Experience at other these wetlands indicate that the vegetation can be quickly established and the wetlands can be almost fully functional after the first year of operation. SEDIMENT BASINS. The State Water Quality Control Board considers sedimentation/siltation, selenium, and pesticides to be the pollutants of concern in the Alamo River. Sediment basins have been enlarged to comprise approximately a third of the total water volume and designed to reduce the potential for bioaccumulation of selenium. To reduce surface evaporation and to reduce the potential for attracting wildlife the basins are designed to be narrow and deep. The 10-foot depth will decrease the available oxygen at the bottom to reduce available selenium in the aquatic uptake cycle. Flow will be trained to stay near the bottom by the use of remixing pipes. Selenium attached to sediment particles will settle to the bottom and ultimately be removed during cleanout. The long aspect ratio of the basins will provide for a maximum siltation fallout time. SEDIMENT DISPOSAL AREAS. On-site disposal areas for sediment will be provided to increase the longevity of the wetlands sites and economize removal operations. Excavation will occur after the results from the wetland monitoring have been obtained. Sediments will be analyzed for selenium and other constituents of concern prior to excavation. EMERGENT MARSH CELLS. The emergent marsh cells will have a normal water surface elevation one foot below the sediment basin water surface and will be six feet deep in the open water areas. Two cells similar in surface area and water volume will be constructed. The overall flows required will be calculated using a nominal seven-day hydraulic detention time for half of the flow going through each cell. The hydraulic control boxes will have the ability to handle the total flow through each cell for flushing. The cell outlet pool areas have been enlarged from previous designs and will be protected from floating detritus and other debris by a vegetation filter plant bed six inches in depth.

EMERGENT MARSH PLANT BEDS. The planted areas in the emergent marsh cells will consist of emergent vegetation on a series of plant beds one foot below the water surface that extend out into the cells in an alternating pattern. This will create a meandering deep water channel from cell inlet to outlet. This design will better facilitate cell draining and help distribute the flow throughout the cells, reducing areas of stagnant water and possible accumulations of sediment and pollutants. A width of 30 feet for these beds is intended to allow the access of large harvesting equipment, such as thrashers, while not being so expansive as to produce dead flow zones and large areas of detritus build up where dissolved oxygen is diminished. Maintenance equipment will access the beds from seven percent sloped ramps where the beds will meet the containment berm/maintenance roads.

Q9 - Current Site Conditions

If the project requires the construction or installation of facilities, describe the current conditions at the location(s) where the facilities would be installed. Include information on characteristics such as land use, topography, soils, vegetation, wildlife usage, drainage patterns, contaminants, and any other features pertinent to the proposed project location. If the proposed project involves changes in land use practices in the watershed, describe the characteristics of the area affected. Indicate whether the site is occupied by State- or federally listed species or species of special concern. Attach a location map and any photos or figures that illustrate the current condition of the site or area on the "Site Map and Photos" section of the application under the tab labeled "General Information and Attachments."

The site is an excellent candidate location for a wetland. The surrounding area is of degraded habitat and this project would provide excellent benefits to the area. The design plans showing the topography are included as an attachment as are the ownership maps. A location map, site overview map, and photos are also provided as attachments. As discussed for Q7 sensitive species are identified in the attached CEQA Initial Study and Negative Declaration that is included as an attachment. The Holtville site is surrounded on the east and north by the Alamo River, with adjacent owners on the southern boundary (from east to west) being Martinez, who sold a portion of their land for this project and Central Valley Cemetery District, who issued a long term lease of a portion of their property for wetland use. The "Rivers" property within the footprint of the wetland has been deeded to Holtville.

Q10 - Proposed Approach

Generally describe the approach for implementation of the proposed work. As relevant, include information on construction, water conveyance, planting, and other key features of the proposed work. Indicate whether the proposed techniques have been successfully implemented at the Salton Sea or in a similar environment. Demonstrate that the best available science has been incorporated into the approach.

If relevant, attach design drawings and other graphical information related to the design on the "Design Drawings and Figures" section of the application under the tab labeled "General Information and Attachments."

Also attach a Work Plan, Budget, and Schedule as described on the "General Information and Attachment" tab of this application.

A major portion of the site has already been cleared and grubbed. Some additional vegetation removal may be necessary. The design drawings, work plan, budget, and schedule are attached separately. The tasks that remain are earthwork/grading, installing hydraulic structures and planting. Descriptions of the main components of the project that will be constructed are provided below.

CONTAINMENT BERMS AND ROADS. 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 have a six-inch aggregate road base. Burrowing muskrats have caused erosion, short circuiting, and other damage at wetland 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, the Authority will either bury a galvanized wire mesh fence along and below the toe of the outer berm slopes, or place a concrete slurry wall within the berm. A 30-foot-wide corridor of vegetation between the river bank and the perimeter of the wetlands will 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. 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 will decrease the available oxygen at the bottom to reduce available selenium in the aquatic uptake cycle. Flow will be trained to stay near the bottom by the use of remixing pipes. Two large pipes will be used at each remixing crossover to keep flow velocities and turbulence to a minimum. The long aspect ratio of the basins will provide for a maximum siltation fallout time.

Sediment basins will be a maximum of 100 feet wide between the inside edges of the maintenance roads. This will allow for sediment to be excavated from both sides of the basins, which is the most common and economical method in the region. Existing practices reported by IID show that maintenance crews should be able to remove sediment in this size of earthen canals at an average rate of approximately a quarter mile per day. **SEDIMENT DISPOSAL AREAS.** On-site disposal areas for sediment will be provided to increase the longevity of the wetlands sites and economize removal operations. To reduce the possibility of sediments being washed back into the river by surface run-off, no sediment disposal areas will be located between the wetlands and river banks. The disposal areas will be 24 feet wide and two feet deep and will be adjacent to the sediment basins on the upland side so that the sediment can be excavated and dropped in one movement of the equipment. **SEDIMENT BASIN OUTLETS.** Basin outlets will be precast concrete boxes with removable flashboards so the outlet flow will always come from the upper six inches of the basin water column before it flows into the emergent marsh cells. **EMERGENT MARSH CELLS AND EMERGENT MARSH PLANT BEDS.** These features are described for Q8.

Q11 - Project Benefits

Describe the anticipated benefits to be provided by the proposed project and explain how the project would further the goals of the Program. Identify the species or habitats that would benefit from the water quality improvement and describe the relative contribution the project would make in supporting the priority fish and wildlife described in the guidelines.

The primary benefit of the project will be in improving water quality of the water flowing into the Salton Sea. Salton Sea restoration can never be fully completed until the quality of the inflow water is improved. The pilot wetlands on the New River have shown that wetlands can be beneficial in water quality improvements. The proposed Holtville wetland along with the recently completed Alamo River wetland at Shank Road will be important steps toward improving the quality of the river water. Wetlands coupled with on-farm best management practices and Total Maximum Daily Load (TMDL) limits on silt and other constituents could result in substantial water quality improvements of the Alamo and New rivers.

Q12 - Operations and Maintenance (O&M)

Generally describe how the project would be operated and maintained over time. Include a description of periodic maintenance activities that would be required, an estimate of projected costs, and a description of the frequency and timing of activities such as water management, vegetation management, sediment removal, and other O&M activities relevant to the proposed project. Indicate who would perform long-term maintenance and describe how the O&M would be funded.

The applicant will be expected to prepare a detailed O&M Plan for the project, which should be included as a task component of the Work Plan and Budget.

The project is designed for minimal long term management. The existing pilot wetlands on the New River have been functioning for more than a decade. The Holtville wetland design builds upon the experience gained at these wetlands to be even more effective and lower maintenance. The system is designed as a gravity-fed, low maintenance project. The primary maintenance item will be cleanout of the sediment ponds, which is expected to be on a 10 or more year cycle. The sediment basins have been designed to be more accessible for maintenance than the ones on the New River. Berms are designed to be wider than the New River wetlands to avoid problems associated with burrowing muskrats. The site is located in floodplains and designed to withstand the very infrequent flooding that may occur. Annual maintenance costs, therefore, will be very low, less than 1% of construction costs. There is no energy requirement for operation. We have included in our request, \$50,000 for maintenance which is expected to cover maintenance of plantings for the first five years. This would include funds to be expended after the first year to replace vegetation that does not survive the first season. As indicated in the ownership letter provided as an attachment, the owners have accepted responsibility for site maintenance.

Q13 - Monitoring and Adaptive Management

Generally identify the areas of scientific uncertainty associated with the project and describe the plan to adaptively manage the project to help ensure that the project goals and objectives are achieved. Describe the monitoring that would be conducted to measure performance and inform adaptive management adjustments in the future.

The applicant will be expected to prepare a detailed Monitoring and Adaptive Management Plan for the project, which should be included as a task component of the Work Plan and Budget. Monitoring reports are to be submitted annually to DFG. Funding for implementation of the first two years of monitoring under the plan can be included in the applicant's budget. Indicate the funding source for the monitoring and adaptive management beyond the initial two years.

The Long-Term Management Plan is provided as an attachment. Monitoring will be accomplished in accordance with the program in place for monitoring the existing wetlands on the New and Alamo rivers. Funding for the first two years of monitoring is included in the grant request.

Q14 - Phasing

Indicate whether and how the proposed work might be phased or reduced if the project is funded at a reduced level. Explain how project benefits and total cost of the project would be affected if portions were deferred to later years. Describe the extent to which the proposed project could be expanded in the future and the cost effectiveness of those additions.

If the proposed work is a continuation of previously completed work, describe the extent to which the continued success of the prior work is dependent upon the proposed work. If the previous work was funded by a State agency, list the project name and year the grant was awarded.

The project could be phased as follows: PHASE 1: GRADING/EARTHWORK PHASE 2: INSTALL HYDRAULIC STRUCTURES PHASE 3: PLANTING The grant request is for the three phases, but the Authority could complete Phase 1 or preferably Phase 1 and 2 with funds from this grant and seek other funding sources the remaining work. Recently a largely volunteer group did the planting for the Shank Road wetland, so if this grant covered only Phase 1 and 2, a similar arrangement could possibly set up for this new wetland at Holtville. Previous phases of work were funded by the Bureau of Reclamation and IID, which included survey work, design, permitting, preparation of environmental documentation including the CEQA Initial Study and Mitigated Negative Declaration, and clearing and grubbing of the site.

Q15 - Availability of Water

Describe the water requirements (volume and quality) and identify the source(s). Explain the reliability of the water source and describe how the proposed project would be influenced by a temporary reduction or interruption of water supply or changes in water quality.

Water will be diverted directly from the Alamo River and returned to the river. The source is steady and reliable. 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. There are no short- or long-term water costs.

Q16 - Adjacent Property Impacts

Describe how the proposed project might affect adjacent property and landowners. Disclose any known concerns or opposition to the project or land access issues.

Adjacent land uses are mostly riparian or undeveloped open space and no conflicts with adjacent uses have been identified. The City of Holtville considers the land use to be complementary to their community and has been very supportive of the construction of the project and will assume maintenance of the site.

Q17 - Sustainability and Climate Change

Describe the sustainability of the proposed project and its resilience to change.

Global climate change is unlikely to affect the success of the project. Flows in the Alamo River are fairly constant, relatively large compared to the wetland diversions, and expected to continue for the foreseeable future. To the extent there are some decreases in flow volumes in the Alamo River, the water quality problems in the river may become more severe, and the water quality benefits of wetlands more obvious.

Section : Research Project

Research Project

Q6 - Project Type

Is your project a Research type of project? If it is go to question #2 of this section. If not, go to the appropriate project type section to complete your application.

- 1) Yes
2) No

Q7 - Research Goals and Objectives

State the goals and objectives of the proposed research project.

The Holtville Wetland is not a research project in and of itself. However, along with the new Alamo River Wetland at Shank Road and the two pilot wetlands on the New River, the proposed Holtville Wetland will have significant research value in the future. Research value will be related to water quality improvements and removal of contaminants and selenium behavior in treatment wetlands.

Q8 - Proposed Research

Describe the proposed research, the scientific basis, and the questions that the research would investigate. Include any conceptual models that may help clarify the areas of uncertainty. Attach any relevant conceptual models on the “Design Drawings and Figures” section under the “General Information and Attachments” tab.

Q9 - Relevance to Program Goals

Describe how the proposed research directly relates to the successful creation and maintenance of habitat at the Salton Sea in the near term. Within the context of previous attempts to collect similar information, describe how the proposed research would fill a data gap or provide new information useful to improving existing and future habitat values.

Q10 - Research Methods

Describe the approach and design of the proposed research. Include the initial hypotheses to be tested, anticipated experimental methods, and likely statistical analyses. For research conducted in the field, indicate the locations where work would occur.

Attach maps and other graphical information related to the research on the “Design Drawings and Figures” section of the application under the tab labeled “General Information and Attachments.”

Also, attach a Work Plan, Budget, and Schedule as described on the “General Information and Attachment” tab of this application.

Q11 - Timeframe

Indicate how soon after project initiation the proposed research could provide managers with preliminary interpretations of data that may lead to insight into creation and management of habitats.

Q12 - Phasing

Indicate whether and how the proposed work might be phased or reduced if the project is funded at a reduced level. Explain how project benefits and total cost of the project would be affected if portions were deferred to later years.

Q13 - Benefits of the Research

Describe the anticipated benefits to be provided by the proposed research and explain how the results would further the goals of the Program. Indicate the species that would ultimately benefit from the work and describe the relative contribution the project could make in supporting the priority fish and wildlife described in the guidelines.

Section : Adaptive Management Experimentation Project

Adaptive Management Experimentation Project

Q6 - Project Type

Is your project an Adaptive Management Experimentation type of project? If it is go to question #2 of this section. If not, go to the appropriate project type section to complete your application.

- 1) Yes
2) No

Q7 - Adaptive Management Goals

State the goals and objectives of the proposed adaptive management experiment. These should be simple, objective statements about what the proposed work seeks to accomplish over the near and long term. The goals should be measurable and consistent with the Program goals identified in the guidelines. Include a description of performance metrics that would be used to measure the effectiveness in achieving the stated goals and objectives.

Q8 - Proposed Experiment

Describe the proposed adaptive management experiment. Include a description of the habitat or management practices that would be manipulated for the purposes of the experiment and the timeframe over which the experiment would be conducted. Describe the rationale for the proposed experiment, including the scientific basis and any conceptual models that help clarify the areas of uncertainty.

Attach any relevant conceptual models on the “Design Drawings and Figures” section under the “General Information and Attachments” tab. Indicate the timeframe for the project to become fully functional.

Q9 - Current Site Conditions and Management

Identify the owners and land managers of the site where the proposed work would be conducted. Describe the current conditions at the site proposed for the experiment, including information on the physical characteristics pertinent to the proposed project. Describe how the site is managed, with particular attention to management actions that may be modified as a result of the experiment. Indicate whether the site is occupied by State- or federally listed species or species of special concern.

Attach a location map and any photos or figures that illustrate the current condition of the site on the “Site Map and Photos” section of the application under the tab labeled “General Information and Attachments.”

Q10 - Proposed Approach

Describe the approach for implementation of the proposed work. Include information on the study design, monitoring requirements, and a description of how management would be adapted as a result of project outcomes. Also, describe the extent of any additional activities at the site needed to accommodate the experiment, such as earthwork, installation of water conveyance structures, planting, invasive plant removal, erosion control, and other key actions of the proposed work. Indicate whether the proposed techniques have been successfully implemented at the Salton Sea or in a similar environment.

Attach design drawings and other graphical information related to the experiment on the “Design Drawings and Figures” section of the application under the tab labeled “General Information and Attachments.”

Also attach a Work Plan, Budget, and Schedule as described on the “General Information and Attachment” tab of this application.

Q11 - Project Benefits

Describe the anticipated benefits to be provided by the proposed project and explain how the project would further the goals of the Program.

Q13 - Phasing

Indicate whether and how the proposed work might be phased or reduced if the project is funded at a reduced level. Explain how project benefits and total cost of the project would be affected if portions were deferred to later years.

Q13 - Availability of Water

If the proposed project requires additional water, describe the water requirements (volume and quality) and identify the source(s). Explain the reliability of the water source and describe how the proposed project would be influenced by a temporary reduction or interruption of water supply or changes in water quality.

Q14 - Adjacent Property Impacts

Describe how the proposed project might affect adjacent property and landowners. Disclose any known concerns or opposition to the project or land access issues.

Section : Attachments Section

Attachments Section

A1 - Authorizing Resolution

Attach a scanned copy of a signed resolution or equivalent document from the applicant's governing board or officer authorizing the submittal of this application.

Last Uploaded Attachments: Holtville Wetlands Resolution.pdf

A2 - Applicant Team Organization: Chart

Attach an organization chart indicating key staff and their roles relative to the proposed work.

Last Uploaded Attachments: Holtville Wetlands Org Chart.pdf

A3 - Resumes/CVs

Attach resumes/CVs for the PM/PI and key staff proposed for the project. You can combine all the CVs in one document as long as the individuals are identified.

Last Uploaded Attachments: Holtville Wetland Resumes.pdf

A3 - Continued

Upload additional CVs and Resumes here if needed.

A3 - Continued

Upload additional CVs and Resumes here if needed.

A4 - Work Plan

Attach a work plan with a task-by-task description of how the proposed work would be conducted and identify the deliverables for each task. The work plan must also identify which costs are being directly funded by the Program.

Last Uploaded Attachments: Holtville Wetlands Work Plan.pdf

A4 - Continued

Upload here any additional documents describing the work plan if needed.

Last Uploaded Attachments: Holtville CEQA Final_IS_MND.pdf,Holtville 404 Permit.pdf,Holtville NPDES Permit Response.pdf,Stormwater Annual Permit Fee 2010.pdf

A4 - Continued

Upload here any additional documents describing the work plan if needed.

A4 - Continued

Upload here any additional documents describing the work plan if needed.

A5 - Budget

Attach a budget for the requested funding showing the breakdown of estimated costs of the proposed work by task, including a list of equipment to be purchased as part of the project. The budget should also indicate the total cost of the project and the source of additional funding, if any, including any cash contributions, in-kind services, volunteer effort, maintenance and operation costs, and other grant funding. Please differentiate the grant request from the total project budget and demonstrate how the grant award would be tracked separately. Also, describe the basis for the cost estimates and the methods used to calculate them.

Last Uploaded Attachments: Holtville Wetlands Budget.pdf

A5 - Continued

Upload any additional documents describing the Budget if needed.

A5 - Continued

Upload any additional documents describing the Budget if needed.

A5 - Continued

Upload any additional documents describing the Budget if needed.

A6 - Schedule

Attach a schedule for completing the proposed work by task, and indicate significant milestones. This can be submitted in Microsoft Word, Excel, or Project file formats.

Last Uploaded Attachments: Holtville Wetlands Schedule.pdf

A6 - Continued

Upload here any additional documents describing the Schedule if needed.

A6 - Continued

Upload here any additional documents describing the Schedule if needed.

A6 - Continued

Upload here any additional documents describing the Schedule if needed.

A7 - Site Maps and Photos

Attach a location map indicating the proposed project and vicinity, and any photos and diagrams that would help illustrate the current condition of the proposed site. Please include a legal description of the project site, if available.

Last Uploaded Attachments: Holtville Wetland Configuration Map.pdf

A7 - Continued

Upload any supplemental maps or photos related to the project if needed.

Last Uploaded Attachments: Holtville Wetland Site Photos.pdf

A7 - Continued

Upload any supplemental maps or photos related to the project if needed.

A7 - Continued

Upload any maps or photos related to the project if needed.

A8 - Design Drawings and Figures

Attach design drawings that depict the proposed habitat creation or enhancement as well as any diagrams or figures that would help illustrate project features and assist in the review of the proposal.

Last Uploaded Attachments: Holtville Wetlands Site Master plan.pdf

A8 - Continued

Upload here any supplemental drawings and figures related to the project if needed.

A8 - Continued

Upload here any supplemental drawings and figures related to the project if needed.

A8 - Continued

Upload here any supplemental drawings and figures related to the project if needed.

A9 - Letters of Support

Attach any letters or other evidence from local entities indicating support for the proposed project.

Last Uploaded Attachments: Letters of Support.pdf

A9 - Continued

Upload any letters of support you may have received.

A10 - Operation and Maintenance Plan

Upload your Operation and Maintenance plan if needed.

Last Uploaded Attachments: Holtville Wetlands Management Plan.pdf