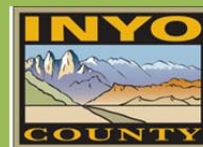


The California Resources Agency  
California River Parkways Grant  
September 1, 2015


# Owens River Water Trail



*The Other Side of California*  
DEATH VALLEY AND THE EASTERN SIERRA

**Section A. River Parkways Grant Program**

Application Form

<b>Project Name</b> OWENS RIVER WATER TRAIL		<b>Estimated Date of Completion:</b> <u>May 1, 2019</u>	
		<b>Grant Amount Requested:</b> \$ <u>500,000</u>	
		<b>Estimated Total Project Cost:</b> \$ <u>500,000</u> (State Grant and other funds and In-Kind donations)	
<b>APPLICANT (with mailing address)</b> Inyo County 135 South Jackson Street P.O. Box 337 Independence, CA 93526		<b>County</b> Inyo	<b>Nearest City/Town</b> Lone Pine
Check one: Non-Profit <input type="checkbox"/> Local Public Agency <input checked="" type="checkbox"/> State Agency <input type="checkbox"/>		<b>Project Address (or nearest cross street)</b> Lone Pine Narrow Gauge Road and the Owens River	
		<b>Senate Dist.</b> 8th	<b>Assembly Dist.</b> 26th
		<b>US Congressional Dist.</b> 8th	
<b>Applicant's Representative Authorized in Resolution</b> (Signature required at bottom of this page)			
Name: <u>Robert Harrington</u>		Title: <u>Water Department Director</u>	
Phone: <u>760-878-0001</u>		Email Address: <u>bharrington@inyocounty.us</u>	
<b>Project Manager - Person with day to day responsibility for project (if different from authorized representative)</b>			
Name: <u>Larry Freilich</u>		Title: <u>Mitigation Manager</u>	
Phone: <u>760-878-0001</u>		Email Address: <u>lfreilich@inyocounty.us</u>	
<b>Brief Description of Project</b> (Summarize major activities to be funded by this RP Grant) Planning, development, and implementation of improvements supporting a water trail on the Lower Owens River; and habitat restoration to excavate blocked, or narrow portions of river channel to accommodate passage of paddle craft and to improve water quality.		<b>Latitude</b> 36°37'07 N	<b>Longitude</b> 118°02'09 W
		Coordinates Represent: <u>Upper end of trail</u> Coordinates Determined Using: <u>Google Earth</u>	
Name of River, Stream or Creek:			
<b>Two (2) statutory conditions</b>	Recreation ..... <input checked="" type="checkbox"/>	<b>Public Access</b> <input checked="" type="checkbox"/>	
	Habitat ..... <input checked="" type="checkbox"/>	<b>Project Type:</b> <u>Planned recreation in developing ecosystem</u>	
	Flood Management ..... <input type="checkbox"/>	<b>Created:</b> _____	
	Conversion ..... <input type="checkbox"/>	<b>Restored:</b> _____	
	Conservation & Interpretive Enhancement ..... <input type="checkbox"/>	<b>Acquired:</b> _____	
I certify that the information contained in this project application, including required attachments, is complete and accurate.			
Signed: 		Date: <u>8/31/2015</u>	
Applicant's Authorized Representative as shown in Resolution			
<b>Print Name:</b> Dr. Robert Harrington	<b>Print Title:</b> Inyo County Water Department Director	<b>Designee?</b> Y N <input type="checkbox"/> <input type="checkbox"/> yes, attach letter of designation from authorized representative.	

## SECTION B: ONE-PAGE PROJECT SUMMARY

A. Summarize how the project meets the program goals. Include a brief description of current site conditions, project activities, community and government agency partnerships, and benefits of the proposed project.

B. Summarize major components of the project.

Sample Project Categories	Requested Grant Funds	Other Funding Source(s)	Total Cost
Project management/administration			
Planning, design, & permitting			
Implementation/construction			
Land acquisition			
Plant establishment & project assessment			
Contingency			
<b>Total</b>			

C. Summarize any public access components of the project. If the project is part of a larger parkway plan, summarize how the project is incorporated into this parkway plan. If the project can be accessed by biking, walking, or public transportation, please explain.

## APPLICATION SECTION ONE-PAGE PROJECT SUMMARY

The Owens River Water Trail is a signature recreation project—the first dedicated water trail on a river in California. The project creates a 6.3 mile in-water trail on the newly rewatered Lower Owens River in the scenic Owens Valley that is solely dedicated to kayaks, canoes, and other paddlecraft. Recreationists will find well designed parking areas, accessible paths to the river, and formal paddlecraft entry and exit points. The Owens River Water Trail is also improves aquatic habitat; opening up the river and improving transport of organic sediments.

The Lower Owens River is a component of the Lower Owens River Project (LORP) which, in addition to ecosystem recovery promotes sustainable recreation. The area of the proposed water trail has a moderately wide channel characterized by large areas of open water separated by relatively short lengths of channel that are obstructed or bridged by bulrush and cattail (collectively referred to as tules). Tules and coyote willow line the margins of the open water channel; ponds open to salt grass meadow. Tree willow is the dominate overstory. The river has a sustained 40 cfs flow and a yearly seasonal habitat flow of up to 200 cfs.

The project is expected to improve water quality. Years of low flows prior to 2006 allowed tules to colonize the channel. In places, thick beds of tule roots completely cover the river bottom and vegetation blocks the channel. The seasonal habitat flows meant to move muck out the system are diminished in the vegetation and the buildup of organic material, derived from decaying tules, cannot be effectively flushed by the habitat flow. The project improves water quality by opening these blockages. The newly established channel will better fit the river's hydrograph and is expected to improve flushing of organic sediment and protect the fishery.

Inyo County and LADWP jointly manage the LORP. A preferred Recreation use plan for the LORP, which has at its core a river trail, has the support of LADWP and parties to the MOU, and was developed by a diverse range of stakeholders including the LADWP, conservation organizations, ranchers, anglers, students, area Indian Tribes, local, state, and federal agencies, local businesses, and the general public. A water trail on the Lower Owens River has popular support, and now area businesses, local agencies and NGOs are meeting to discuss forming a Lower Owens River stewardship group.

The entire project area is owned by the City of Los Angeles and is open to daytime use by the public. The Owens River Water Trail is 2.5 miles from the center of Lone Pine, easily accessible by bike or car. Lone Pine aspires to be identified as a River Town; this project establishes that connection. The Lone Pine economic plan associated with the project includes a concessionaire running regularly scheduled drop-offs and pick-ups of boaters between the river and the many local hotels.



## C-1: project requirements and statutory conditions

**A. Habitat**

**1. Hydrologic and Site Conditions:** Fifty-six miles of the Owens River were dried up when the City of Los Angeles diverted the entirety of the river into the Los Angeles Aqueduct in 1913. Prior to diversion, City of Los Angeles Hydrographers recorded flow in the river averaged of 425 cubic feet-second (cfs), and peaked at well over 3,000 cfs. Thereafter, groundwater and a few ditches provided enough inflow to maintain a small stream and a number of small beaver ponds. In December 2006, Los Angeles and Inyo County jointly initiated the Lower Owens River Project (LORP), established a perpetual flow down the dry channel. The LORP guarantees a minimum river base flow of 40 cfs with additional springtime water releases indexed to forecasted snowmelt runoff.

The goal of the LORP is the establishment of a healthy, functioning Lower Owens River riverine-riparian ecosystem, and the establishment of healthy functioning ecosystems in the other elements of the LORP, for the benefit of biodiversity and threatened and endangered species, while providing for the continuation of sustainable uses including recreation, livestock grazing, agriculture, and other activities.

In years when runoff from snow melt is predicted to be normal or higher, a 200 cfs flushing flow is sent down the river in the late spring. This seasonal habitat flow is meant to mimic the dynamic seasonal disturbance of an unregulated river; removing muck from the streambed and maintaining water quality, wetting the floodplain and encouraging recruitment of willow and cottonwood, and controlling cattails and bulrush (collectively referred to as tules).

Physically, the river in the project area is a narrow to moderately wide channel characterized in part by areas of open water separated by relatively short lengths of channel that are completely blocked or bridged by tules. Water depth between these bridged areas is sometimes more than 8 feet in base flow conditions. The bridged sections may be the result of beaver activity.

The 56 mile long river-riparian corridor is almost completely undeveloped. Other than the river intake and flow measuring structures, and three road crossings, the Lower Owens floodplain is without development. Outside of wilderness, there are few accessible rivers in California that are in this open and wild condition.

There are no specific environmental concerns in the 6.3 mile section of the river proposed for the ORWT. No special management of rare, threatened, or endangered species is prescribed for the project area. Annual monitoring for and treatment of invasive vegetation, primarily Saltcedar (*Tamarix ramosissima*) and Perennial pepperweed (*Lepidium latifolium*) control invasive species.

**2. How the Project will restore water quality and protect the fishery:** Water quality standards set by the Lahontan Regional Water Quality Board for the river have been met, however, in this section of the river the warm water fishery (largemouth bass, bluegill, catfish, bullhead, and

carp) is subject to perturbation. The seasonal flushing flows meant to move out muck are attenuated by tules in this area. Buildup of organic material, derived primarily from decaying tules, cannot be effectively flushed by the seasonal flow, so unplanned high flows can stir up sediments. If this occurs when the water is warm then biological oxygen demand can drive down dissolved oxygen levels, which can cause fish kills.

**3. Stream management:** The river will be cleared by mechanical means, both by tracked heavy equipment and by specialized hand tools. About 12% of the 6.3 mile proposed water trail is obstructed by tules. Years of very low flows prior to 2006 allowed tules to colonize the channel resulting in thick beds of roots, which cover the river bottom and cap sediments. These areas will be excavated to remove deep layers of roots and expose sediments down to six feet below the water surface. Once these areas are opened the newly established uninterrupted channel will provide a sediment transport function that better fits the river's hydrograph. This is expected to improve water quality and protect the fishery.

After the river blockages are removed, 1.75 miles of narrow channel will need to be hand cleared by volunteers. The methods and procedures for this work are well established. In 2013, under permit from the California Department of Fish and Wildlife (CDFW) and the LADWP, volunteers organized by the County opened up a 1.30 mile section of the river in seven days. Based on this experience, hundreds of yards of encroaching tules can be cleared and removed from the water by five people, working in the river channel, in one day. The primary cutting tool is an 8 inch rice knife that is attached to a six foot PVC shaft. The design was developed by CDFW and further refined by the county to increase efficiency and safety.

Generally, five people are needed to hand clear the channel. Two "cutters" progress upstream, cutting the tule stalks from the rhizome as deep as possible on both sides of the channel. Two "transporters" float the buoyant tule spoils downriver to a "hauler" who removes the floating debris and piles it on the bank for removal later in the day.

The section of the river selected for the water trail has a good amount of large woody debris (LWD) along the banks and river bottom. The Owens River is a soft bottom river lined with tules. Tules extend from the wetted bank into the channel in water up to four feet deep. There are no boulders or other large rocky debris in the system to redirect water or provide shelter for fish. In the Owens River LWD serves that function. Most of the LWD encountered while clearing tules is left in place if it does not interfere with boat travel, but some is hauled to the water's edge and secured to the bank. Strategic placement of LWD provides physical and biological benefits. It provides habitat for invertebrates and provides cover for fish. Wood placed parallel to the current creates a hard channel edge that provides a local increase in water velocity, which can inhibit tule colonization into the channel. Small debris dams that don't interfere with boating will be left in place to provide protective cover for fish.

**4. Riverine and riparian plan elements:** Parking areas, paths to the water and water entry and exit points will be constructed of gravel and geotextiles, which allow for water infiltration. Boat

launches constructed of gravel and geotextile will be built along the river's edge, but these will have little impact on the river.

**5. Mosquito management:** The LORP has created hundreds of acres of wetlands in the Owens Valley since 2006. The County and LADWP pay costs associated with monitoring, treatment, and public education arising from components of the LORP. Mosquito abatement is an ongoing effort on the LORP jointly conducted by LADWP and the County. The project area is within the LORP.

**6. Immediate threats:** No other projects are being implemented, or are planned that would threaten river-riverine habitat in the vicinity of the project area.

**7. Fate of habitat if no project:** Fish kills will continue to occur in this stretch of the river and may become more frequent if organic material is not suspended and moved out of the system. There is concern that the river is accumulating dissolved organic material. However, now, even large flows that reach this part of the river are attenuated in the tule blockages. Energy from the current dissipates in tule blockages and suspended sediment settles out of the water column leading to channel aggradation and expansion of tule beds.

### **C. Recreation**

**1. Recreational components planned:** Clearing the channel of 0.78 miles of blocked river by mechanically harvesting tules and selectively dredging the bottom will open up the river and allow boaters and standup paddle boards an enjoyable and uninterrupted journey down 6.3 miles of an exceptionally scenic section of the Lower Owens River.

There is great demand to open the Lower Owens River for recreation. Presently, there are no extended paddle routes anywhere along the 54 miles of newly rewatered river, and the short lengths of open water that do exist are not easily accessible. Users must park in dirt, negotiate barb wire fences, climb over or around woody debris and desert scrub, and pass through a wall of tules to get to the water. Now, there is no easy access to the river. It is practically impossible for the disabled to reach the water. The ORWT, with its formal parking areas near the river, paths to the water, and accessible launches will allow users an easy approach to the river and simple, safe, entry into the water. These improvements will allow access to users of all abilities and ages to experience the river.

Implementation of the LORP led to the development of many hundreds of acres of tule marsh in the Blackrock Waterfowl Management Area, off-river lakes and ponds, and along the Lower Owens River-Riparian corridor. Marsh habitat is now overrepresented in the LORP and open water is at a premium. The ORWT removes a relatively small area of marsh habitat and increases open water habitat. As mentioned, opening the channel is expected to improve water quality and benefit the warm water fishery.

River kayaking, canoeing, and standup paddle boarding are all very popular sports and the ORWT will be an attractive location for these activities. **2. Construction standards:** Improvements will be designed around standards developed by the National Park Service, Rivers, Trails & Conservation Assistance Program. Water trail launches, paths to the water and near river parking areas will be designed with guidance from Iowa Department of Natural Resources, Land and Stream Management Guides. Inyo County code and best management practices will be adhered to.

**3. Trail construction materials:** Water forms the surface of the 6.3 mile trail. The water trail is 100% permeable. Paths to the water and the launches will, to the extent they can accommodate the handicapped, be constructed of permeable materials. When completed, the entire river trail will be accessible to the disabled. Creating an experience where the disabled can enjoy nature in a unique way is one of the primary goals of the project. Kayaking is one of the few sports that offer independent recreational opportunities for the handicapped.

## C-2: Community, Nonprofit, and Government Agency Support and Collaboration

### **A. Collaboration with Organizations**

**1. Partnerships and partner roles:** A preferred Lower Owens River Recreation Use Plan (RUP), which has at its center an Owens River Water Trail (paddle trail), was released in 2013. The RUP provides a framework for future recreation use that helps protect the area from the unintended consequences of continuing area use in the absence of a common, balanced recreation vision and management strategy. LADWP and the County developed a scope of work for the RUP. LADWP identified the section of river planned for an ORWT as suitable for such use. The RUP was developed by a team of recreation planners at M.I.G. incorporated (Berkeley). The Sierra Nevada Conservancy funded the plan. The RUP designed to balance the need to protect the recovering ecosystem, respect traditional values and uses, provide attractive recreational opportunities, not interfere with LADWP's operations, and to be consistent with LORP goals. The draft is the product of broad research, agency consultations, and extensive public outreach including workshops and presentations, stakeholder interviews and surveys. The plan identifies key goals of the recreation plan as strengthening the tourist economy of local communities, enhancing user opportunities, improving access and wayfinding, improving access for fishing, canoeing, and kayaking, and inspiring cultural and environmental education.

**2. Incorporation of partners in project planning/design/implementation:** Area Native American tribes are key stakeholders and have been active in the development of the RUP. Employees of the Lone Pine Paiute Shoshone Tribe participated in the experimental clearing of tules in the Lower Owens River and have used tules stems harvested from the activity for traditional crafts. Tribal representatives will be encouraged to comment on CEQA for the ORWT, and will be invited to monitor construction to assure protection of cultural artifacts.

**3. Plans in place that cover the project:** The ORWT is consistent with management goals in LADWP's Owens Valley Land Management Plan; it promotes a key Lower Owens River Project goal

while improving the river; it is recommended in the LORP preferred Recreational Use Plan; and it will be in compliance with the County of Inyo General Management Plan. The County is the land use authority.

## **B. Community Support and Involvement**

**1. Describe community support and involvement:** The ORWT is located within the Lower Owens River Project (LORP). The LORP was established through the Inyo/Los Angeles Long-Term Water Agreement, and later modified by a Memorandum of Understanding (MOU) between Inyo County, LADWP, California Department of Fish and Wildlife, Owens Valley Committee, and the Sierra Club. These agencies and citizens' groups' work together to monitor and manage the LORP, and assure the project is meeting goals. Continuation of recreation is one of the LORP goals. All of the parties participated in the planning that brought about the RUP.

Groups assisting in the development of the RUP included the Sierra Club, Owens Valley Committee, Bristlecone Chapter of the California Native Plant Society, and Eastern Sierra Audubon. These conservation groups provided valuable input on how the RUP could tap into growing trend toward eco-tourism in the area. Area tribes, including the Fort Independence Tribal Office, Lone Pine Paiute Shoshone Tribe, and Big Pine Paiute Tribe, voiced a desire that interpretive education about cultural preservation be included in signage, and that historic sites be avoided. A focus group of Owens Valley High School students found that kids wanted better access to the waters of the river for water sports including tubing. Manzanar National Historic Site representatives offered that they would benefit from additional tourists drawn to the area by the LORP, and that they could help promote area recreation. The California Department of Fish and Wildlife areas and the Bureau of Land Management offered guidance on which areas were best to steer recreational use, and which area to avoid. The Advocates for Access of Public Lands promoted multiple use planning. The Lone Pine Chamber of Commerce and Lone Pine Economic Development Corporation provided information on how a RUP would expand the palette of recreational offerings and stimulate the local economy. Individuals meetings were held with area ranchers and fishermen, who currently are most invested in work and recreation in the LORP. Ranchers and fishermen played a key role in shaping the plan, and the County further modified the scope to accommodate their interests. LADWP participated in all of the planning meetings and public workshops.

**2. Opposition to the project and efforts to address conflicts:** There is no opposition to either the RUP, and to date no opposition to the ORWT. Rancher's had voiced concern about being sued if a gate is left open and a cow wanders onto a road and is hit (solution, install cattle guards, and include "how to behave in cattle country" in interpretive materials and signage). Fishermen were worried that their secret fishing spots would be identified (solution, map areas that are popular and accessible). The Native American tribes were concerned about pot hunting and disturbances of cultural sites (solution, identify sensitive sites and route use elsewhere, and include educational information in interpretive materials and signage).



**3. Influence of demographics, social/cultural issues on project design and importance of the project to the community:** Native American culture is an important part of the community's identity; as is cowboy culture. Tribal members have been interested in helping organize a "tule festival" to celebrate the river and the plants that had been important as a material for housing, utensils, and crafts. The Lone Pine Paiute Shoshone Tribe sent representatives to all of the river tule clearing work days. They have used some of the collected materials to make traditional crafts. They plan to make full size tule boats to float the river. The Lone Pine Tribe is also very interested in using the ORWT to create jobs and provide economic opportunities. Ranching has been a way of life for 150 years in the valley and celebrations of the river would certainly be influenced by their culture. Lone Pine is identified as a Disadvantaged Community. River recreation is one activity that is available to those with limited resources and may provide recreation-based commercial opportunities.

The river was largely missing to the community from 1913-2006, the period when LADWP diverted the flow of the Owens River into the Los Angeles Aqueduct. When the water returned, river recreation was a potential recreational use of the newly rewatered river. All concerned had expected to boat the river when water was returned, but the channel that developed after years of low flows, didn't cooperate; was limited due to river obstructions and overgrowth of tules. Lone Pine was counting on becoming a River City, but lack of access to the water because of river obstructions and overgrowth of tules, has prevented the town from realizing that goal. The ORWT would be a symbol of pride to the town, and an important economic driver in this tourist oriented town.

**4. How does the project promote/encourage diverse involvement:** The Community is rallying around the river. The Native American Tribes, Ranchers, kids, the business community, area organizations of all stripes, all look to the river as a place to enjoy and recreate and celebrate their culture.

As a means to view wildlife and habitat, or as a destination activity itself, canoeing is a low-impact recreation that can be enjoyed by a large number of people. The activity itself requires little in the way of technical knowledge or strength and is undertaken by people of a variety of ages and physical conditions.

**5. Organized youth involvement in project:** We expect that the students that participated in the development of the RUP, and got together to help on the channel clearing project will continue their involvement. Kids love water and the ORWT is all about water.

**6. Plans to keep the community informed and involved:** It would be hard to find a person in the Owens Valley who does not know about the LORP and its recreational opportunities. Recreation is why many residents are in the area. Front page stories in the Inyo Register are frequently about recreational opportunities. We are looking forward to a river-focused Tule Festival, which is sure to be widely advertised and well attended. Every river stewardship day will

be announced in the local media. We've been very successful with generation stories in the LA Times about the LORP. We have a list dedicated to the RUP that has contact information for over 25 organizations that have indicated an interest in helping with any Lower Owens River project. We have an email list of 130 people who want to stay informed about recreational opportunities in the LORP area.

### **C. Project Need**

**1. Compelling reasons to select this project:** The community spent considerable time and effort pulling together a RUP for the LORP. The momentum is still there. We have not lost any support, but the groups want to see the results of their contributions. There is tremendous support for implementing components of the plan; particularly developing access for fishing and providing for on-river recreation. The ORWT satisfies both needs and fulfills the core goals of the RUP. However, for the past two years, County and Sierra Nevada Conservancy staffs have been searching for funds to implement the RUP, but have not found a good fit. River Parkways is a perfect fit for this exciting project.

- *Need to implement the project this year:* Each year the river generates more organic material that is not effectively removed. Water quality in the section of the river proposed for a water trail is not improving. If the biological consultants (Ecosystems Sciences Inc., Boise ID.) are correct, the river in this area is nearing a tipping point, where our ability to clean the river of organic muck using flow alone may not be possible without killing off a most, or the entire fishery.
- *Project site if this project does not occur:* The project site will remain as it is. There is no plan for development or changes in use.
- *Future actions beyond the scope of this project to fully address overall project goals:* It was expected that the return of water to the river, combined with seasonal variation in flow, would bring about robust woody recruitment. In fact very little recruitment is occurring. Experiments in pole planting to establish groves of cottonwood and tree willow in the floodplain are planned for this winter. Friend of the Inyo, a volunteer service organization, will coordinate the work. If successful, a stewardship program anchored by the ORWT can organize this work in the future.

**2. Continuation of completed work:** A preferred Recreation Use Plan for the LORP, with water paddle trails at its core, was funded by the Sierra Nevada Conservancy, but was not implemented. The ORWT would be the realization of a primary plan objective.

### **D. Local and Regional Impacts**

**1. Expected benefit to the community:** Lone Pine has aspirations to become a River City; however, access to stretches of the Lower Owens River suitable for non-motorized paddlecraft are limited to punctuated stretches of river near town. The ORWT will satisfy the community's desire for a length of channel where residents can spend the better part of a day navigating the river. Community desire to boat the river is strong, and there is disappointment that the rewatering of

the river does not allow this activity. Access to the river for fishing is also limited. The Lower Owens River has an excellent warm water fishery, but much of it is inaccessible. Anglers travel from all over California to fish the Owens River, but find the water hidden behind walls of tules. Fishing by boat, drifting down the ORWT, will offer a completely new experience, an attractive new way to enjoy their sport.

- *Contribution to economic stability/development of the community?* The eastern sierra economy is driven by tourism focused to the west in the Sierra Nevada. Hundreds of thousands of tourists visit from out of the area to fish, hike, camp, ski, and backpack in the Sierra. They also come for local events: The Owens Lake Bird Festival draws 250 visitors; The Early Opener Trout Derby brings in 400 participants; the Fukuhara Art Workshop attracts 250 visitors from around the state; 200 people come to town to run and support the Death Valley to Whitney Run; 600 people attend the Concert in the Rocks series; and more than 3,000 visitors descend on the town for the Lone Pine Film Festival. Many of these visitors will extend their stay in town a day to experience the unique experience of an ORWT. A fall Tule Festival would fill in the shoulder season.

- *Addressing environmental justice concerns?* There are no specific EJ concerns that have surfaced in the Owens Valley. However, the Native American Tribes may find new economic opportunities associated with river trail.

**2. Encouraging tourism:** Tourism fuels the economy of Lone Pine and other towns in the Owens Valley. Behind government services, which largely support recreation on public lands, tourism is the number two source of income in Inyo County. Lone Pine and Independence, the towns closest to the project area, offer a combined 461 hotel rooms. There are 583 public and private campsites available nearby.

The ORWT offers a one of a kind ecotourism experience that is sure to attract new visitors from around the state who are looking for a unique recreational experience. There are no other designated river water trails in California, and the project proponents could not identify another similar project anywhere on the West Coast. Promotion of the project will include media outreach. The ORWT is newsworthy. It can be expected that the water trail will appear in regional and national publications such as *Sunset*, *Outside*, *Canoe and Kayak*. The Lower Owens River has been covered in the news by the Los Angeles Times, and NPR station KPCC, and published stories about the Lower Owens River recreation have appeared in *Canoe and Kayak*, and *Standup Paddleboard* magazines.

### C-3: Public Access, Location, and Transportation

**A. Public access of project site:** LADWP land, which includes the floodplain in the project area, is open to the public from sunrise to sunset without seasonal restrictions. Camping is not allowed.

**B. Addressing competing interests between public access and ecological protection:** The impact of canoeing and kayaking on the river is minimal. The impact of self-propelled water travel on wildlife deserves some consideration during bird breeding and nesting seasons, and even

then, over-use is the principal concern. With moderate levels of user education, canoeing offers a sustainable recreational activity for the Lower Owens River.

The ORWT, considered in a CEQA checklist, is expected to not interfere with LORP goals. It is expected to create opportunities for local residents and visitors to experience recreation, learn more about the ecosystem, and become active stewards of the Lower Owens River.

**C. Location and populations served:** The project is in the southern Owens Valley, east of the Sierra. The project will regularly serve the local community within an hour's drive. The Eastern Sierra is a popular recreation destination, serving visitors from around California, as well as out of state and international travelers.

**D. Location of project in relation to populations served:** The center of Lone Pine, CA is 1.3 miles directly west of the Owens River and 2.5 road miles to the water trail trailhead. The population centers on the Owens Valley are all within an hour drive of the project. Visitors from Southern California make up 40-45% of area traffic; Lone Pine is three hours and 15 minutes from downtown Los Angeles. Ten to 15% of visitors are from Northern California. About 20% of area visitors come from Las Vegas; these are mostly international guests.

**E. Project impact on transportation/pollution: Will the project be used as, or contribute to, an alternative transportation mode?** Non-motorized boating is an alternative form of transportation that is promoted by this project. A recreationist spending the day kayaking, canoeing, or standup paddle boarding produces no pollution. Use of the water trail may displace some motorized recreation as a preferred activity, certainly in the short term; those who take up the sport as a regular pursuit will engage in pollution-free on a regular basis.

**F. Is the project a part of an SB 375 Sustainable Communities Strategy or Alternative Planning Scenario developed by a regional Council of Governments?** No.

**G. Parking, hours of operation, available staffing, user fees, seasonal restrictions or other ecological considerations:** Parking areas at the entry and exit points will be provided. Operating hours are sunrise to sunset. No staff will be employed on site, the trail will be free of charge. There will be no seasonal restrictions. Restrictions due to environmental considerations are not anticipated.

#### C-4: Organizational Capacity and Project Sustainability

##### **A. Organizational capacity**

**A.1 Inyo County's experience performing on projects:** The County is experienced in planning, designing, and implementing a wide range of projects.

**A.2 Availability of expertise:** The county has a professional staff with a wide range of expertise.

**A.3 Steps to be taken in the first year:** The project has gone through preliminary design and planning. In the first year CEQA will be completed and the project design will be refined. A land tenure and maintenance agreement will be negotiated between Inyo County and the City of Los

Angeles. Construction bids will be solicited and a contractor hired. All required regulatory permits will be obtained. Signage will be printed. Construction activity will begin within the year.

**A.4 Methods used to estimate costs:** Costs were estimated based on the County's experience performing work and activities similar to those anticipated in this project. County labor and equipment costs were used for estimates. Further, contractors who have performed work for the County were asked for estimates of costs for clearing river channel. The Army Corp of Engineers, Lahontan Regional Water Quality Board, and California Department of Fish and Wildlife were contacted for estimates on permitting fees.

## **B. Monitoring Operations and Maintenance**

**B.1 Data to be collected to determine effect and success:** This section of the Lower Owens undergoes a rapid assessment survey (RAS) annually for a range of impacts including evidence of recreation, presence/absence of invasive species, and woody recruitment. We have continuous RAS data going back to 2007, and plan to continue annual surveys until 2023. We also have good baseline information on the fishery in the area of the project site. Creel censuses have been conducted annually for the past three years, and additional creel surveys will be conducted during project development and implementation. We have the equipment and experience to measure and monitor chemical and physical properties of the water in the project area.

**B.2 Plan for long term maintenance:** The County, by authorizing this application committed County staff and resources to operate and maintain the ORWT based on the terms of a 20-year maintenance agreement with LADWP. The County's Public Works and Parks and Recreation Department would assume this work. The County Parks and Recreation Department has responsibility for operating and maintaining seven County campgrounds and seven regional parks (including maintaining water features); they have the experience and capacity to add the ORWT to their work. Public Works oversees the Roads Department, which provides maintenance to improvements similar to those found in the ORWT; they have the experience and capacity to add the ORWT to their work.

Tasks associated with the ORWT O&M include maintenance and upkeep of improvements including two ½ acre graveled parking areas; two 10 foot by up to 150 foot long foot paths to the river; and two 10 foot by 20 foot graveled water entry and exit pads. Also anticipated is regular trash pickup from barrels in the two parking area on a weekly basis May through September, and monthly between October through April. Also anticipated is grading and repair of the road leading to the river off highway 136 at three year intervals.

County Water Department staff and LADWP watershed staff would monitor biological and water quality in the project area as needed. A RAS is conducted annually in the project area, and a creel census is conducted every year to every few years. The results of these studies are published in an annual report available on the Water Department website ([www.inyowater.org](http://www.inyowater.org)). Information obtained in the report would be conveyed in our ORWT project grant reports. The County Water



Department (with a staff of physical and biological scientists) would oversee any monitoring required by CDFW and the State Water Boards.

Once the river is initially cleared, any tules that do emerge or encroach on the waterway will be controlled both passively and actively. Passive tule control requires ongoing recreational use of the ORWT. It is expected that the ORWT will be a popular attraction and the open channel will be maintained largely by user activity. When new shoots are kinked by regular boat and paddle activity, especially early in the growing season, the stem will die back and not reemerge.

After the river blockages are removed, 1.75 miles of narrow channel will need to be hand cleared by volunteers. The methods and procedures for this work are well established. In 2013, under permit from the California Department of Fish and Wildlife and the LADWP, volunteers including staff from California Department of Fish and Wildlife, the Independence and Lone Pine Indian Reservations, as well as volunteers from the Owens Valley Committee, Eastern Sierra Audubon, Lone Pine High School, and the Eastern Sierra Land Trust, opened up 1.30 miles of river in seven work sessions. The work was organized and coordinated by a County AmeriCorps member. Based on this experience, hundreds of yards of encroaching tules can be cleared by five people in one day.

Channel clearing has proven to be quite popular with volunteers. There is community interest in forming a stewardship group to clean and maintain the river. The Eastern Sierra Interpretive Association, Lone Pine Paiute Shoshone Tribe, Owens Valley Committee, and the Sierra Nevada Conservancy have all shown great interest in helping establish and support a river stewardship group. As well, organized recreation groups in southern California have offered to come up and volunteer to maintain the river. The County has a list of 129 individuals and more than a dozen groups in the Owens Valley and in Southern California who have offered to in one way or another to help support the river project. LA River Expeditions and Friends of the Los Angeles River have pledged to help build support in southern California for using and maintaining an Owens River water trail. River stewardship is popular with funders, and it would be expected that this attractive project would attract private, public and corporate support. We have already received a pledge from a private supporter to pay for any number of wetsuits needed to complete channel work.

Operations and maintenance activities, conducted by County staff, will require an annual budget allocation of \$5,048 in the first year of operation. This allocation takes into consideration the schedule of activities; that some years will require more effort and outlay than others. The budget approved by the Inyo County Supervisors, when they approved submission of this grant application, includes an inflation adjusted annual allocation for the project from year 1 through year 20.

**B.3 Unanticipated external events:** The Lower Owens River is a highly regulated river system. In the project area flow varies between 40 and 105 cfs. A hydrological study of the river was completed recently. Northwest Hydrological Consultants modeled flows between 40 cfs and

200 cfs. This study and associated maps will be used to inform the design and location of project improvements to assure improvements can accommodate change in river stage within this range.

Fires have swept through this section of the river as recently as February 2013, burning off tules and tree willow. Within four months the tules had all regrown, the salt grass meadow had come back, and within 6 months most of the willow was coming back through basal sprouting. Improvement will largely be constructed of non-flammable materials. Geotextile materials destroyed in a fire would need to be replaced to better accommodate the disabled, but even without the mats the river would remain accessible.

**B.4 Rising sea level:** The project site is 3,604 to 3,632 feet above present sea level. Boat handling skills learned on the ORWT could come in handy in coastal cities subject to flooding.

**B.5 Protection from vandalism and deterioration:** The majority of improvement will be constructed of material not prone to vandalism, or generally not a target of vandalism, such as rock and gravel. Signage is vulnerable, but can be cleaned by County maintenance crews, or replaced either by the County sign shop or local vendor.

**B.6 Partners assistance with stewardship and O&M:** Groups that have been instrumental at supporting the river to date will be called upon to help with periodic maintenance. These groups include the local Indian Tribes, AmeriCorps members, 28 local fishermen that regularly participate in the creel census, members of conservation groups including Audubon Society, Sierra Club, Owens Valley Committee, local schools, and the rancher whose land the ORWT traverses. Supporters of the ORWT have met with the Founder of Friends of the Los Angeles River, Louis McAdams, and he's pledged his support in recruiting help from his members to assist with cleanups or other service projects. The Director of LA River Expeditions, an organization that leads organized river trips down the LA River has made a similar pledge to recruit help in southern California. Both organizations voiced an interest in formally establishing a sister river relationship between the LA River and Owens River.

## C-5: Project Readiness

**A. Project status and timeline:** The LORP area, which includes the ORWT project area, has been the subject of an EIR/EIS addressing the reintroduction of water to the LORP, water quality, effects on wildlife habitat, and other physical effects of the LORP. The LORP Recreation Use Plan, developed through extensive stakeholder and public review, identified areas suitable for water trails. A hydraulic model for the Lower Owens has been developed that can be used to inform construction in the channel. Preliminary plans for the ORWT have been developed by the County that includes mapping sections of river requiring restoration and clearing and conceptual drawings of parking areas, paths to water and water launches have been produced. A CEQA checklist has been prepared and an MND will be completed within six to nine months following project funding. Non-profit organizations such as the American Canoe Association, River Management Society, and Friends of the LA River have committed to support the project, as have a number of area NGOs. A

native plant list is available. The City of Los Angeles and Inyo County has not yet negotiated a land access land tenure agreement. The County and Los Angeles have numerous such agreements related to other projects and facilities, such as campgrounds, parks, airports, weed control projects, and environmental monitoring. We anticipate that such an agreement can be negotiated for the ORWT. A site visit with CDFW has been conducted, and the Lahontan Regional Water Quality Board and the Army Corp of Engineers have both been contacted to discuss the ORWT and establish permit needs. All three agencies have positive views of the project. The County had been permitted to work in the river by LADWP and CDFW. Both agencies are familiar with our work and performance adhering to mitigation requirements. Property restrictions will be worked out with LADWP.

**B. Factors that can cause delays:** Seasonal habitat restrictions to avoid nesting birds may be required March-May, however, off-river constructions can take place during this period. Archeological finds may require changes in the footprint of the project. Since the project area is mostly open-space, there is a great deal of flexibility available to relocate improvements. As discussed above, a land access tenure agreement needs to be negotiated. No other significant delays are anticipated.

**C. Toxins or Toxic chemicals:** No toxins or toxic chemicals are known to occur in the project area.

**D. Possible project site impediments:** Overhead electrical transmission lines are located near the end of the ORWT. These can be avoided if required by relocating the river exit 0.25 miles below the currently planned exit point. A feasible alternative exit site has been discussed by project planners. Relocating the exit is not expected to require any additional funding.

#### C-6: Additional Project Characteristics and Multiple Benefits

**A. Other statutory conditions met:** Project partners have requested that interpretive signage be erected that educates recreational users about the importance of protecting cultural resources, and about the importance of ranchlands and how to behave in a working landscape. Signage will also include educational information about the goals for river restoration associated with the ORWT.

#### **B. Environmental benefits**

**1. Reduction/sequestering of greenhouse gasses:** The project design does not specifically address the reduction or sequestering of greenhouse gas emissions; however, the majority of project improvements will be constructed with locally sourced rock and gravel. No surfaces will be paved with concrete or asphalt. Avoiding these products, avoids creating about a ton of CO<sub>2</sub>e emissions from the fabrication of a ton of cement<sup>1</sup>, and 45.6 pounds of CO<sub>2</sub> emissions from the production of a ton of asphalt mix<sup>2</sup>.

**2. Addressing climate change:** Light colored aggregate will be used to surface the two small parking areas. No other claims of increased adaptability to climate change are made.

**3. Use of recycled/reclaimed water:** The majority of water flowing down the Lower Owens River and through the project area is captured and pumped back into the Los Angeles Aqueduct and contributes to Los Angeles' municipal water supply.

**4. Use of recycled materials:** Improvements will be primarily surfaced with locally sourced and sustainably mined materials. Geotextiles having a recycled content will be given preference.

**5. Energy efficiency:** This ORWT is water powered, which makes it quite energy efficient. Other than in the course of construction, or during periodic maintenance, no energy is required by this project.

### **C. Regional landscape use**

**1. Current use of river frontage:** The ORWT project area is located within the bounds of the LORP and will be managed and maintained to assure compliance with LORP goals; which are the establishment of a healthy, functioning Lower Owens River riverine-riparian ecosystem, and the establishment of healthy, functioning ecosystems in the other physical features of the LORP, for the benefit of biodiversity and Threatened and Endangered Species, while providing for the continuation of sustainable uses including recreation, livestock grazing, agriculture and other activities. Currently uses include livestock grazing from October to March, and year-round warm water fishing.

**2. Existing park open space available in the area:** The beginning of the ORWT is 2.5 miles from the center of Lone Pine. Other available recreation areas within 2.5 miles of the town center include Spainhower Park (3.2 acres), Lone Pine Ball Fields (13 acres), and the High School ballfield (2.3 acres). Eighty acre Diaz Lake Recreation Area is 3.0 miles from the town. The ORWT project adds 415 acres of close-by open space and 6.3 miles of river recreation. Land owned by the City of Los Angeles, including the project area, is now open to the public.

### **D. Public health**

**1. Physical activity benefits and monitoring:** The ORWT will be a signature recreational project in the area, which will certainly be used by residents of in the Eastern Sierra, and by out-of-area visitors. Everyone from first-time beginners to expert paddler can enjoy the ORWT. The flat water and exceptional scenery on the ORWT will provide a fun unforgettable adventure that participants will want to repeat. The learning curve for paddling on flat water is quite manageable, and the sport appeals to those of all abilities. Strong support for the ORWT comes from those serving the disabled in the Eastern Sierra. Kayaking offers freedom for the mobility impaired.

**2. Safety and security measures:** Signage at the river entry will provide river safety advice. The public will be directed to call 911 to report any recreation violations or other problems. The Inyo County Sheriff, or the Fish and Game Warden will be dispatched. The Inyo County Sheriff's

Department patrols the Lone Pine Narrow Gauge Road and Highway 136. The California Highway Patrol patrols Highway 136. Southern Inyo Hospital is 2.7 miles from the ORWT entry and 5.5 mile from the ORWT exit. LADWP has a patrol in the LORP area during the daytime. Inyo County has the third lowest property crime rate in California

**3. Promotion:** The County of Inyo and local chambers of commerce actively advertise and promote recreational opportunities in Inyo County. The ORWT will join the list of recreational attractions promoted by the Eastern Sierra Interagency Visitor's Center (IVC). The IVC is located 3.2 miles from the end of the ORWT and serves more than 250,000 people every year. Two concessioners have already indicated an interest in river outfitting; running a scheduled shuttle between the town and the river.

**4. Agency and private group promotion support:** Disabled Sports of the Eastern Sierra brings guests to the Eastern Sierra from all over the state in order to recreate in a spectacular setting. The organization is one of the ORWT's strongest supporters. The County Health Department offers a number of wellness programs, which includes a monthly physical activity promotion. Paddling the ORWT will join other promoted sports.

#### C-7: Other Funding Sources and In-Kind Services

**A. Funds already committed:** The County has provided labor and material support for project development and ongoing operations and maintenance.

**B. Other grants in process for project:** We are hoping to use the River Parkways grant as a springboard. The ORWT is expected to provide a basis for multiple grants and partnership projects that can improve community and visitor experiences while encouraging recreation related economic development.

**C. Other options if request is not granted?** Proponents of the ORWT will continue to seek public and private funding for the project.

**D. Contingency plan if project is over budget?** The County would use its equipment, staff, and resources to fill in budget gaps.

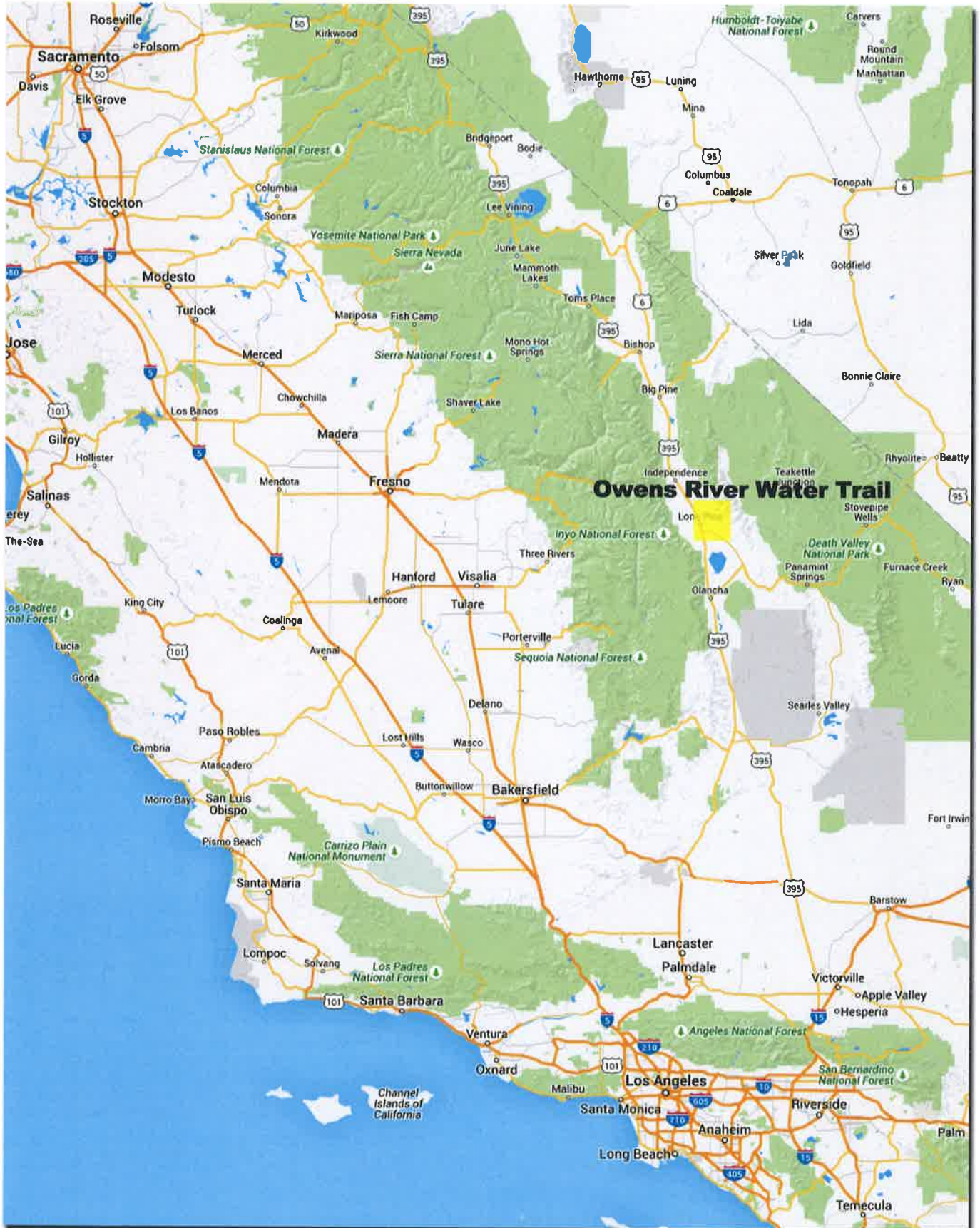
<sup>1</sup> Mahasenan, Natesan; Steve Smith; Kenneth Humphreys; Y. Kaya (2003). "The Cement Industry and Global Climate Change: Current and Potential Future Cement Industry CO<sub>2</sub> Emissions". *Greenhouse Gas Control Technologies – 6th International Conference*. Oxford: Pergamon. pp. 995–1000. [doi:10.1016/B978-008044276-1/50157-4](https://doi.org/10.1016/B978-008044276-1/50157-4). ISBN 978-0-08-044276-1.

<sup>2</sup> The National Asphalt Association reports that the EPA Reporting tool shows 45.6 pounds of CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emissions per ton of asphalt mix



# OWENS RIVER WATER TRAIL

## AREA MAP



# OWENS RIVER WATER TRAIL

## REGIONAL MAP

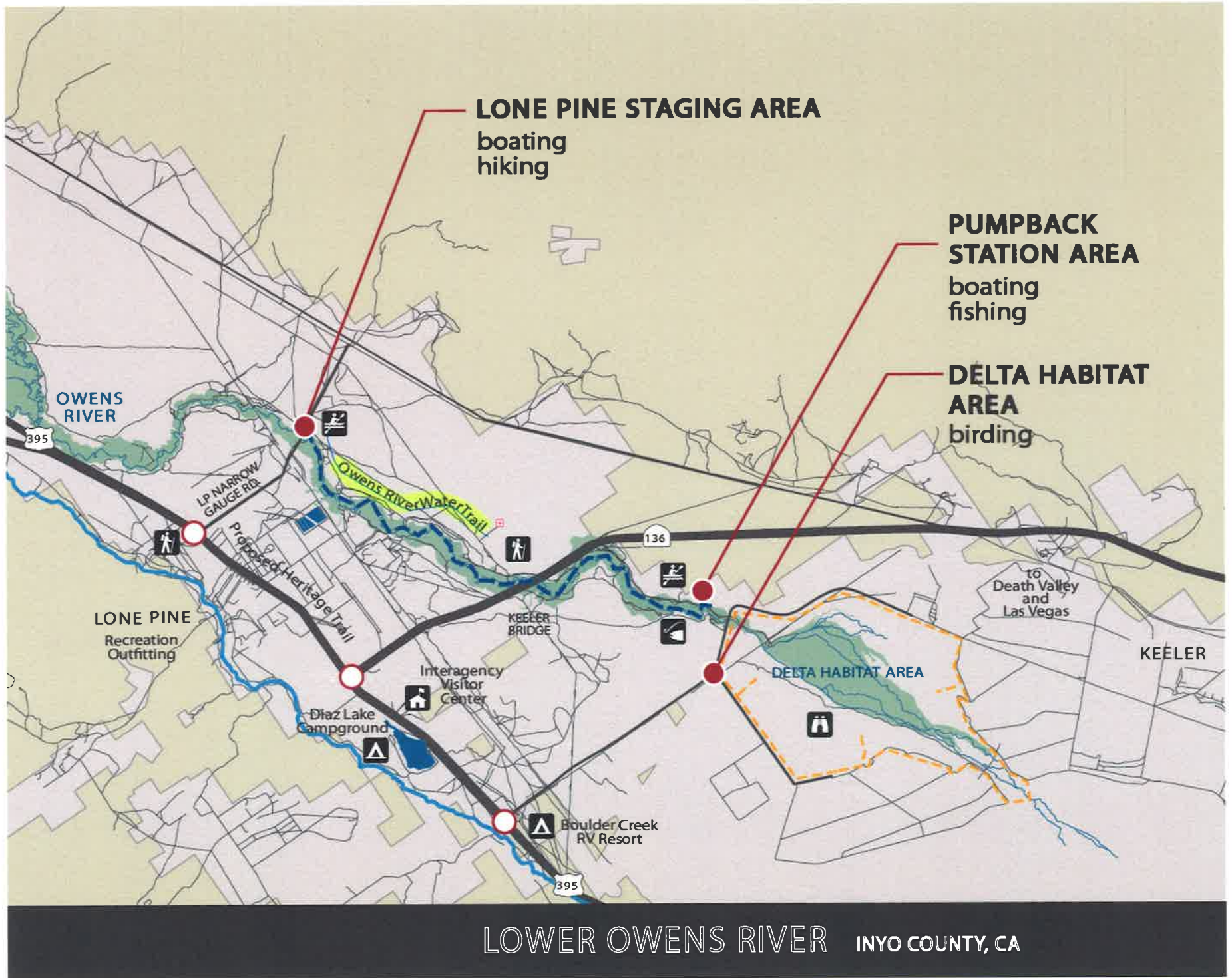




# OWENS RIVER WATER TRAIL

## AREA MAP









Google Earth Pro

miles  
km



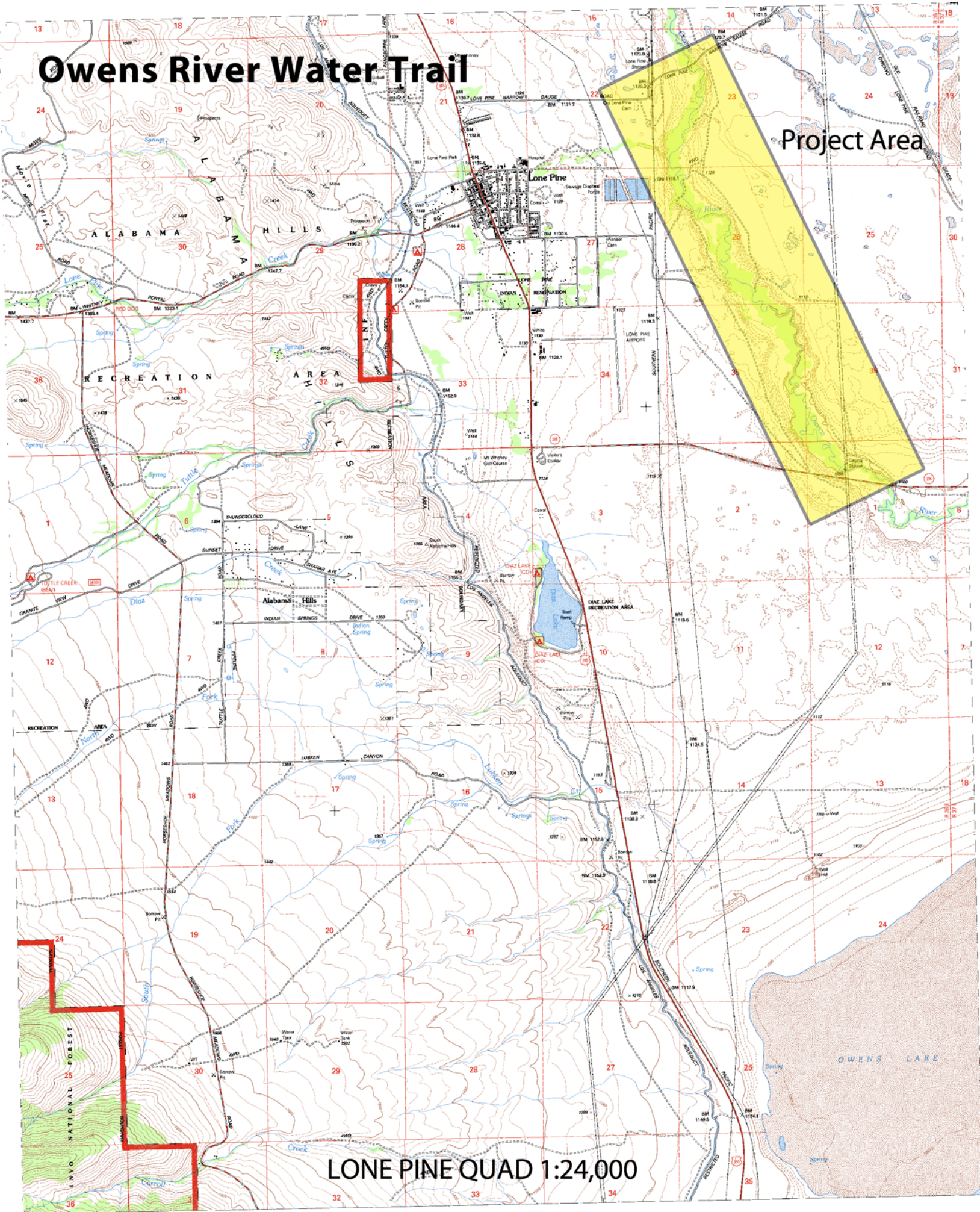
LINES  
RED- EXCAVATION  
YELLOW- HAND CLEARING





# Owens River Water Trail

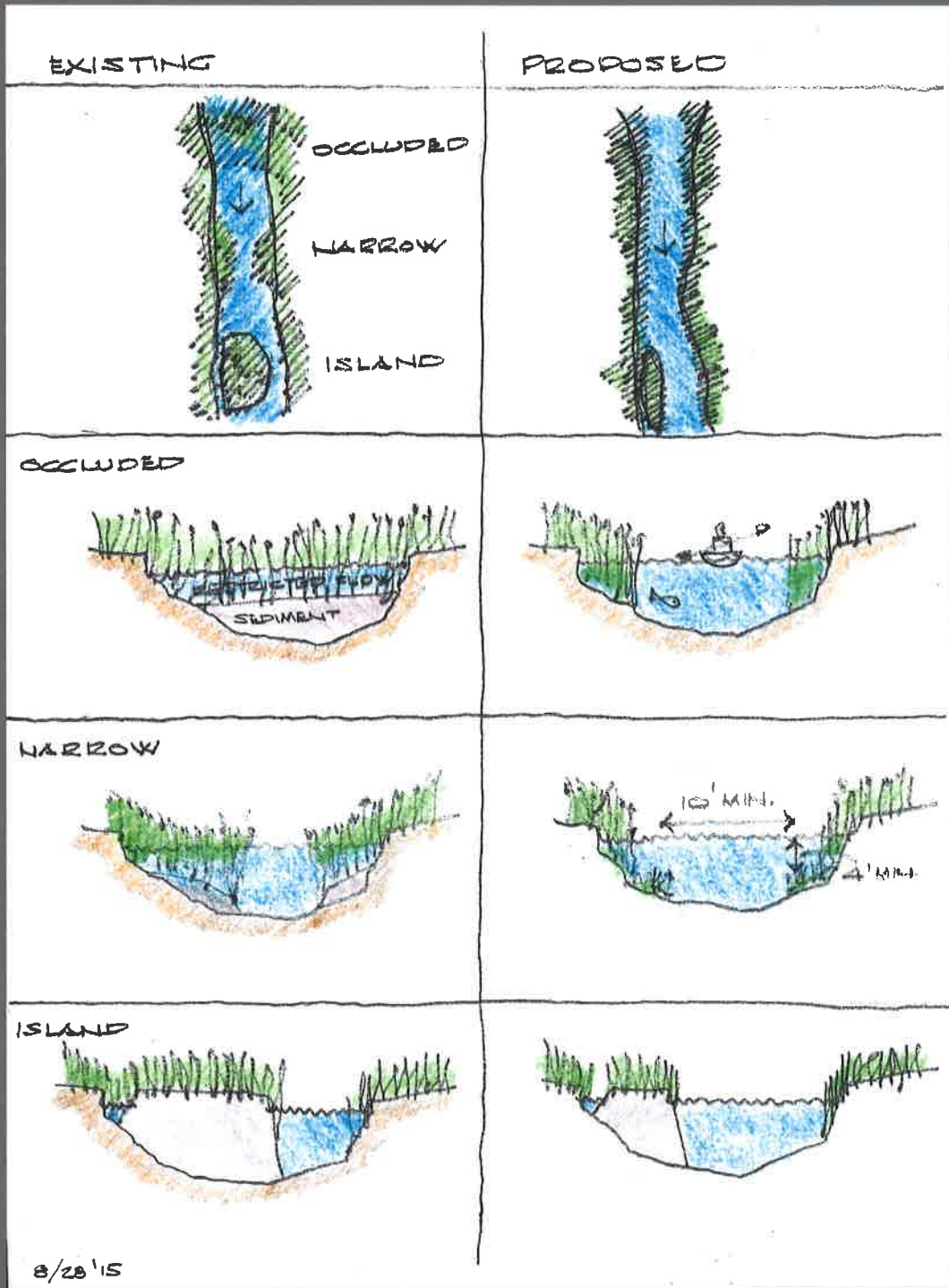
Project Area



LONE PINE QUAD 1:24,000



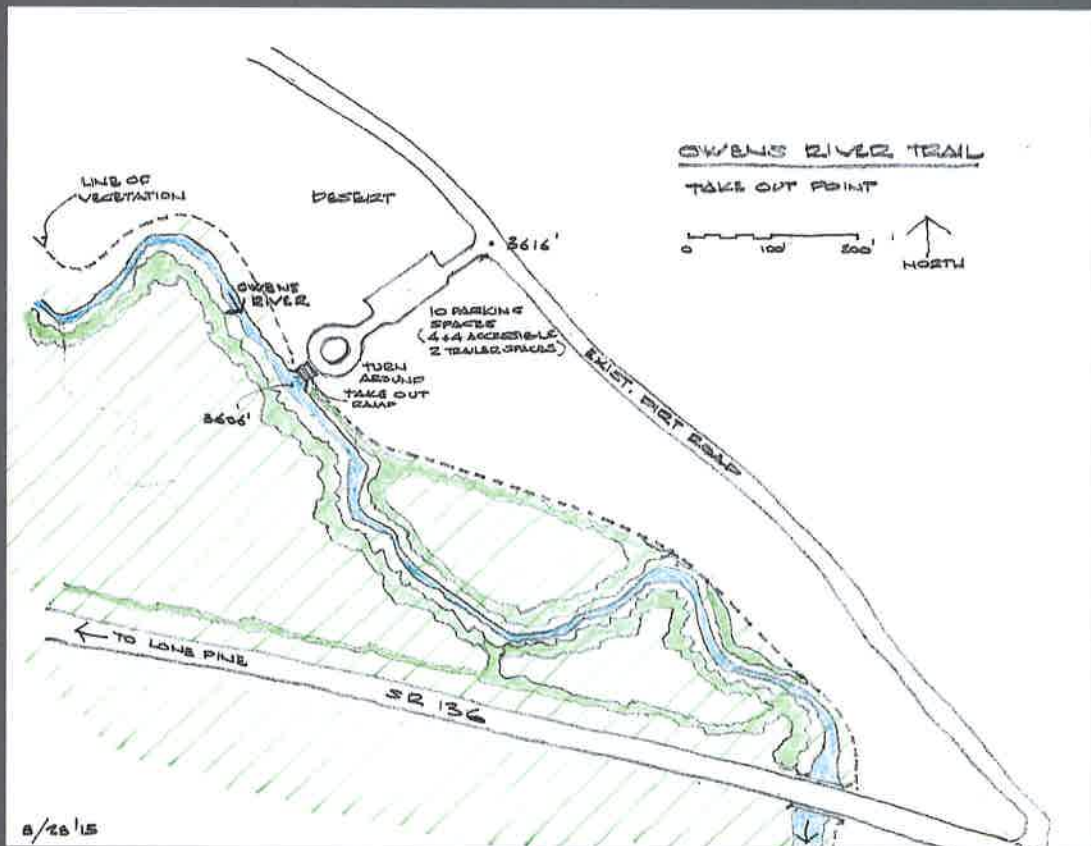
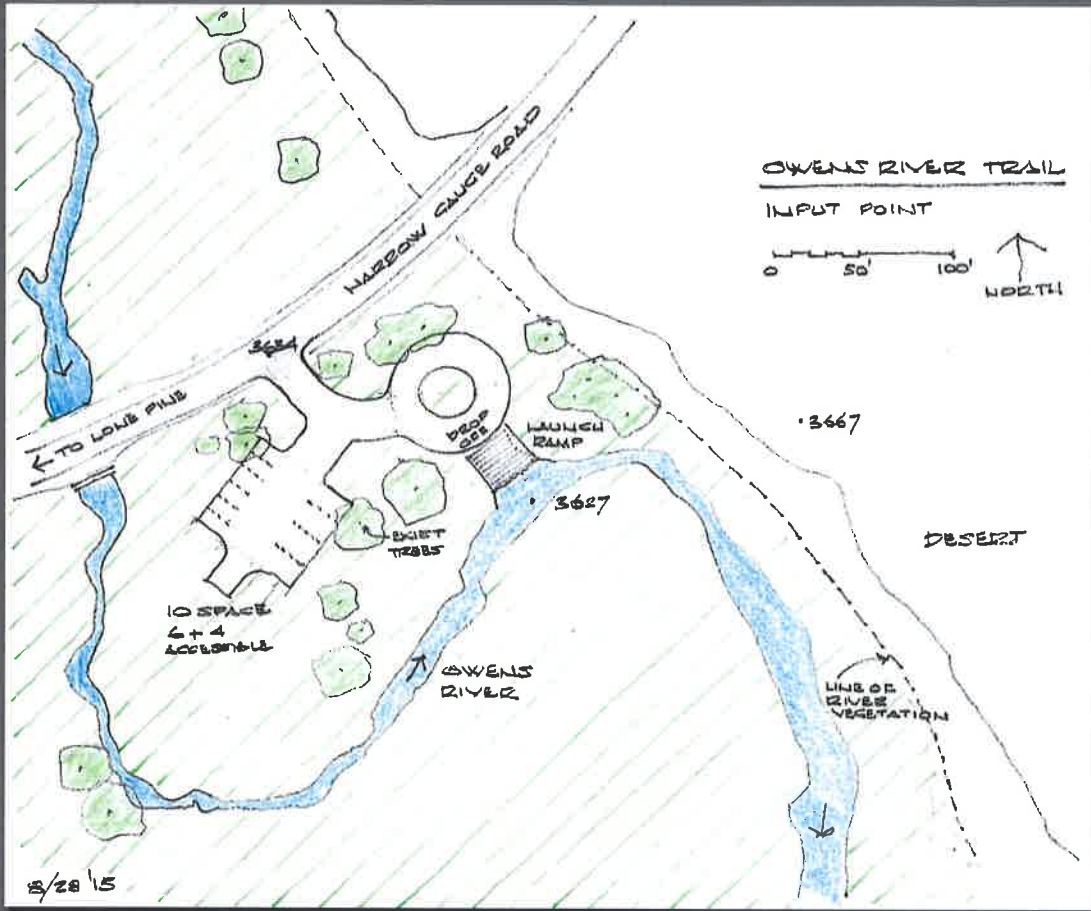
# OWENS RIVER WATER TRAIL CHANNEL IMPROVEMENTS



8/28/15

# OWENS RIVER WATER TRAIL IMPROVEMENTS

## CONCEPTUAL DESIGN





# OWENS RIVER WATER TRAIL

## PARKING DESIGN

Drainage is a special concern in parking and launch areas. Reshape the land surrounding parking and launch areas so water from the rest of the site does not drain across these areas (Figure 3B-1). Also, drainage from the parking area or site in general should not drain into the stream through the launch ramp (Figure 3B-2). Ensure that parking area drainage is treated for water-quality enhancement before it reaches the stream by incorporating stormwater management practices included in the section of this manual.

Develop a plan to revegetate vegetation around the edges of the parking and launch areas disturbed during construction. Native vegetation, rather than lawn grasses, is recommended at launch sites. Information relating to vegetation is provided in Chapter 4 of this manual.

Drives need a low definition of the extended limits of parking areas. However, people prefer the visual appearance of rock and wood materials rather than concrete to areas along rivers and streams and otherwise rural settings. Also, use parking, drive and other adjoining feet designed rather than concrete stormwater flow.

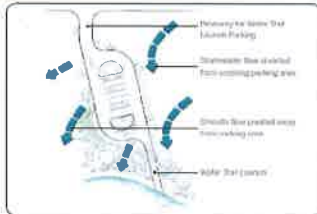


Figure 3B-1. Stormwater Runoff from Parking Area.



Figure 3B-2. Stormwater Runoff from Launch Ramp.

Create permeable-paved parking stalls to accommodate boats, gear, and people. Plan standard parking stalls to be 10 feet wide and 50 feet long. Design details are provided in this manual for carry-down water access, as well as for a traditional, hauled-in water launch. Templates for 5- to 12-foot designs are included. Templates are ready to be adjusted to include additional uses based on specific site requirements. All parking areas require a minimum of one designated, van-accessible parking stall meeting ADA requirements. Stalls meeting van-accessible ADA requirements must be 15 feet wide and 20 feet long. Parking areas serving universal design launches larger than 25 stalls require two or more van-accessible stalls (Table 3B-1). Consider use of compacted urethane tiles for accessible portions of parking areas not constructed with concrete or asphalt. Materials used according to this purpose include a gradient of 1/8 inch/foot to lines spread, compacted, and sealed in layers.

Total Number of Stalls in Parking Area	Required Minimum Number of Van-Accessible ADA Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4

Table 3B-1. Minimum Van-Accessible ADA Spaces.

A staging area adjacent to other van-accessible ADA parking stalls or a loading lane is required at universal design launch areas (Figure 3B-3). The area accommodates unloading and loading of people, assistive devices, and gear.

Trailers carrying multiple kayaks or canoes are becoming common at state-designated launches. Note that at parking areas include a vehicle turnaround option and accommodate at least one parallel-parking stall for a vehicle with a trailer. The impact and cost of the parking surface added by these elements are minimal when compared with the safety hazards created when they aren't present. If they aren't accommodated within a parking area, trailers are more likely to be stored on adjacent road shoulders and drive entrances, creating unsafe conditions for other drivers, as well as pedestrians.

## MINIMUM PARKING AREA DESIGN WITH BOAT CARRY-DOWN ACCESS

Consider mown grass or aggregate surfacing for parking surface to increase stormwater retention rates, particularly in winter and other low flow areas (Figure 3B-4).

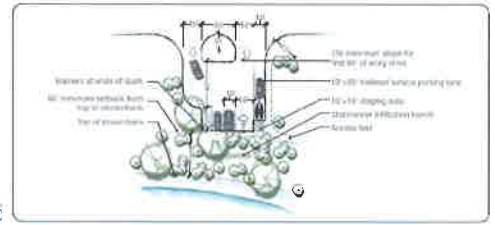


Figure 3B-4. Minimum Parking Area Design with Boat Carry-Down Access.

## STORMWATER MANAGEMENT ON-SITE

The goal of the Iowa Water Trail program is to minimize impact to water resources from construction of amenities serving water trail recreation. Changes in drainage resulting from parking areas, even gravel or mown grass surfaces, impact streambanks and channel stability, particularly when located in near-stream areas. The goal is to capture and treat water from parking areas during 1-25 inch storm events before it reaches streams when site conditions permit. The amount of runoff is known as the water quality volume and in Iowa is the most common type of rain event containing the majority of pollutants from surfaces such as parking. Stormwater management design is based on the Iowa Stormwater Management Engineering Standards.

Stormwater can be either infiltrated, where conditions allow, or stored below reaching adjacent water bodies. Infiltration and filtration areas can be located within the 50-foot buffer between parking and the top of the streambank. Use Table 3B-2 to determine which alternative is most appropriate.

## INFILTRATION DESIGN

Final calculated site and design of infiltration structures use Iowa Stormwater Management Manual formulas and procedures. Two infiltration designs are generally applicable to shallow (1' to 1.5') conditions: infiltration on topsoil (Figure 3B-5) and Chapter 25-2 Infiltration Stormwater Management Manual and Infiltration Areas (Figure 3B-7 and Chapter 25-4 Iowa Stormwater Management Manual).

An estimate of the size of the area needed to infiltrate the water-quality volume from a parking area can be calculated using the following process:

Area of parking area in square feet  $\times$  runoff volume coefficient  $\times$  designated rain volume storage in inches (1.25 cubic feet of water storage space needed).

Table 3B-2. Use Concrete to Stormwater Management.

Infiltration is Most Appropriate	Vegetated Filter is Most Appropriate
Seasonal water table is > 4' deep	Seasonal water table is < 4' deep
Does not flood frequently	Floods frequently
Surface and underlying soils are NRCS Hydrologic Group A, B, or C	Surface and underlying soils are NRCS Hydrologic Group D
Slope is < 15%	Slope is > 15%

For planned infiltration:  $1.227 \times (30.55 \times 6) \times (7.5 \times 221.7) = 211 \text{ sq. ft.}$  (If 10' x 21' area, fit existing).

For planned infiltration:  $1.227 \times (30.55 \times 6) \times (7.5 \times 221.7) = 211 \text{ sq. ft.}$  (If 10' x 21' area, fit existing).

Both forms of infiltration require collection of a stable stage outflow to

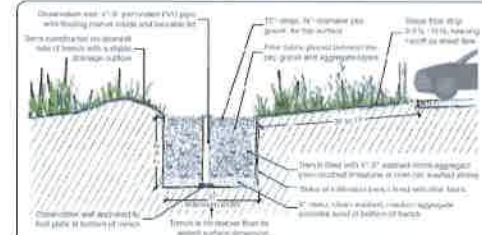


Figure 3B-5. Infiltration Design.

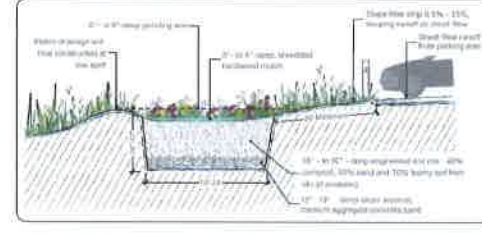


Figure 3B-7. Vegetated Filter Strip Design.

## FILTRATION DESIGN – VEGETATED FILTER STRIP

Filter strips are located on the corner and perpendicular to the direction of flow (Figure 3B-8). Locally filter strips are located on 2 percent to 6 percent slopes. The entire width of the parking area must be cleaned evenly across the filter strip width. A maximum width of 75 feet of parking area can be cleaned across a property abutting filter strip. Parking area drainage in excess of 75 feet requires multiple filter strips.

The minimum width of filter strips is 20 feet. See Table 3B-3 for required dimensions. The goal for vegetation in the filter strip is to include the densest arrangement of plants items possible. Use a variety of species on sites with full sun exposure. Sunny sites require a combination of native trees, shrubs, and herbaceous plant species.

Native plants suitable for vegetated filter strips are listed in Table 3B-3.

Table 3B-3. Required Filter Strip Design with Parking Area. (Adapted from Iowa Stormwater Management Manual, 2011).

Minimum filter strip width	Slope of Filter Strip Site	
	< 2%	Between 2% and 6%
20'	20'	40'

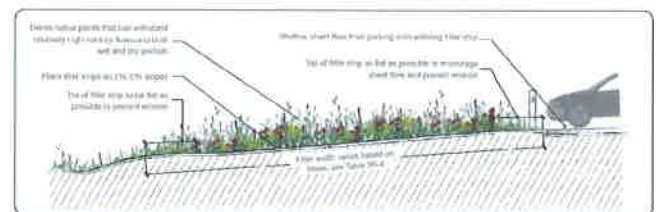
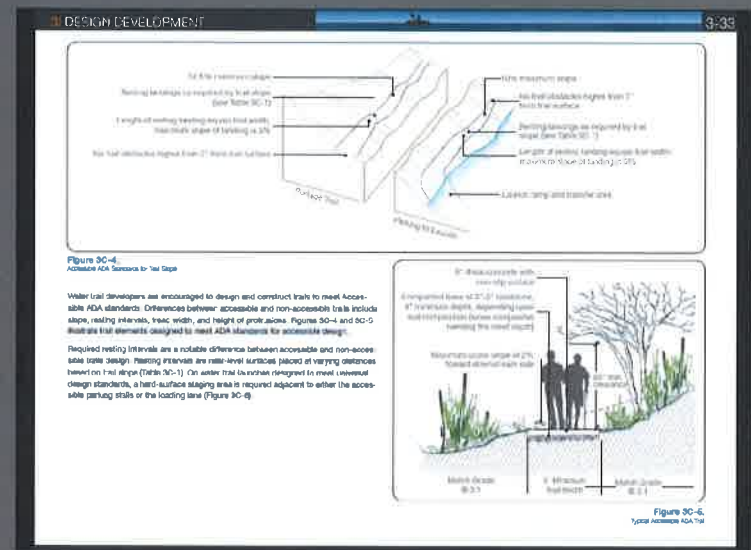
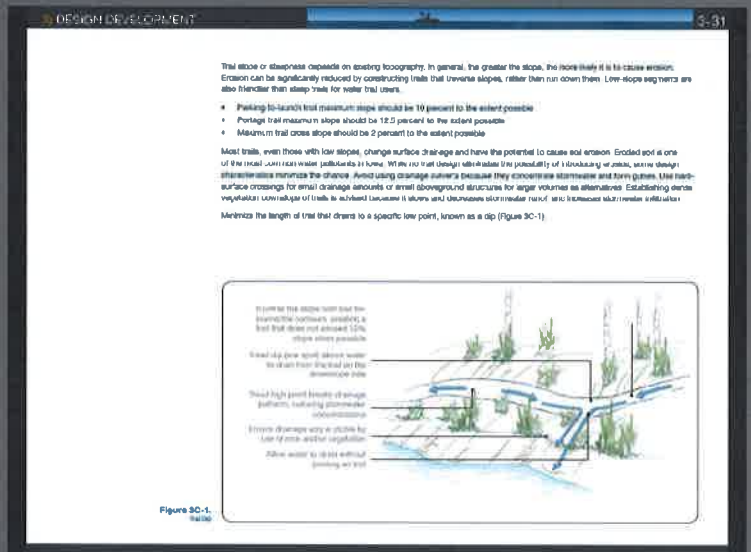
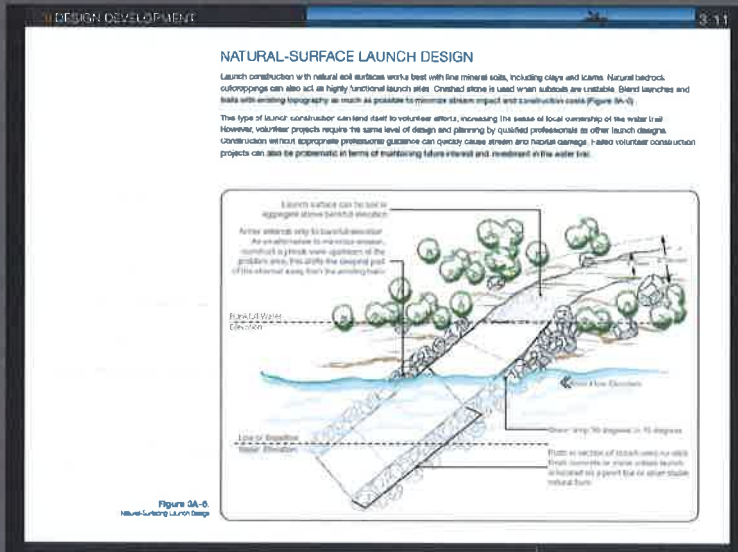


Figure 3B-8. Vegetated Filter Strip Design.

# Parking Construction and Design Principles

(With Permission from the Iowa Department Of Natural Resources)

# OWENS RIVER WATER TRAIL



## Path and Water Entry Construction and Design Principles

(With Permission from the Iowa Department Of Natural Resources)



# OWENS RIVER WATER TRAIL



RECOVERING BURN IN SOUTHERN PROJECT AREA. FIRE IN FEBRUARY 2013



RIVER ISLAND



WATER AT TULE'S EDGE



SALT GRASS MEADOW NEAR ORWT EXIT POINT





## RIVER ENTRY AREA

LONE PINE NARROW GAUGE ROAD. ALABAMA HILLS AND MOUNT WHITNEY IN BACKGROUND





Lone Pine Narrow Guage Road,  
Location of river entry. Looking  
north up the Owens Valley.






Island with salt grass meadow beyond. Object is to manage to retain diverse river structure.






Southern end of the project area  
burned in February 2013. Recovery  
in progress.



A wide-angle photograph of a dirt road in a semi-arid landscape. The road, marked with tire tracks, leads from the foreground towards a concrete structure on the left and a fenced-in area in the middle ground. The background features rolling hills, several high-voltage power line towers, and a clear blue sky with scattered clouds. The terrain is covered with sparse, dry vegetation and patches of green grass.

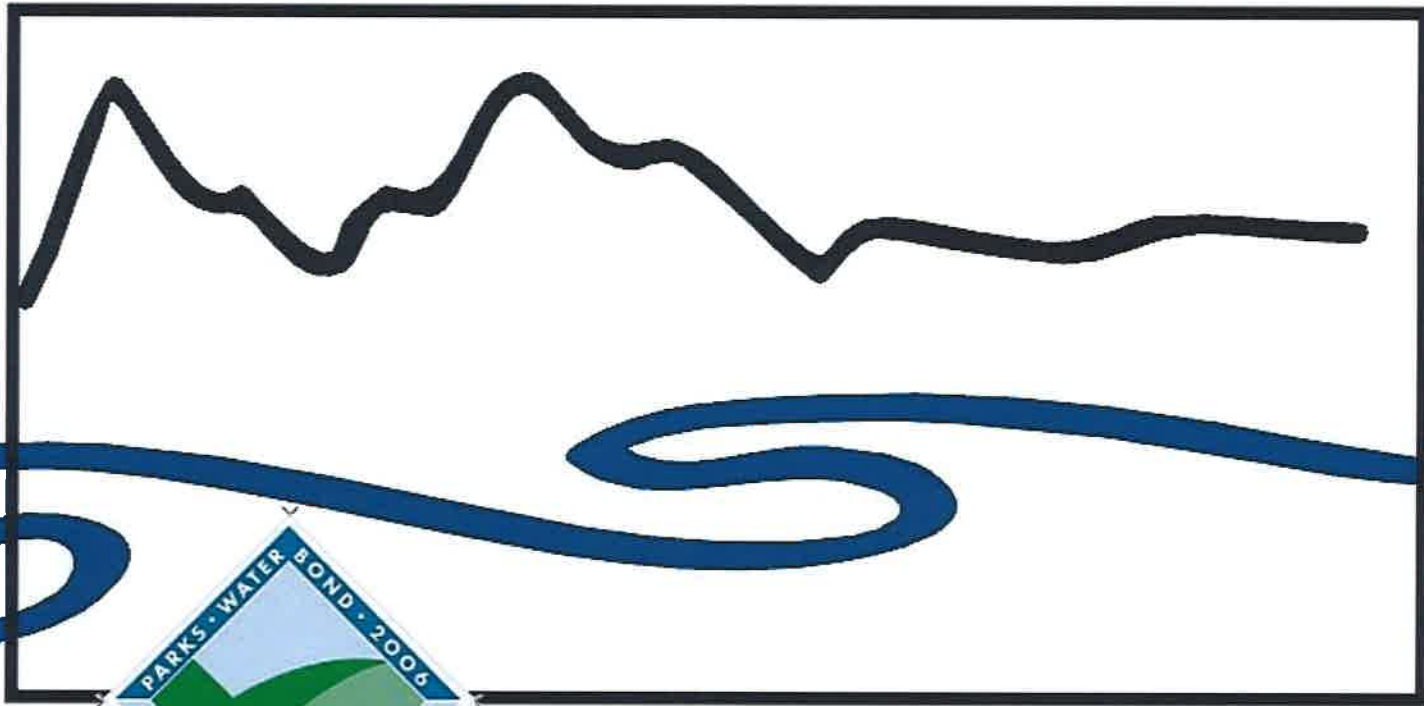
**Keeler Bridge at Hwy 136. Area that will host parking, staging, path to river and river exit.**





Owens River Water Trail, looking south. Lone Pine in the trees, with the Alabama Hills and Sierra above.

# Owens River Water Trail



**A California Natural Resources Agency  
River Parkways Project  
In Partnership with Inyo County**







Lone Pine Narrow Gauge Rd the top of the ORWT



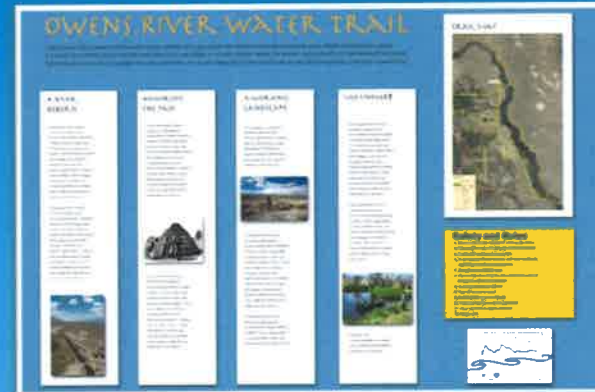
ORWT goal is to maintain the river in a natural condition



Student group clears tules



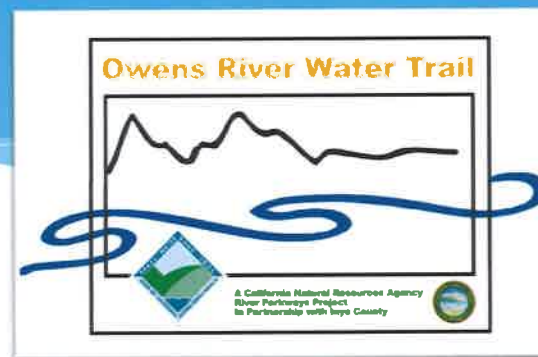
LORP interpretive signage on Lone Pine Narrow Gauge Rd just above ORWT launch



ORWT interpretive signage draft design



Visitors Center near ORWT serves 250,000 visitors annually



Draft acknowledgement sign



Collecting bulrush for traditional crafts





Top end of the proposed Owens River Water Trail



Aerial view of a section of proposed ORWT



Group exploring the project area in winter



Location of river entry at Lone Pine Narrow Gauge Rd. Mature willows and wetlands will be protected



Tight sections of the river required widening



Volunteers moving woody debris to bank

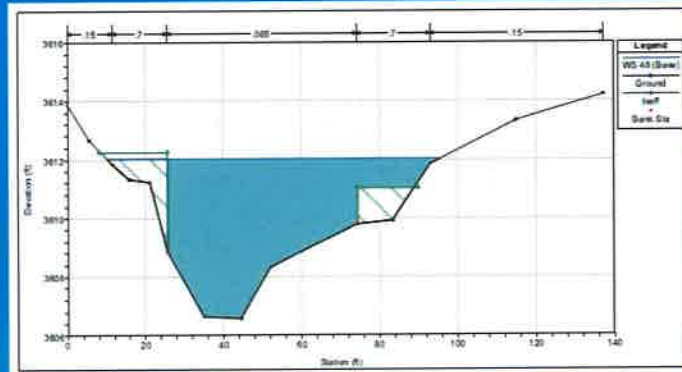


Volunteers setting out to clear tules





Group of Owens River paddlers



Typical channel cross section at the bottom of the ORWT



Selection of tools used to clear tules



ORWT exit site at Keeler Bridge (Hwy. 136) with trestle buttress of historic Carson & Colorado Railroad. Salt grass meadow carpets the ORWT area



River punctuated by narrows and islands



Eastern Sierra visitors at Fort Independence



Friendly Lone Pine caters to adventurers



# OWENS RIVER WATER TRAIL

HERE BEGINS THE LOWER OWENS WATER TRAIL WHERE YOU CAN FLOAT OR PADDLE YOUR KAYAK CANOE AND OTHER PADDLECRAFT DOWN 6.3 MILES OF WINDING DESERT RIVER AND END UP AT THE RUINS OF KEELER BRIDGE NEAR THE DEATH VALLEY ROAD. IT'S AN ENCHANTING SCENIC EXPERIENCE WITH WILDLIFE ALONG THE WAY AND EVER-CHANGING VIEWS OF THE HIGHEST PEAKS OF THE SIERRA NEVADA AND INYO MOUNTAINS.

## A RIVER REBORN

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## HONORING THE PAST

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## A WORKING LANDSCAPE

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## VOLUNTEER!

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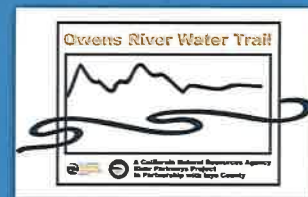
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## TRAIL MAP



## Safety and Rules

1. Wear a properly-fitted lifejacket while on the water.
2. Never paddle under the influence of alcohol or drugs.
3. Paddle with a group, not by yourself!
4. Dress appropriately for weather and water conditions, including air and water temperature.
5. Carry food and drinking water.
6. Do not carry more weight or persons than your boat is designed to safely accommodate.
7. In case of emergency call 911.
8. The trail closes at sunset.
9. No fire of any type are allowed.
10. Cultural artifacts are not to be disturbed.
11. Leave no trace. Carry out all waste.
12. Avoid cattle.



RESOLUTION NO. 2015-41

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO, STATE OF CALIFORNIA, AUTHORIZING INYO COUNTY TO ACT AS GRANTEE FOR RIVER PARKWAYS ACT OF 2004 IMPLEMENTATION FUNDING FOR GRANT FUNDS FROM THE STATE OF CALIFORNIA, CALIFORNIA RIVER PARKWAYS GRANT PROGRAM AND AUTHORIZING THE DIRECTOR OF THE INYO COUNTY OF INYO WATER DEPARTMENT TO ACT AS PROJECT DIRECTOR

WHEREAS, the Legislature and Governor of the State of California have provided funds for the program shown above; and

WHEREAS, the California Natural Resources Agency has been delegated the responsibility for the administration of this grant program, establishing necessary procedures; and

WHEREAS, said procedures established by the California Natural Resources Agency require a resolution certifying the approval of application(s) by the Applicants governing board before submission of said application(s) to the State; and

WHEREAS, the Applicant, if selected, will enter into an agreement with the State of California to carry out the project

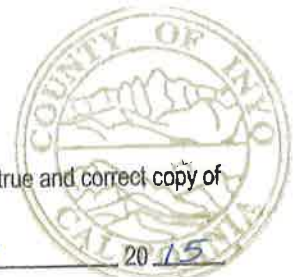
NOW, THEREFORE, BE IT RESOLVED THAT THE INYO COUNTY BOARD OF SUPERVISORS HEREBY:

1. Approves the filing of an application for the Owens River Water Trail
2. Certifies that Applicant understands the assurances and certification in the application; and,
3. Certifies that Applicant or title holder will have sufficient funds to operate and maintain the project(s) consistent with the land tenure requirements; or will secure the resources to do so; and,
4. Certifies that it will comply with all provisions of Section 1771.5 of the California Labor Code; and,
5. If applicable, certifies that the project will comply with any laws and regulations including, but not limited to, the *California Environmental Quality Act* (CEQA), legal requirements for building codes, health and safety codes, disabled access laws, and, that prior to commencement of construction, all applicable permits will have been obtained; and,
6. Certifies that applicant will work towards the State Planning Priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety as included in Government Code Section 65041.1, and
7. Appoints Robert Harrington, Director of the Inyo County Water Department or his designee, as agent to conduct all negotiations, execute and submit all documents including, but not limited to applications, agreements, payment requests and so on, which may be necessary for the completion of the aforementioned project(s).

PASSED AND ADOPTED by the Board of Supervisors of the County of Inyo, State of California, this 25<sup>th</sup> day of August 2015, by the following vote:

AYES: Supervisors Totheroh, Griffiths, Tillemans, and Kingsley  
 NOES: -0-  
 ABSTAIN: -0-  
 ABSENT: Supervisor Pucci

  
 \_\_\_\_\_  
 Chairperson, Inyo County Board of Supervisor



The foregoing instrument is a full, true and correct copy of the original on file in this office.

Attest August 31 20 15  
 Kevin D. Carunchio, Administrative Officer and  
 Clerk of the Board of Supervisors, Inyo County, California

Attest: KEVIN D. CARUNCHIO  
 Clerk of the Board

by:   
 Patricia Gunsolley, Assistant

By 



# Inyo County Water Department

## Letters of support for the Owens River Water Trail

### Organizations

- Los Angeles Department of Water & Power
- Department of Parks & Recreation – Boating and Waterways Commission
- California Department of Fish and Wildlife
- Sierra Club
- Owens Valley Committee
- Lone Pine Paiute-Shoshone Reservation Environmental & Air Quality Department
- Eastern Sierra Interpretive Association (ESIA)
- American Canoe Association – California Branch
- Lone Pine Chamber of Commerce
- Disabled Sports Eastern Sierra
- Eastern Sierra 4 X 4 Club

### Local Businesses

- Doug Thompson – Owner – Whitney Portal Store Hostel & Hotel
- Bob Sigman – Director – Museum of Western Film History
- Art & Jaque Hickman – Owner – Boulder Creek RV Resort
- Kalplesh Bhakta – Owner - Comfort Inn – Lone Pine
- Kevin & Lis Mazzu – Owner – McDonalds (Lone Pine, Bishop, Mammoth Lakes)
- Linda Ellsworth – Owner – Ray's Den Motel
- Charles James – Freelance Journalist
- Timothy S. Keating & Neil Woodruff – SWS Mountain Guides

### Project enthusiasts

- George Wolfe
- Frank Colver
- Barbara Winckler
- Greg Camplin
- Ted & Sue Schroeder
- Rob Toker
- Sherilyn McDonald
- Paula Gammell
- Kathi Hall
- David Woodruff



Department of Water and Power



the City of Los Angeles

ANTONIO R. VILLARAIGOSA  
Mayor

Commission  
THOMAS S. SAYLES, *President*  
ERIC HOLOMAN, *Vice-President*  
RICHARD F. MOSS  
CHRISTINA E. NOONAN  
JONATHAN PARFREY  
BARBARA E. MOSCHOS, *Secretary*

RONALD O. NICHOLS  
General Manager

RECEIVED

February 21, 2013

FEB 26 2013

Dr. Robert Harrington, Director  
Inyo County Water Department  
P.O. Box 337  
Independence, CA 93526-0337

Inyo Co. Water Department

Dear Dr. Harrington:

Subject: Support for Lower Owens River Recreational Use Plan

On behalf of the City of Los Angeles Department of Water and Power (LADWP) and the Board of Water and Power Commissioners, I would like to extend our support for the Lower Owens River Project Recreation Use Plan (Plan) that is being developed by the Inyo County Water Department (ICWD) and MIG Consultants. LADWP appreciates the efforts of ICWD and the MIG Consultants to develop this Plan with both public and agency input to benefit recreational opportunities and the local economy. LADWP is committed to upholding the Lower Owens River Project's environmental mitigation goals, and will continue managing City of Los Angeles (City) lands in the Owens Valley for multiple uses including recreation.

*LA's the Place*

Several of the concerns that LADWP previously raised with regard to potential resource issues and conflicts with LADWP's operations and maintenance needs have been resolved by ICWD through the Plan's development. While a few issues remain that need refinement such as enforcement, liability, and maintenance funding of the project; LADWP is optimistic that ICWD and MIG Consultants will address these concerns in the Plan's final form. LADWP looks forward to reviewing the Plan's next draft.

If you have any questions regarding this matter, please contact Ms. Lori Dermody, Watershed Resources Specialist, at (760) 873-0408.

Sincerely,

James G. Yannotta  
Manager of Aqueduct

- c: Mr. Larry Fröllich, ICWD
- Ms. Linda Arcularius, Inyo County Board of Supervisors
- Mr. Rick Pucci, Inyo County Board of Supervisors
- Honorable Tom LaBonge, Councilmember, Fourth District
- Commissioner Christina E. Noonan
- Commissioner Jonathan Parfrey
- Ms. Lori Dermody

Water and Power Conservation . . . a way of life

□ Bishop, California mailing address: 300 Mandich Street • Bishop, CA 93514-3449 • Telephone: (760) 873-0208 • Fax (760) 873-0266  
111 North Hope Street, Los Angeles, CA 90012-2607 • □ Mailing address: Box 51111 • Los Angeles, CA 90051-0100  
Telephone: (213) 367-4211 • Cable address: DEWAPOLA

Los Angeles  Department of Water & Power

ERIC GARCETTI  
Mayor

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
MICHAEL F. FLEMING  
CHRISTINA E. NOONAN  
BARBARA E. MOSCHOS, *Secretary*

MARCIE L. EDWARDS  
General Manager

August 21, 2015

California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Bonds and Grants Unit  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Dear Grant Unit Representative:

Subject: Letter of Support for California Waterways Grant for the  
Lower Owens River Water Trail

The Inyo County Water Department (ICWD) is submitting a grant application to the California River Parkways Grant Program for funds to establish the Lower Owens River Water Trail. This trail will occupy a portion of the Lower Owens River Project (LORP), which is a large scale river restoration project mandated by a 1997 Memorandum of Understanding (1997 MOU) between various parties. The LORP is jointly managed by the City of Los Angeles Department of Water and Power (LADWP) and ICWD, and occurs on City of Los Angeles property in the County of Inyo. The goal of the LORP is:

*"The establishment of a healthy, functioning Lower Owens River riverine-riparian ecosystem, and the establishment of healthy, functioning ecosystems in the other features of the LORP, for the benefit of biodiversity and threatened and endangered species, while providing for the continuation of sustainable uses including recreation, livestock grazing, agriculture, and other activities." (1997 MOU)*

LADWP supported the development of ICWD's Lower Owens River Recreational Use Plan, 2013 (Plan) that would allow for the establishment of limited primitive facilities to improve access and enhance recreational uses in the LORP. These modest facilities were to occur in disturbed areas that were already receiving moderate use.

Los Angeles Aqueduct Centennial Celebrating 100 Years of Water 1913-2013

Bishop, California mailing address: 300 Mandich Street • Bishop, CA 93514-3449 • Telephone: (760) 873-0208 • Fax: (760) 873-0266  
111 North Hope Street, Los Angeles, CA 90012-2607 Mailing address: Box 51111, Los Angeles, CA 90051-5700  
Telephone: (213) 367-4211 www.LADWP.com



California River Parkways Grant Program  
Page 2  
August 21, 2015

Additionally, limited signage, a walking trail, and two paddle trails were proposed as part of this Plan. This project has yet to be implemented.

ICWD's current proposal for grant funding includes new infrastructure and channel excavation activities that were not originally contemplated in the original Plan, and also in new locations than were previously considered. As a result, LADWP is in support of exploring the feasibility of the new project but cannot yet grant authorization to proceed with implementation without more information regarding potential impacts and/or conflicts with LORP goals. Therefore, LADWP would like to extend support for grant funding through the planning stage and subsequent evaluation under the California Environmental Quality Act (CEQA) for the Lower Owens River Water Trail.

If you have any further questions, please contact Ms. Lori Dermody, Watershed Resources Supervisor, at (760) 873-0408.

Sincerely,

FOR ORIGINAL SIGNED BY *G. Loveland*  
JAMES G. YANNOTTA

James G. Yannotta  
Manager of Aqueduct

LD:bs

c: Mr. Kevin Carunchio  
Ms. Lori S. Dermody



Department of Parks and Recreation  
BOATING AND WATERWAYS COMMISSION  
One Capitol Mall, Suite 500  
Sacramento, California 95814

COMMISSION MEMBERS  
David O. Livingston, *Chair*  
Virginia Maduefo, *Vice Chair*  
Douglas Metz  
Frank Peralta  
Katherine Pettibone  
Randy Short

August 26, 2015

[lfreilich@inyocounty.us](mailto:lfreilich@inyocounty.us)

Larry Freilich  
Inyo County Water Department  
P.O. Box 337  
135 South Jackson St  
Independence, California, 93526

Dear Mr. Freilich:

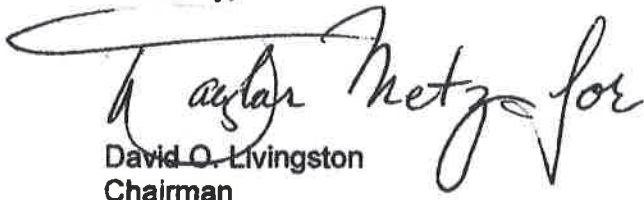
The California Boating and Waterways Commission submits this letter in support of efforts to provide a unique recreational activity for California Boaters through the development of the Owens River Water Trail. The Commission views this project as being fully consistent with our policy goals of expanding boating and watercraft recreational areas, facilities, and opportunities to maintain safe, publicly accessible, and sustained long-term use.

On August 26, 2015 the California Boating and Waterways Commission held a public meeting at Eureka, California. At that meeting the commission received a report on the Owens River Water Trail. The report discussed the joint effort by Inyo County and the Los Angeles Department of Water and Power to develop this exceptional recreational opportunity in the beautiful setting of the Eastern Sierras. The Commission also heard about Inyo County's application for a Resources Agency River Parkways Program grant that could help fund mechanical river preparation, signage, route markers, maps, parking facilities, river paths, and handicap accessible water entry and exits points. Additionally, we were informed about the important collaboration between the Owens River Water Trail and the Disabled Sports Eastern Sierra, Wounded Warriors Program. Following this brief, our Commission unanimously voted to endorse the Owens River Water Trail project via this letter.

Mr. Freilich  
Page 2  
August 26, 2015

The California Boating and Waterways Commission looks forward to seeing the Owens River Water Trail completed and available for the enjoyment of all Californians.

Sincerely,

A handwritten signature in black ink that reads "David O. Livingston". The signature is written in a cursive style with a large, sweeping initial "D".

David O. Livingston  
Chairman

cc: Col Christopher C. Conlin, USMC (Ret)  
Acting Deputy Director  
California State Parks & Recreation  
Division of Boating and Waterways

Tara Lynch, Chief Counsel  
California State Parks & Recreation  
Division of Boating and Waterways

Mark Bagley  
Sierra Club, Range of Light Group  
Owens River Watershed Conservation Chair  
P.O. Box 1431  
Bishop, Ca. 93515

Grant Review Committee  
California River Parkways Grant Program  
The Natural Resources Agency  
ATTN: Bonds and Grants Unit  
1416 Ninth Street, Suite 1311  
Sacramento, Ca. 95814

August 29, 2015

Dear Grant Review Committee,

The Sierra Club was instrumental in negotiating an MOU that established the Lower Owens River Project (LORP) that we have today. I am the Owens Valley MOU party representative for the Sierra Club and have been involved in this project since 1997.

The Sierra Club is delighted that the county is moving forward with a plan to open up a section of the Lower Owens River for a water trail. Recreation is one of the goals of the LORP, which is yet to be fully realized. The proposed Owens River Water Trail offers a unique recreational opportunity that serves the local community and visitors from around the state and nation. This river trail will open a portal to showcase the beauty of the area and the success of the recovering ecosystem.

The project also has great potential for improving water quality in this section of the river. The MOU parties have indicated that they would like to see improvements to water quality in certain sections of the river. This excavation of the channel promises to allow more continuous flow, which we believe will improve water quality. This is an important goal for this project.

Our members in the Eastern Sierra, Southern California, and around the state are looking forward to exploring the paddle trail and assisting with stewardship to maintain the project.

Sincerely,



Mark Bagley





State of California – Natural Resources Agency  
**DEPARTMENT OF FISH AND WILDLIFE**  
Inland Deserts Region  
407 W. Line Street  
Bishop, CA 93514  
www.wildlife.ca.gov

*EDMUND G. BROWN, Jr., Governor*  
*CHARLTON H. BONHAM, Director*



August 31, 2015

Larry Freilich  
Inyo County Water Department  
135 South Jackson Street, Box 337  
Independence, CA 93526

Subject: Letter of Support for the Owens River Water Trail

Dear Mr. Freilich

The California Department of Fish and Wildlife (CDFW) is a party to the 1997 Memorandum of Understanding to the 1991 Environmental Impact Report mandated by the Inyo-LA Long Term Water Agreement. Therefore, CDFW is one of the parties responsible for implementing and monitoring the Lower Owens River Project, the largest river restoration in the western United States.

CDFW is in support of Inyo County's grant application for the Owens River Water Trail. CDFW believes that the Owens River Water Trail will improve recreational use and access along the Lower Owens River; encourage environmental stewardship in the Owens Valley; and reduce **environmental damage from informal stream access corridors.**

CDFW will issue a Streambed Alteration Agreement for the Owens River Water Trail to minimize and mitigate any adverse impacts to fish and wildlife resources as a result of construction activities. Inyo County has already begun consultation with CDFW personnel regarding a Streambed Alteration Agreement for this project. Inyo County has obtained and met the required mitigation measures of previous Streambed Alteration Agreements mandated by restoration and enhancement projects within the Owens Valley.

If you have any questions regarding this letter, please contact Nick Buckmaster at (760) 872-1110 or [Nick.Buckmaster@wildlife.ca.gov](mailto:Nick.Buckmaster@wildlife.ca.gov).

Sincerely,

Lacey Greene  
Environmental Scientist

cc: Chron  
Nick Buckmaster, CDFW

*Conserving California's Wildlife Since 1870*



Owens Valley Committee  
P. O. Box 77  
Bishop, CA 93515  
August 27, 2015

California River Parkways Grant Program  
California Natural Resources Agency  
Attn: Bonds and Grants Unit  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Director, California River Parkways Grant Program:

The Owens Valley Committee (OVC) is a party to the 1997 Memorandum of Understanding (MOU) to the EIR of the 1991 Inyo-LA Long Term Water Agreement and is responsible for monitoring the Lower Owens River Project. The Owens Valley Committee also participated in the development of a recreation use plan for the lower Owens River. The OVC is in support of Inyo County's grant application for the Owens River Water Trail, one of the elements of the recreation use plan.

There are many benefits to the creation of the Owens River Water Trail. Among those are:

- Creation of two access points that will enable visitors to experience the lower Owens River for a variety of reasons, including bird watching, water activities, fishing and the enjoyment of nature.
- Environmental damage that is occurring now with the creation of informal access roads to the river will be stopped or greatly reduced with the new access points.
- The clearing of the river channel will help diversify the habitat.
- Increased visitation to the lower Owens River will result in people from outside our area appreciating the river and its unique setting.
- The project will involve hands-on volunteer efforts which will encourage continued stewardship of the lower Owens River.
- The project will enable people with a range of physical abilities to access the river.

The OVC is excited that the Owens River Water Trail will become a reality. We encourage the California Natural Resources Agency to approve this grant for the benefit of a wide spectrum of visitors to our valley, and to enhance the lower Owens River ecosystem.

Sincerely,

Mary Roper  
President, Owens Valley Committee



August 25, 2015

RECEIVED

AUG 28 2015

Larry Freilich  
Mitigation Manager, Inyo County  
P.O. Box 337, Independence, CA 93526  
760-878-0011  
[www.inyowater.org](http://www.inyowater.org)

Inyo Co. Water Department



Mr. Freilich;

The Lone Pine Paiute-Shoshone Reservation Environmental & Air Quality Department is pleased to support Inyo County's efforts for Owens Valley River restoration projects.

Our department employees have participated in County efforts of tule removal for river access and improved flows, as well as willow tree planting at recent burned areas near the Reservation boundaries. In continuing the long-term collaboration, we have developed education programs through the Lone Pine Tribal Youth Education Program (LPTYEP).

The Owens River was central to the existence and culture of native people in this valley before it was devastated by wholesale diversion into the Los Angeles Aqueduct in 1913. Improved flows since the Lower Owens River Project (LORP) began are only half the battle to restoration. Unnaturally low, legally mandated flow volumes allow for overgrowth of cattails and bulrushes (tules). Though both of these plant species were intensively utilized, generations of native people, being deprived of river access, have diminished traditional ecological knowledge (TEK) base. Our department has been working with tribal youth and their families to reacquaint them with these resources. Classes and demonstrations have included cattails as food, insulation, cordage, basketry and mats; bulrushes for boats and duck decoys. We are working with three other tribes in the valley to reestablish skills to produce traditional boats and housing structures in annual events. To that end, we are committed to the long-term partnership with Inyo County in its effort toward river ecology restoration. These improvements will improve access to culturally valuable resource materials, recreation and opportunity for this community to re-establish a vital relationship with the Owens River.

Attached are sample photographs of our river projects.

Sincerely,

Mel O. Joseph, Environmental Director  
Lone Pine Paiute-Shoshone Reservation

Cc: The Natural Resources Agency, California River Parkways Grant Program

Environmental and Air Quality Department  
Phone: 760-876-4690  
Fax: 760-876-4682  
1101 E-Sha Lane, P.O. Box 747  
Lone Pine, CA 93545



Tule boat and cattail cordage lessons



Collecting cattail fluff for pillows



Harvested cattail flowers for food



Willow tree planting in burn area



Tule removal to widen channel





**RECEIVED**

AUG 19 2015

**Inyo Co. Water Department**

Larry Freilich  
Mitigation Manager  
Inyo County Water Department  
135 South Jackson  
PO Box 337  
Independence CA 93526

August 17, 2015

Dear Mr. Freilich:

The Eastern Sierra Interpretive Association (ESIA) supports your grant proposal to create an Owens River Water Trail on the Owens River in the vicinity of Lone Pine. This proposal to create a new interpretive activity is consistent with ESIA's mission to educate and inspire people about our public lands and resources, to encourage visitors to get to know the area better, and to enable everyone to be effective stewards of these resources.

We understand this trail proposal is unique. Although sharing traits with other developed trails, such as signs and route markers, maps, and facilities for parking, visitors would not walk the Owens River Water Trail—they would float this trail. Gliding down a water path in the middle of the Owens Valley through lush natural habitat in the desert, with towering Mount Whitney and the Sierra Nevada crest to the west and the colorful Inyo Mountains to the east, would be an unforgettable experience.

The River Parkways grant would fund mechanical river preparation, signage, route markers, maps, parking facilities, river paths, and handicap accessible water entry and exits points. ESIA recognizes this would be an unforgettable experience for Eastern Sierra visitors, something that would become a signature attraction in the region, with the opportunity to educate visitors about healthy rivers and habitat preservation and contribute to the economic vitality of our communities.



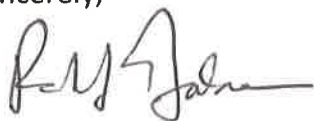
ESIA is aware that currently without a formal trail, without access, only the adventurous few can experience the river, and inadvertently this is causing resource damage. There is no easy way to access the water, and as a result visitors drive out into the floodplain, trample vegetation, and break down the river bank to get to the water's edge. Frequent portages are required, which further degrade banks and vegetation; causing resource damage in a recovering ecosystem. The proposed solution is the Owens River Water Trail, which would provide low-impact access from floodplain to the water's edge, and a structured way to enter the water. As planned, we understand this project also opens up the river to the disabled, providing specialized entry and exit points custom designed for the handicapped. The national Wounded Warriors Project supports this effort to make an accessible river trail.

We also support the knowledge that the project not only promotes ecologically compatible recreation, it also helps improve aquatic habitat. Stretches of the proposed river trail are occluded by cattails, tules, and submerged logs that have come in with the new water. The punctuated river is trapping muck and sediments that can deplete dissolved oxygen and stress fish. Opening up the channel allows seasonal flushing flows access to the river bottom to strip off this organic layer and protect the fishery.

Your proposal indicates that after initial mechanical preparation, the water trail would be maintained through volunteer efforts. This type of multi-sector partnership has been shown to work in other water trail systems around the country. Already, in the area proposed for water trail development, 120 hours of volunteer labor, permitted by the California Department of Fish and Wildlife, and the Los Angeles Department of Water and Power, opened up more than two miles of blocked river. We understand a non-profit group, focused on Owens River stewardship, will continue this stewardship effort. This stewardship group has ESIA's backing, that of the local business community and conservation groups, and has begun to form promising partnerships in southern California that will enhance the group's reach.

We look forward to hearing about this project as your grant proposal moves forward, and how ESIA might actively participate in helping with implementation of this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Gardner". The signature is fluid and cursive, with a long horizontal stroke at the end.

Robert Gardner  
Eastern Sierra Interpretive Association  
Executive Director

California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Bonds and Grants Unit  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

August 30, 2015

Re: Owen's River Paddle Trail

Project Review Committee:

On behalf of the American Canoe Association's (ACA) California Branch, I am writing to express my organization's support for the Owens River Paddle Trail. As the California State Director for the ACA, I see many project ideas, but the Owens River Paddle Trail seem both especially rewarding and achievable.

The ACA, founded in 1880, is a national nonprofit organization serving the broader paddling public by providing stewardship, advocacy, education, programs, events, and insurance to promote paddlesport exploration, recreation, and competition and to protect or expand paddling environments. With thousands of members, the heart of the ACA is the people who paddle, cherish and protect the rivers, lakes, streams, bays and oceans of the United States and beyond.

We are excited to hear that Inyo County in the Eastern Sierra region is launching a proposal to establish an Owens River Water Trail on over six miles of river near Lone Pine. The amazing scenery in this area, the river's contentious and important history, and the unique experience of paddling in a desert river, is sure to be a hit with our members and paddlers throughout the state. The heritage of the Owens River also makes it uniquely interesting to paddlers and historians.

The Owens River Water Trail would be the first formally designed and sanctioned river trail in California. The Owens is a perfect stretch of flat-water river to develop a demonstration project that can serve as a model for other such trails in the West. Paddle trails are highly popular in the Midwest and in Eastern States. New paddlers are often hooked on kayaking or canoeing after experiencing their first glide down a formal river trail. We expect the same result from the ORWT and believe it would augment tourism, fishing, and recreation in the Eastern Sierra area as well.

ACA lends its support to this groundbreaking project and encourages a grant from the CA Natural Resources Agency to make this proposal a reality.

Yours on land and water,



California State Director  
ACA | Canoe – Kayak – SUP – Raft – Rescue  
310-617-3441  
[castatedirector@americancanoe.net](mailto:castatedirector@americancanoe.net)  
[www.americancanoe.org](http://www.americancanoe.org)  
[www.facebook.com/ACA.California](https://www.facebook.com/ACA.California)



August 5, 2015

California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Owens River Water Trail Support  
1416 Ninth St., Suite 1311, Sacramento, CA 95814

To Whom It May Concern:

The Lone Pine Chamber of Commerce, and its 105 business members wholeheartedly support the development of an Owens Valley Water Trail. The trail would showcase the areas extraordinary natural wonders in a whole new way. It would be a wildly popular area attraction close to town; offering a new means for visitors to experience the Eastern Sierra. Lone Pine gets 300,000 visitors annually. One third of these visitors are International visitors from Western Europe who are attracted to the area by its wide variety of outdoor experiences. The menu of local outdoor attractions now includes hiking in the high Sierra, watching birds on Owens Lake, exploring the colorful Alabama Hills, fishing the serene waters of the Owens River—an Owens River Water Trail would fit right in, and certainly be a hit with our visitors.

The project would certainly bring additional economic benefits to the town. Extra nights of lodging in one of our 13 hotels and motels, extra food served in one of our 11 restaurants, and importantly this project will create a whole new industry based on outfitter services. We already have businesses that will step in and run a river concession.

We hope you will move to approve this grant proposal that will offer another unique experience in California, in one of the most popular visitor destination towns in the state. Thank you for your help in making Lone Pine a River Town.

Sincerely,

Kathleen New  
President /CEO





California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Owens River Water Trail Support  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Grant Review Committee:

This letter is to express my support for Inyo Counties grant application for The Rivers and Trails Grant to fund the project to construct an Owens River Water Trail on the Lower Owens, this project is much needed to enhance the experience of the rewatering project that received National and International recognition when the "gates" were opened.

The rewatering of the Lower Owens was projected to be a very important economic stimulus for the Southern part of Owens Valley, many delays and events have slowed this project. By funding the River Trail it would support the master plan to move forward.

Recent work over the last 6 years has led to submitting Legislation to the House and Senate to designate 18,000 acres of BLM land into the first National Scenic Area managed by the Bureau of Land Management. The Alabama Hill Recreation Area receives 120,000 visitors from November to March. This area will adjoin the Owens River Water Trail in close proximity. The Mount Whitney Region has access to the Pacific Crest Trail and The John Muir Trail joining Lone Pine to the South, Mexico and North Canada.

A River element in this location would add additional opportunity to experience the remote area of California with these Iconic existing Trails and resources.

It is not one day passing that reference to Los Angeles and the Owens River is not mentioned, an Owens River Water Trail could enhance the education and scientific information of reestablishing a water supply to a land laid fallow so many years and the rebirth that is happening now. Showing the support, that the City of Los Angeles maintains on making this rewatering a model.

If you are unfamiliar with the Owens Valley of California, its geography is extremely diverse and ranges from rugged mountains, like that of the Sierra, to limited agricultural fields, to extremely mountainous, in-land terrain. The Owens River Water Trail project will foster economic development opportunities for our fiscally challenged communities, particularly to more than 50 local businesses.

Thank you for your time and consideration. Should you have any questions, please do not hesitate to contact my office.

Sincerely,

Doug Thompson  
Owner of Whitney Portal Store Hostel and Hotel  
Doug Thompson Ceo Lone Pine EDC  
Past President Desert Mountain RC&D

# Museum Of Western Film History

P.O. Box 111 Lone Pine, CA 93545

(760)876-9909

August 26, 2015

California River Parkways Grant Program

Natural Resources Agency

Re: Owens River Parkway Grant

Dear Grant Review Members,

As Director of the Museum of Western Film History in Lone Pine, California, I talk with visitors everyday as to their travel experiences. I am always amazed at the diversity of their interest from exploring the mountains of the Eastern Sierra and the Alabama Hills, visiting the Bristlecone Forest, the Sand Dunes of Eureka Valley and discovering the many recreational options of Death Valley to name a few. A good portion of these visitors seek to combine their land experiences with aquatic recreation.

So many of our guests (about 70%) come from the Southern California area and have questions about the Owens Lake history and our long ago access to local water recreation. It is unfortunate that our "water story" and the history of the Aqueduct project is seen as a negative image in our environment. What a joy to think that we may soon have a very different story to tell our visitors, not to mention providing them with the opportunity of a river parkway experience through the Owens River Water Trail Project.

Motels, restaurants, clothing retailers, sporting goods stores, transportation providers, and the like will all benefit from the Owens River being available to the resident and visitor for water recreation. This could translate to more stable year round employment, longer stays in our community, and result in an improved lifestyle for many.

Visitors come to the Eastern Sierra to recreate midst the flora and fauna. The Owens River Water Trail Project is a perfect extension to our existing mission of an exceptional, repeatable visitor experience.

Thank you to the CA Natural Resources Agency, River Parkways Program for considering our request and for providing this grant opportunity!

Sincerely,

Robert Sigman, Director  
Museum of Western Film History





August 20, 2015

California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Owens River Water Trail Support  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

California Natural Resources Agency,

Disabled Sports Eastern Sierra enthusiastically supports the development of an Owens River Water Trail. Disabled Sports Eastern Sierra (DSES) is a volunteer based non-profit dedicated to changing the lives of children and adults with disabilities and their families through outdoor sports and activities. We believe that no one should be left behind simply because of a disability! Kayaking is one of the sports especially suited for the disabled. The Owens River Water Trail will provide an important recreational opportunity for our clients. To build on this opportunity DSES encourages building specialized water entry and exit points designed to accommodate individuals with disabilities. This would open up needed new recreational opportunities to the disabled.

The sport of adaptive paddling is growing. Every summer DSES hosts camps such as Operation: High Altitude and Pedal Paddle which feature adaptive paddle sports. The number of participants in these camps as well as the number participating in daily lessons and activities is increasing every year. With the development of the National Wounded Warrior Center in Mammoth Lakes, the potential number of individuals who could benefit from the Owens River Water Trail increases dramatically.

We hope that you will approve this grant proposal. The Owens River Water Trail offers an opportunity for individuals with disabilities to experience the wonder and beauty of the Eastern Sierra in a way never before possible.

Sincerely,

Kathy Copeland  
Executive Director

# **BOULDER CREEK RV RESORT**

P.O. Box 870 Lone Pine, CA 93545  
T. (760)876-4243 F. (760)876-5253

**August 21, 2015**

**California River Parkways Grant Program  
Natural Resources Agency  
Re: Owens River Parkway Grant**

Dear Grant Review Members,

We are the owners of a 104 space RV Resort in Lone Pine. We have been in business at this location for 28 years and are well acquainted with the amenities offered by our community and the surrounding region. We cannot express to you the excitement that the possibility of this grant has generated in our business community.

The majority of businesses in the Eastern Sierra depend on tourism and work hard to help each and every visitor enjoy the surrounding area. So many of our guests (about 70%) come from the Southern California area and have questions about the Owens Lake and the "water story". The usual comment is how water recreation is missing because of the Aqueduct project and how it is seen as a negative image in our environment. What a joy to think that we may have a very different story to tell our visitors, not to mention providing them with the opportunity of a river parkway experience.

Motels, restaurants, clothing retailers, sporting goods stores, transportation providers, and the like will all benefit from the Owens River being available to the resident and visitor for water recreation. This could translate to more stable year round employment, longer stays in our community, and result in a improved lifestyle for many.

Visitors come to the Eastern Sierra to recreate midst the flora and fauna. The River Parkway project is a perfect extension to our existing mission of an exceptional, repeatable visitor experience.

Thank you for considering our request and for providing this grant opportunity!

Sincerely,

Art and Jaque Hickman, Owners  
Boulder Creek RV Resort  
(760) 937-4233 (cell)

# LP Investment Group, Inc.

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1920 S. Main St, P.O. Box C, Lone Pine, CA 93545 Phone 760.876.8700 Fax 760.876.8704

August 26, 2015

California River Parkways Grant Program  
The Natural Resources Agency  
1416 Ninth St, Suite 1311  
Sacramento, CA 95814

RE: Owens River Water Trail Support

To Our Grant Review Members

We are the owners of the Comfort Inn - Lone Pine and our sister property Holiday Inn Express - Bishop, have been in this community and surrounding for over 25 years now. As business owners and residents of our community cannot be more excited on the prospect of making Lone Pine into a "River Town" with the help and approval of this grant. We are a small town with big heart on hospitality and want our visitors and residents to our valley to see and have the best of what we can offer. An Owens River Water Trail will bring back an amazing natural wonder that has been lost to us for a long time. We as a community will not only benefit from a business prospective, but also can be proud of being part of a project that will bring back a bit of our historical landscape not only for our generation but for future generations to come, which can only be done with your support and approval of this grant.

Please again, requesting that you please approve this grant proposal that will bring back a unique natural wonder and experience not only to our community but for the state of California itself.

Sincerely,



**Kalpesh (Kal) Bhakta**  
Managing Partner  
LP Investment Group  
Comfort Inn - Lone Pine



California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Owens River Water Trail Support  
1416 Ninth St., Suite 1311, Sacramento, CA 95814

To: California River Parkways Grant Program  
From: Kevin and Lis Mazzu / Owner-Operators: McDonald's of Lone Pine, Bishop and Mammoth Lakes  
Re: Owens River Parkway Grant  
Date: August 27, 2015

Dear Grant Review Members,

We would like to provide feedback as both business owners and local members of the community. Having operated a small business in the Owens Valley for the last 10 years, we have realized that tourism and outside visitors to this area drive most of the economic growth and provide the critical revenue to operate a successful business. The local Chamber of Commerce states it well when they say that the area's "lifblood is outdoor recreation based tourism".

It is crucial for the economic vitality of the Owens Valley to develop, support and promote a multi-use approach to our public lands. We need to promote outdoor activities that can both benefit our local residents and draw more tourists to the area to enjoy the natural resources that we offer.

This is where the "Owens River Water Trail and Parkway" system is a great fit.

Providing a unique river parkway experience linked to the rich history of water in the Owens Valley is a fantastic opportunity to combine history, education, and recreation into an exceptional experience unique to our area. As small business owners and local residents in support of recreational land management, we fully support this 'river parkway' concept and are appreciative of your consideration of a grant for this concept. Finally we are anxious to see the project up & running, and providing positive results both recreationally as well as economically to the Owens Valley.

Sincerely,

Kevin and Lis Mazzu

McDonald's Owner/Operators

(760) 784-5494

8/18/15



To: Ca. River Parkways Grant Program  
The Natural Resources Agency

Re: Owens River Water Trail Support

The Eastern Sierra 4x4 Club works with various agencies and organizations to support outdoor dispersed recreation in the Owens Valley. Access to, and appreciation of, "Mother Nature" is a common thread and the Owens River Water Trail is a program we fully support. We would be glad to help bring this project to fruition and promote its continued success. The hustle and bustle of today's society creates a stress that is best relieved by the access and exposure to the natural beauty available to us. A river trail would be a great way to safely experience nature in a way that is not available on roads.

We hope you will approve this grant request and thereby provide visitors and local residents a new type of trail. A water trail, which provides an opportunity to experience the natural environment along the Owens River.

Sincerely,

Mike Johnston

President

Eastern Sierra 4x4 Club



## SWS Mountain Guides

210 East Lake St.

Mt. Shasta, Ca. 96067

mail@swsmtns.com

[www.swsmountainguides.com](http://www.swsmountainguides.com)

Phone: 888.797.6867 / Fax: 877.797.6867

August 25, 2015

California River Parkways Grant Program  
The Natural Resources Agency  
1416 Ninth St., Suite 1311,  
Sacramento, CA 95814

### Attn: Owens River Water Trail Support

To Whom It May Concern:

I work in the Sierras as a mountain guide and look at the Owens Valley with its lush green center stretching into the distance. Over the years friends have told me of the recreational and sporting opportunities along the river. I floated short sections on hot July days off the mountain. Maybe that is how the dream germinated of taking a small vacation and kayaking the Owens



View of the lower Owens River from a few miles north of the Lone Pine airport.


River from Bishop to Lone Pine. A few years ago I began to research the navigable sections of the river. I was surprised that even being willing as I was to portage the pull out for the trans-Inyo river trip was still just south of Independence. I inquired why this was. People were then kind enough to educate me about the life cycle of the tule, the low flow of the lower Owens River and the difficulties these interrelated factors caused for the development of the Lower Owens Waterway. In this manner I discovered that there was a grassroots movement to clear the channel by hand. I was proud that community members felt strongly enough about this issue to put that much effort into a project. Last week at the end of a climb a guest asked if I would I like to take my first flight over the Owens Valley in his single engine plane. I jumped at the opportunity the see the region as I had never seen it before. I hoped to enrich my knowledge base of the mountains, their streets and how they intersect. What surprised me most in the end was not the Inyo Mountains with their hidden mines and vegetation or new buttresses in the Sierras, but that the Owens River did not seem to be a river at all from the air but a greenway that only occasionally showed a glint of water as if it were a chain of independent lakes and not a continuous water course. Knowing all I did about the region I still had not been able to truly assimilate the reality of the situation.

Serendipitously a few days after this flight I was asked to write this letter in support of a grant to create the Owens River Water Trail. I believe that from all sides this makes sense for Southern Inyo County. From an economic stand point the waterway would allow for an augmentation of existing businesses, more rooms would be filled and more may be meals served. There would also be new business opportunities such as kayak and intertube rentals. From an environmental view the waterway can be used to create a focus on California's water and the need to steward, protect, conserve, and share this precious resource. From an emotional and psychological stand point the increased access to water should have a positive effect on the community at large. From a recreational

view it creates a watersport to go with the hiking, climbing, mountain biking, and ATV usage that made the region an international destination. Finally from an aesthetic perspective the water way will have a balancing effect on the region by balancing the dry picturesque desert with an assessable and navigable wet land.

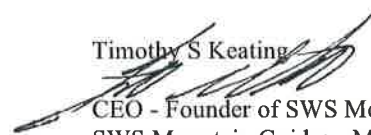
How assessable this new channel should be is a question that needs to be answered. How much infrastructure should there be? Will it have a frontcountry feel or keep the backcountry ethic of most of Inyo County is known for? These questions will be a matter of debate in the future but whatever the answer we at SWS Mountain Guides give full support to **The Owens River Water Trail.**

Neil Woodruff

  
Manager / Senior Guide

SWS Mountain Guides: Eastern Sierras Office

Timothy S Keating



CEO - Founder of SWS Mountain Guides  
SWS Mountain Guides - Main Office



**The Writer's Choice**  
***Better Write than Wrong;***  
***Better Read than Dead***  
Freelance Writer Charles James  
Big Pine, California



26 August 2015

**Re: California River Parkways Grant Program and the Owens River Parkway Proposal**

Dear Grant Review Members,

I am a local journalist writing for news media outlets in the Eastern Sierra. Having covered the Lower Owens River Project (LORP) and Recreation Plan for many years, I have interviewed hundreds of local residents and visitors to the area on their experiences here. With the restoration of the Lower Owens, the variety of fish, flora, and fauna that has sprung forth over just a few years has been astounding to witness. It is with that in mind that I find myself very excited about the Owens River Water Trail Grant Proposal being submitted to you by Inyo County. It will guarantee the continued success of the largest river restoration project ever attempted in our country's history.

The communities of the Eastern Sierra are highly dependent on ecotourism. Time and again, I find myself covering stories of projects that threaten our local environment ranging from continued water exports to large solar energy projects. The local communities have stood fast to keep the large-scale industrialization of the area at bay and have largely succeeded in doing so, however the threats continue.

The history of the Owens Lake itself has long served as a poster child on how large-scale manmade projects can be enormously destructive even as it may have benefited many others. It has seriously threatened and destroyed the natural environment of the Owens Valley, and it has presented health hazards that have extend far beyond the lake itself. Whether serving as an object lesson or just a simple aesthetic pleasure, to paddle down the Lower Owens River into the Owens Lake would be marvelous way to experience the joy of nature and reflect on the efforts that have been taken (and are continuing) on its behalf for those living now and in future generations.

The ORWT proposal would greatly enhancement the opportunities available for the large number of visitors to the area for recreation, wildlife viewing, fishing, boating and paddling. It also would help the local rural economies and provide much needed jobs.

I strongly urge your support of Inyo County's grant proposal for the Owens River Water Trail.

Sincerely yours,  
Charles James  
Freelance Journalist  
Big Pine, CA  
(760) 263-9687

[Reply](#) [Reply All](#) [Forward](#)

## Support for the Owens River Water Trail

George Wolfe [gwolfe.mail@gmail.com]

**To:** Larry Freilich  
**Cc:** Joel Shapiro [joel@electriclodge.org]; anthea raymond [anthea.raymond@gmail.com];  
Brendan Nelson [brendan.nelson@tvc.cbs.com]; chris lee [chris@lariverexpeditions.org];  
Sara Perales [sara@lariverexpeditions.org]; Jonathan Sherman [jonathan@lariverexpeditions.org]

Sunday, August 23, 2015 3:08 PM

You forwarded this message on 8/23/2015 7:12 PM.

To:

California River Parkways Grant Program  
The Natural Resources Agency  
Attn: Bonds and Grants Unit  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Care of:

Larry Freilich  
Mitigation Manager, Inyo County  
Pob 337, Independence, CA 93526  
[www.inyowater.org](http://www.inyowater.org)

Dear Natural Resources Agency,

We would like to throw our support behind this great idea for an Owens River Water Trail. As we've seen through activities down here on the Los Angeles River, one logical step toward a nascent river's revitalization is to begin with public use. Both our river and the Owens have suffered from decades of abuse and neglect, but that can change quickly with a groundswell of support, from grassroots activity to statewide agencies to even federal involvement.

Of course, both rivers have much older histories, but what both rivers have in common is that they've needed a few initial leaders to raise consciousness and nudge them back into being so that these gems within our respective communities can flourish once again and be enjoyed by new generations of the wider public.

We've enacted a multi-pronged strategy since 2011, when we were part of a kayaking & recreational coalition that has over 5 years created an estimated 5,000+ environmental stewards who've kayaked the river and are in support of its continued use and recovery. This jumpstart to the river's new potential and vitality has played a role in acquiring roughly \$1.3 billion for much more involved projects that will reprioritize the river for many years to come.

8/21/2015

water trail

**water trail**

Frank Colver [fcolver@znet.com]

**Sent:** Thursday, August 20, 2015 1:04 PM

**To:** Larry Freilich

**As an enthusiast of Owens River recreation I strongly support the Inyo County proposal for the creation of the Lower Owens River Water Trail.**

**Frank Colver**

**Newport Beach, CA**



## Owens River Trail

BarbaraWinckler@gmail.com [barbarawinckler@gmail.com]

**Sent:** Thursday, August 20, 2015 5:19 PM

**To:** Larry Freilich

Hi Larry;

I wanted to write and show my support for the Owens River Trail for which you are rallying to gain support. As an enthusiast of Owens River recreation, and after paddling on it several times, it has captured my heart.

So, I'm strongly supporting the Inyo County proposal for the creation of the Lower Owens River Water Trail.

Greg and I moved to Michigan this last February, but when we come back into town, we would definitely be available to help you with any river grooming you might need.

Keep up the good work.

All the Best...

Barbara

Please excuse any typos. (Or odd words) as this was sent from my iPhone.

... Auto correct can be a beautiful thing! :-)- Then again...;-)

## Owens Valley River Trail

Gcamplin [gregcamplin321@mail.com]

**Sent:** Thursday, August 20, 2015 5:29 PM

**To:** Larry Freilich

Hi Larry;

I wanted to write and show my support for the Owens River Trail for which you are rallying to gain support. As an enthusiast of Owens River recreation, and after paddling on it, this would be a definite plus for the area.

So, I'm strongly supporting the Inyo County proposal for the creation of the Lower Owens River Water Trail.

All the best.

Greg Camplin  
3969 Last Bay Drive  
Traverse City, MI 49696

Sent from my iPhone

## Larry Freilich

---

**From:** Ted Schroeder <tedschroeder@icloud.com>  
**Sent:** Tuesday, August 25, 2015 12:40 PM  
**To:** Larry Freilich  
**Subject:** Owens River Trail

To All involved in the proposed Owens River Trail: Do it. I'm a 75 year old guy raised in Lone Pine. In the past our family has floated the Truckee, Klamath, Rogue, Colorado and side trips In the Sierra and Europe. These trips fostered a sense of adventure and an educational foundation for an understanding of what makes this old planet tick. We,Owensites have lost so much to "progress" it's time to get something back. Good Luck and Happy Trails to all. Ted and Sue Schroeder, 619 Marsh Ave. Reno, Nevada 89509

Sent from my iPad



## Larry Freilich

---

**From:** Linda Ellsworth <linda9417@yahoo.com>  
**Sent:** Monday, August 24, 2015 4:26 PM  
**To:** Larry Freilich  
**Subject:** The Owen;s River Trail

To whom it may concern,

My name is Linda Ellsworth and I am a resident and business owner (Ray's Den Motel) living in Independence, Ca. I just read about the Owen's River Trail project and would like to voice my support for this incredible idea. I used to be a river guide in Utah and since moving to the Owen's Valley I miss floating a boat through beautiful scenic areas. I have kayaked the Owen's River north of Bishop and wish there were more places near Independence. Most of the Owen's River is hard to get to with the high banks and a lot of it is choked by cattails. I would love to see this project go through for my own personal benefit and as an added recreational activity for the people that visit this area.

Count me in. I can volunteer some time if needed during the winter months.

## Larry Freilich

---

**From:** Robert Tokar <rob@tokartoons.com>  
**Sent:** Monday, August 24, 2015 7:35 AM  
**To:** Larry Freilich  
**Cc:** George Wolfe  
**Subject:** Owens River Water Trail

Hello,

I'm writing to express my interest in paddling the Owens River Water Trail and I'd like to inquire about stewardship as well.

I paddled on the LA River for the first time this summer and I'm excited to add to my experience.

Best regards,

Rob Tokar  
West Hollywood, CA

Sent from my iPhone. Please excuse any shortcuts or typos.

8/22/2015

Owens River Trail

## Owens River Trail

Sheri [sherimac.raft@att.net]

**Sent:** Saturday, August 22, 2015 9:22 AM

**To:** Larry Freilich

I'm a kayaker/rafter in Orange County who believes the Owens River is special. The chance to spend two or three days, particularly in fall, is worth the long drive from southern California. I support Inyo County's proposal for a lower river trail.

Sherilyn McDonald, Esq.  
605 Cherry St.  
Brea, CA 92821



**Larry Freilich**

---

**From:** pagawaga1@surewest.net  
**Sent:** Monday, August 31, 2015 10:44 AM  
**To:** Larry Freilich  
**Subject:** Owens Valley Water Trail

Good morning,

I just wanted to write in Support of an Owens Valley Water Trail. As a recurring visitor whose stepson lives in Inyo County, a Water Trail is a great idea and would bring additional tourism and economic value to the region.

Respectfully,

Paula Gammell

August 26, 2015

California River Parkways Grant Program  
The Natural Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, CA. 95814

ATTENTION: OWENS RIVER WATER TRAIL SUPPORT

To Whom It May Concern:

I am a business owner in Lone Pine, California. I am writing to ask that you please consider approving the grant for the Owens River Water Trail.

Lone Pine has an average of 300,000 visitors each year, of which approximately one third come from Europe. These visitors enjoy the natural aspects of Lone Pine, whether hiking, fishing, bird watching or photographing the unique landscape of the Alabama Hills and other scenic areas.

This Water Trail would provide a unique and memorable experience for all visitors.

This Trail would also provide an economic benefit to our town as people may stay an extra day or two which would provide additional business to our local motels and restaurants which in turn would provide additional tax for Inyo County and the State of California.

Lone Pine is already considered a "destination" town and this Trail would only add to the natural resource attractions we are already known for.

Thank you for your time and consideration.

Kathi Hall  
PO Box 1028  
Lone Pine, CA. 93545



INYO COUNTY  
Water Department  
135 South Jackson Street;  
P.O. Box 337, Independence, CA 93526  
760-878-0001 p; 760-878-2552  
[www.inyowater.org](http://www.inyowater.org)

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## **DRAFT MITIGATED NEGATIVE DECLARATION OF ENVIRONMENTAL IMPACT AND INITIAL STUDY**

**PROJECT TITLE: Owens River Water Trail**

**PROJECT LOCATION: Lone Pine, California**

**PROJECT DESCRIPTION:** The Owens River Water Trail (project) provides recreational access to a 6.3 mile section of the 62.0 mile, newly rewatered, Lower Owens River. The project provides recreational boaters with a structured method to enter and exit the water, and allows unimpeded navigation, which is now not possible due to channel that is partially or fully occluded by emergent vegetation.

The project involves mechanically opening up 0.78 miles of blocked river channel and widening about 1.75 miles of narrow channel to allow passage through the entire length of the river by non-motorized watercraft, such as kayaks and canoes.

The project constructs water entry and water exit structures along the river bank. Small parking areas with gravel surfaces will be constructed near both of the water access locations. At the water exit location, a staging area will be constructed to allow boaters vehicle access to retrieve boats and equipment at the end of the run. Pedestrian paths between parking and staging areas and the water entry and water exit structures will be constructed. Signage will be erected including highway directional signage, road direction signage, and route orientation markers along the river course. Interpretive/ instructional kiosks will be constructed near both of the river entry and exit points.

**FINDINGS:** An Initial Study and Evaluation of Potential Impacts has been prepared by the Water Department (attached). The Initial Study, including an environmental checklist, indicates that the proposed project would not have a significant adverse impact on the environment for the following reasons:

- A. The proposed Owen River Water Trail consistent with nearby uses in the area. No conflicts exist with goals and policies of the General Plan, and the project is consistent with the Inyo County General Plan.
- B. The proposed Owen River Water Trail is consistent with the requirements of the Title 18 (Zoning) and other sections of the Inyo County Code (ICC).
- C. The proposed project's improvements: natural surface cover for parking areas, paths to water and water entry will meet permit requirements and incorporate best design standards and will have less than a significant impact. Hand clearing to remove emergent vegetation will be in adherence to permit



requirement and is expected to result in less than significant impacts. Potentially significant impacts might be expected during mechanical construction to open the river channel, but are not expected to result in long-term significant impacts. Construction impacts may be significant in the following environmental issue areas: Biological, and Hydrological/Water Quality. The following mitigation measures are identified:

Mitigation Measure Bio-1: *Mechanical removal of cattail and bulrush stands shall only occur in the fall and winter (October 1 to March 1) to avoid conflicts with breeding birds. Work outside of this time may be conducted if field surveys determine there would be no effect to nesting birds.*

Mitigation Measure Bio-2:

*To the extent possible, parking areas will be constructed to minimize disturbance of floodplain vegetation including large trees, shrubs and groundcover layers. Any trees lost in construction will be replaced at a 1:4 ratio. Any wetland acreage lost to construction will be replaced in kind in the project area. Boulders will be placed at the perimeter of the parking areas to prevent vehicles from entering adjacent wetlands. Interpretive signage associated with the project will include a description of wetland values.*

Mitigation Measure Hydro/WQ-1: *Best construction management practices will be implemented. Water quality will be monitored downstream of construction and work will stop if permitted threshold conditions are exceeded, and begin again once conditions improve.*

Mitigation Measure Cul-1: *Project proponents will work with the California Office of Historic Preservation, Bureau of Land Management, and Regional Native American Tribal representatives to identify any known significant archeological or historic sites in the project area. These sites will be avoided during construction. Inyo County shall notify Tribal representatives prior to beginning earthwork for the channel clearing work. Interested Tribal representatives shall be invited to be present during earthwork. A trestle that is evidence of the historic Keeler Bridge is near construction activity planned for the southern end of the project. Temporary construction fencing shall be installed along the perimeter of the area of the trestle to avoid construction equipment, vehicles, or personnel from accidentally entering and disturbing the site.*

With mitigation, such potential adverse environmental impacts are not expected to exceed thresholds of significance, either individually or cumulatively.

- D. Based upon the Initial Study and environmental evaluation of the proposed project, it has been found the project with mitigation does not have the potential to create a significant impact on flora or fauna; natural, scenic and historic resources; the local economy; or, public health and welfare. This constitutes a negative finding for each of the Mandatory findings required pursuant to Section 15065 of the California Environmental Quality Act (CEQA) Guidelines.

Please contact Larry Freilich (760-878-0011; lfreilich@inyocounty.us) if you have any questions, or require additional information regarding this project.

Inyo County Water Department

\_\_\_\_\_  
Name, Title, Agency

\_\_\_\_\_  
Date



INYO COUNTY  
Water Department  
135 South Jackson Street;  
P.O. Box 337, Independence, CA 93526  
760-878-0001 p; 760-878-2552  
www.inyowater.org

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## **CEQA APPENDIX G: INITIAL STUDY & ENVIRONMENTAL CHECKLIST FORM**

### EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, “Earlier Analyses,” may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.

- b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance issues.





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**APPENDIX G: CEQA INITIAL STUDY & ENVIRONMENTAL CHECKLIST FORM**

1. **Project title:** Owens River Water Trail

2. **Lead agency name and address:** Inyo County

3. **Contact person and phone number:** Bob Harrington, 760-878-0001

4. **Project location:** Lone Pine, CA

5. **Project sponsor's name and address:** same as Lead

6. **General Plan designation:** Open Space and Recreation

7. **Zoning:** OSR

8. **Description of project:** The Owens River Water Trail (project) allows recreational access to a section of the 62.0 mile, newly rewatered, Lower Owens River. The project provides non-motorized recreational boaters with infrastructure to park a vehicle, a path to the river, and a launch pad on which to enter and exit the water, and allows unimpeded navigation from launch entry to the boat exit point 6.3 miles downriver, which is now not possible due to channel blockage by emergent vegetation (bulrush, *Schoenoplectus acutus* and cattail, *Typha latifolia*).

The project involves using mechanical construction equipment to open 0.78 miles of occluded river channel and uses hand clearing to widen about 1.75 miles of narrow river channel to allow unimpeded passage through a section of the Lower Owens River by non-motorized watercraft such as kayaks and canoes. A tracked excavator and a wheeled or tracked haul will be used to clear occluded sections. Vehicles and tracked equipment will avoid wetlands. Track mats will be used to traverse marsh. Spoils will be placed at the edge of the floodplain. Construction equipment will be stored out of the floodplain on tarps.

Project improvements will include upstream and downstream rock surfaced parking areas constructed away from the river. Rock/geotextile surfaced footpaths will connect the parking areas to the river. The paths will lead to rock/geotextile water entry launch pads and water exit pads constructed at the water's edge. Near the downstream water exit a staging area will be constructed to allow boaters vehicle access to retrieve boats and equipment at the end of the run. Signs will be erected, including directional signage on roads, and route orientation markers along the river course. Interpretive/instructional kiosks will be installed near both of the river entry and exit points.

**9. Surrounding land uses and setting:** Surrounding land uses include cattle grazing, electric transmission utility corridor, a wastewater treatment facility, and a County waste disposal facility. The project area, defined by the perimeter of the floodplain from Lone Pine Narrow Gauge Road south to Highway 136, is largely a natural setting. The floodplain varies in width from 0.12 to 0.33 miles. Dominant floodplain vegetation include salt-grass meadow and tree and shrub willow woodland. A number of informal roads parallel the river on sandy chalky bluffs. A few dirt roads enter the floodplain from the bluff. A range fire swept through about 50% of this floodplain in 2013.

**10. Other public agencies whose approval is required** (e.g., *permits, financing approval, or participation agreement*): Los Angeles Department of Water and Power (landowner), California Department of Fish and Wildlife, Army Corp of Engineers, Lahonton Regional Water Control Board.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

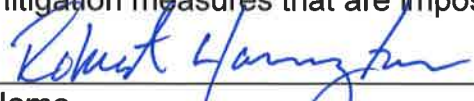
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/> Aesthetics Resources	<input type="checkbox"/> Agriculture and Forestry	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology/Soils
<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards & Haz. Materials	<input checked="" 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 Sig.

**DETERMINATION: (To be completed by the Lead Agency)**

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. 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.

  
 Name \_\_\_\_\_ Date 8/31/2015  
 Title, Agency WATER DIRECTOR, INYO County



# ENVIRONMENTAL CHECKLIST FORM

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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**I. AESTHETICS** -- Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input 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"/> |

**Discussion:** (a) Improvements will be visible, but will not stand out when compared to the surrounding view shed. (b) Some small trees may need to be removed, however all significant trees in the area of improved parking, and river area will not be disturbed. No rock outcrops, or historic buildings will be impacted. The project area cannot be seen from a designated scenic highway. (c) Construction of parking areas, staging areas, paths to water and water entry will be visible, and will displace salt grass meadow, but construction will be in areas that are largely already disturbed by roads and informal parking areas. Water entry/exit points will be visible from the waterway and from the County road but will not dominate the natural setting. Improvements in the area of the water entry and water exit points will be visible from an infrequently traveled county road and will be somewhat visible from a state highway, but will not stand out from the existing background structures and existing improvements. Potential impacts will be temporary and less than significant.

**II. AGRICULTURE AND FORESTRY RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| d) Result in the loss of forest land or conversion of forest land to non-forest use?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) 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 checked="" type="checkbox"/> | <input type="checkbox"/>            |

**Discussion:** (a) The project does not affect land shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. (b) Land in the project area is zoned Open Space and Recreational and is not in conflict with a Williamson Act contract. (c) The project does not conflict with area zoning (OSR [Correct?]. The County does not propose a zone change in the project area. (d) The 395 acre project planning area is scattered with a low density of willow and a small number of cottonwood and under natural conditions would not be expected to support 10 percent native tree cover (Public Resources Code 12220(g)). A few trees may be removed to construct a combined <1.0 acre parking facility and associated river access path, and water entry facility. These will be replaced in the immediate area at a ratio of 1:4 (e) Construction of a parking lot and the river access path will occupy about 1.0 acre, some of which is currently grazed, as a result some salt grass meadow, a low quality forage, will not be available to cattle.

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. 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 type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" 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"/> |

**Discussion:** (a) Construction machinery and ground disturbance will temporarily cause an increase in particulate pollution in the Owens Valley PM-10 Planning Area (OVPA) and will result in emissions of criteria pollutants. However, this contribution is temporary; only during the construction phase and during this period project activities are not expected to significantly raise PM-10 pollution above background conditions. (b) Temporary construction will not lead to any exceedance of air quality standards. (c) Construction machinery and ground disturbance will temporarily cause an increase in particulate pollution in the Owens Valley PM-10 Planning Area (OVPA), but is not expected to contribute to any criteria air pollution exceedances. (d)(e) Any air pollution emissions will be temporary and indistinguishable from background pollutants. Excavating emergent vegetation may temporarily disturb anaerobic sediments causing the release

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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of gases including methane, ammonia, and hydrogen sulfide; however, the closest receptor population is 0.9 miles west of the construction site. This same population is within 0.5 miles of the town wastewater facility, and the smells would be expected to be similar. Due to distance from planned construction, and dilution of odor over a distance, it is expected that the project will not subject a substantial number of people to objectionable odors. River odors are common in the surrounding area, and less than significant impacts will result.

**IV. BIOLOGICAL RESOURCES:** 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 U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/>            | <input 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 checked="" type="checkbox"/> | <input 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"/> |

**Discussion:** (a) Owens pupfish and the Owens tui chub are both listed as T&E species by federal and state governments. Owens speckled dace is a California species of special concern and has been listed as a species of concern in the Federal Draft Species Recovery Plan for the Owens Basin; Owens sucker is a species of special concern with the State of California. Aquatic habitat suitable for these species is found in the project area; however, a 2008 California Department of Fish and Game (CDFG) sampling in the LORP area for native fishes has shown that only pupfish are present and are found at only one location off-river. The river's large population of predator largemouth bass makes it unlikely that any of these species would be present in the project area. The Owens Valley California vole (*Microtus californicus vallicola*), a California Species of Special Concern, is found in the project area. The vole has been found to be abundant along the entire Lower Owens River (2008-2011 Rapid Assessment Surveys, Inyo County Water Department, and Los Angeles Department of Water and Power). The mechanical removal of bulrush and cattail could disturb nesting birds by destroying cover and nests, altering breeding behavior, and displacing breeding pairs. The least bittern, a special status species could be affected. (b) About 13,371 feet of river channel will be excavated to remove emergent vegetation and establish a clear open-water channel. Emergent vegetation is a common habitat type along the Owens River, whereas open water is a rare feature in the Owens Valley. Increasing open water cover is seen as a habit benefit.



Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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Construction will likely result in temporary adverse water quality conditions that could adversely affect game fish due to the depletion of oxygen, and possible increase in hydrogen sulfide and ammonia. The poor water quality could cause fish kills along the river downstream of construction. However, LADWP has excavated sections of the river to remove blockages without triggering fish kills. The Lower Owens River has experienced a number of fish kills with the fishery recovering quickly once water quality conditions improved. (c) The project will mechanically remove sediments and marsh vegetation from up to 2.5 miles of the river. A temporary 15-foot wide haul road will be established for the excavator and trucks. It will be created by driving over the existing vegetation in flat areas, and by minor grading where the terrain is uneven. Several temporary roads will be created perpendicular to the main haul road to provide access to existing dirt roads on the bluff above the river. Establishment of these roads would result in the short-term disturbance of about 16.5 acres of desert sink scrub and alkali meadow. Additionally, up to 0.25 acres of mesic vegetation will be lost, and less than 10 trees (trunks 4"-12") will be removed. Wetlands lost will be created elsewhere in the project area, and trees taken will be replaced at a ratio of 1:4. (d) No native resident or migratory fish are found in this section of the river. Avian species such as Marsh wren, Least bittern and Rails are known to occur near the river. Construction timing and monitoring will reduce this impact to less than significant. (e) There are no local policies, or ordinances, that govern treatment of biological resources in the project area. (f) There are no conservation plans in force in the project area.

**V. CULTURAL RESOURCES:** Would the project:

- |  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?    | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?              | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                                 | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** (a) From May 1880 until April 1960, the Carson and Colorado Railroad Company ran narrow gauge railroad cars in the project area. The remains of a trestle embankment, which supported the train over Keeler Bridge is near the river exit point. Ground disturbing activities during construction are expected to be limited in this area due to the relatively small project scope, which requires minor grading and installing gravel to create a parking area. Given the limited scope of ground disturbing activity, discovery of unknown resources is not anticipated. (b) No known prehistoric or archeological sites are known to occur along the margins of the Lower Owens River, within the floodplain that would be affected by the project (LORP EIR, 1991). Because of the dynamic and energetic actions of a river, the muck taken from the river channel is unlikely to yield archeological resources, however, the parking areas, paths to the river, and riverbank entry and exit points may require earthmoving, which has the potential to unearth previously unknown cultural resources. In addition, the clearing of the river channel will require establishment of temporary access roads along the eastern and western bank, and possibly additional temporary roads to provide access from the river to the nearest existing service road. Establishment and use of these construction-related roads and/or use of construction equipment during the channel clearing work could potentially affect archeological and historic sites. (c) (d) In the event that unknown archaeological resources and/or human remains are disturbed during construction, compliance with CEQA Guidelines Section 15064.5 and standard County policies will work to preclude potentially significant impacts.

**VI. GEOLOGY AND SOILS:** Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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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.

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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 type="checkbox"/>            | <input checked="" 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 checked="" type="checkbox"/> | <input 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"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Discussion:** (a) Lone Pine and surrounding areas are subject to strong seismic ground shaking, as well as seismic-related ground failure, such as liquefaction, however, the project area is not within an Alquist-Priolo Earthquake Fault Zone (CA Department of Conservation, AP map, Lone Pine Quad). Improvements will not include buildings, or other structures that could be disturbed and pose a threat to the public. (b) The project improvements may require minor grading, but will be surfaced with permeable materials to minimize runoff and erosion. (c) The improvement sites are relatively level, such that landslides are not anticipated. (d)(e) On-site soils are not known to be expansive or unable to accommodate waste water disposal systems.

**VII. GREENHOUSE GAS EMISSIONS:**

Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?      | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Discussion:** (a) Construction and operation of the project will result in greenhouse gas (GHG) emissions. However, these emissions will be limited due to the relatively small size of the project. The project once completed is expected to contribute to reductions in GHG emissions, in that promotes non-motorized recreation. The project site is located 2.5 miles from town, within biking distance to town. The relatively low levels of GHG emissions resulting from the project are expected be less than significant. (b) No conflict with any plan, policy, or regulation for reducing GHG emissions is identified.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:**

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" 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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion:** (a)(b)(c) No hazardous materials will be used or disposed of during the project construction or during project implementation. (d) The site is not known to be on any list compiled pursuant to Government Code Section 65962.5. (e)(f) The Lone Pine Airport airstrip is located as close as 0.8 miles from the site. Activity at this airport is low (~1,300 operations/year) and other than during construction, no people will be working or residing in the project area. (g) The project will not interfere with any emergency response or evacuation plan. (h) Fires in the project area have been reported, most recently a human-caused wildfire swept through about 50% of the project area on February 24-25, 2013. This fire was fueled by grasses and trees in floodplain and accelerated by high winds, but the fire was confined to the floodplain due to lack of fuel on the river terrace. The Town of Lone Pine is located above the river terrace and a number of fire defensible spaces lie between the town and the river. There are no built structures in the project area. Impacts regarding hazards and Oous materials will be less than significant.

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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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)?

- |  |                          |                                     |                                     |                                     |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Otherwise substantially degrade water quality?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 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"/> |

**Discussion:** (a) The Lower Owens River (LOR) occurs in the jurisdiction of the Lahontan Regional Water Quality Control Board (Regional Board). The Basin Plan for the region sets forth water quality standards for surface and ground waters of the region. Additionally, the LOR is a water of the United States, which requires the project meet Section 401 certification requirements through the Army Corp of Engineers. The project will be designed to conform to permit standards, and meet all water quality standards during project construction and throughout project implementation. The County will use best management practices during project construction and will monitor to assure that water quality objectives are met. (b) Removal of emergent vegetation will to a small degree reduce evapotranspiration, so a slight increase in recharge might be expected as a result of the project. Otherwise, no impact is expected that will deplete groundwater or affect area wells. (c) The river course will not be altered. Mechanical clearing and widening of the river will follow the existing river channel. Channel clearing and widening may increase laminar flow and can be expected to somewhat increase the velocity of the river, but the increase in velocity in this low gradient river is unlikely to cause bank erosion. Initially, the increase in flow velocity after the river is cleared and widened may increase the transport of organic and inorganic bottom sediments, which will be transported downstream and deposited in lower stretches of the river, or in the forebay of the LOR Pumpback station (3.9 river-miles below the project area). Unplanned flood events in this area have scoured sediments and transported material in the lower sections of the river without evidence of erosion or excessive siltation. These flood events caused magnitudes greater disturbance to the river than can be expected from careful channel excavation. This evidence suggests that the effect of increased river velocity and accompanying increase in the transport of sediments will not result in significant downstream erosion and siltation. (d)(e) Construction to clear occlusions and widen sections of the

Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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river will follow the existing watercourse, so no alterations in drainage patterns are expected to result from the project. Improvements including parking and staging areas, paths to the river, and river access points will be constructed with pervious materials, although these improvements will somewhat change local drainage patterns, the use of permeable materials and the small project footprint make this impact less than significant. Drainage from the parking areas will cause some hydrocarbon pollutants to migrate from the project area, but the amount of polluted runoff leaving the improved area is expected to be small, and through the use of permeable materials hydrocarbon pollution will be transported vertically and pollution would be expected to be mitigated through soil degradation. (f) Mechanically clearing and widening sections of the river will result in temporary water quality impacts that can be significant. The disturbance of organic sediments in the channel may reduce dissolved oxygen levels and increase hydrogen sulfide and ammonia levels. These impacts would be minimized to the extent feasible by best practices construction management. Water quality monitoring will be enforced and if standards are exceeded and work will stop until conditions improve. Although temporary water quality degradation is likely, the project can be expected to improve water quality over time. The river in the project area is slow moving and not energetic, the removal of emergent vegetation and widening of the channel can be expected to somewhat increase flow velocity and improve the efficiency of flow to scour benthic and vegetation sequestered sediments. This is seen as positive improvement, as the build-up of muck and flocculants in the sediment is blamed for reducing dissolved oxygen when the water is warm and sediments are disturbed by unplanned flood events. (g)(h) No housing will be constructed in the project area. (i) No dams or levees will be constructed in the project area. (j) The project area is not subject to threat by seiche, tsunami, or mudflow.

**X. LAND USE AND PLANNING:** 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"/> |

**Discussion:** (a) The project site is zoned Open Space (OS-40) with a General Plan Land Use Designation of Agriculture which allows for the proposed use. The site is utilized for park and recreational purposes currently, and the LPCC is consistent with these uses. The project will not divide any community, and will accommodate greater community benefit. No Habitat or Natural Community Conservation plans apply to the site. (b) The project does not conflict with the County General Plan, the Lower Owens River Monitoring, Reporting and Adaptive Management Plan, or LADWP's Owens Valley Land Management Plan. (c) No HCP or NCCP is in force in the project area. No significant impact is anticipated.

**XI. MINERAL RESOURCES:** 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"/> |

(a)(b) No significant mineral resources are known to be accommodated on the site. No impact is expected.

**XII. NOISE:** Would the project result in the:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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 type="checkbox"/>	<input checked="" 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"/>

**Discussion:** (a)(b)(c)(d)(e)(f) The project will result in a temporary increase in noise from construction. Construction activities will be at least 0.8 miles from the nearest receptor population in the town of Lone Pine. At this distance the noise generated by construction will not be significantly greater than background noise in town. Long-term noise will result from increased recreational activity at the site, but this type of noise is consistent with current nearby non-motorized recreational uses. Noise from construction equipment will be minimized through compliance with standard building and specification requirements. The closest point between the Lone Pine airport and the project site is 0.8 miles. Lone Pine airport receives approximately 1300 visits annually. The result of this low use and the considerable distance between the river and the airstrip is that the project will not expose people visiting the project area to excessive noise levels. Noise and vibration impacts will be less than significant.

**XIII. POPULATION AND HOUSING** -- 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"/>

**Discussion:** (a)(b)(c) The project will result in a new recreational attraction, which may encourage population growth, but it is not expected that this growth will be substantial. No housing or people will be displaced. No significant impact is anticipated.



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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**XIV. PUBLIC SERVICES:** Would the project:

a) 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:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Discussion:** (a) Increased demand for fire and police protection will be minimal, and can be accommodated by existing facilities and staff. The project will not increase the demand for schools or parks. This project provides additional recreational opportunities that may reduce some demand on area parks. Impacts are expected to be less than significant, and in some cases beneficial.

**XV. RECREATION:** Would the project:

a) 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 checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion:** (a) The Owens River Water Trail establishes a new recreational attraction in the area. This new use can be expected to attract residents and visitors who currently recreate at in-town park facilities. The project will benefit area parks in that it offsets some existing recreational demand. (b) The project creates recreational access with minimal improvements. Facilities offered are parking areas, short paths to the river, and water launches, which encourages structured, guided use that concentrates users in areas prepared specifically for such activity. Without such structure visitors enter the area where they can, creating a network of new roads and parking areas in sensitive riparian habitat. Increased recreational use in the project area will cause some adverse effects, such as littering, or disturbing wildlife, but this section of the river is already a popular recreation site. Additional recreation is not expected to cause significant adverse physical effects in the project area.

**XVI. TRANSPORTATION/TRAFFIC --** Would the project:

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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

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"/>
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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"/>
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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"/>
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e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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**Discussion:** (a)(b) The project will increase traffic along Lone Pine Narrow Gauge Road (water trail entry access), which currently sees little traffic. Additional traffic will also be generated along State Highway 136 (water trail exit access), which also sees little traffic. The number of trips generated by this new recreational attraction will be easily accommodated by these existing roads and associated intersections. (c) The water trail and associated facilities will not affect air traffic in any way. (d) The project constructs no new roads. Access from the street to parking areas will be designed to meet standards. (e) Emergency access will be unaffected by this project. Emergency access will be improved in that improved parking areas can be used to stage emergency vehicles if needed. (f) The project will bring more visitors into the area and create a need for more parking. This is accommodated by providing structure parking areas. On most days the parking area provided will be adequate to meet project needs, on occasion the project will receive more visitors that can be accommodated in the developed parking area. Overflow parking can be accommodated roadside in existing turnouts without obstructing traffic. (g) This project is not in conflict with any governing policies, plans, or programs. It is likely that many water trail users will arrive and leave the area on commercial shuttles designed to carry passenger and kayaks. This will further reduce traffic to and from the project improvements.

**XVII. UTILITIES AND SERVICE SYSTEMS --**

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"/>
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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"/>
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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"/>
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d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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new or expanded entitlements needed?

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"/>
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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"/>
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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"/>
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**Discussion:** (a)(b)(c)(d)(e)(f)(g) No water, wastewater, or solid waste services will be provided as part of this project.

**XVII. MANDATORY FINDINGS OF SIGNIFICANCE:**

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 periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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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"/>
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**Discussion:** (a) The project, once completed, is expected to enhance environmental quality; more open water, a rare resource in the Owens Valley will be created, and water quality is expected to improve with the opening of the stream channel. Improvements made to provide parking and a path to the river will reduce uncontrolled entry into the floodplain and river channel; minimizing human impacts. Mitigation measures addressing Biological Resources, Cultural Resources and Hydrology/ Water Quality put in place during construction will reduce all potential environmental impacts to less than significant. (b) The net effect of this project is aquatic and avian habitat improvement. The project overlays the Lower Owen River Project and is consistent with that project's EIR/EIS. Channel clearing has been recommended as a water quality improvement measure by LORP biological consultants and County and LADWP staff biologists. No other projects are underway or under development that could result in cumulative environmental impacts in the project area. (c) The project provides recreation in a natural setting a distance away from the local population. Environmental effects from the project are nonexistent, less than significant, in regard to effects on human beings.



Inyo County Water Department Master Species List

Lower Owens River Floodplain

August 27, 2015

SPECIES CODE	SPECIES	FAMILY	COMMON NAME	SOURCE CODE	Life Cycle	Provenance	Lifeform	Phreatophyte	Noxious	Toxic	Weedy in OV	Rare or uncommon
<b>Ferns and Fern Allies</b>												
AZFI	<i>Azolla filiculoides</i>	Azollaceae	Pacific mosquito fern	5,7	A	N	Herb	Yes				
EQAR	<i>Equisetum arvense</i>	Equisetaceae	Field horsetail	7,8	P	N	Herb	Yes			Yes	
EQLA	<i>Equisetum laevigatum</i>	Equisetaceae	Smooth scouring rush	2,3,5,6,7	P	N	Herb	Yes				
EQUIS	<i>Equisetum</i> sp.	Equisetaceae	Horsetail/ Scouring rush	1,4,6,8	P	N	Herb	Yes			Yes	
MARS1	<i>Marsilea</i> sp.	Marsileaceae	Waterclover	4	P	N	Herb	Yes			Yes	
MAVE2	<i>Marsilea vestita</i>	Marsileaceae	Hairy waterclover	7	P	N	Herb	Yes			Yes	
<b>Flowering Plants</b>												
<b>Dicotyledons</b>												
SEVE2	<i>Sesuvium verrucosum</i>	Aizoaceae	Sea purslane	1,2,4,5,7	P	N	Herb	Yes				
AMBL	<i>Amaranthus blitoides</i>	Amaranthaceae	Prostrate amaranth	2	A	E	Herb	Yes	Yes		Yes	
NIOC2	<i>Nitrophila occidentalis</i>	Amaranthaceae	Western miterwort	1,2,3,4,5,6,7,8	P	N	Herb	Yes				
APGR2	<i>Apium graveolens</i>	Apiaceae	Celery	7	ABP	E	Herb	Yes				
BEER	<i>Berula erecta</i>	Apiaceae	Cutleaf water-parsnip	2,3,5,7	P	N	Herb	Yes				
CIDO	<i>Cicuta douglasii</i>	Apiaceae	Western water hemlock	2,3,4,5,6,7	P	N	Herb	Yes		Yes		
CIMA2	<i>Cicuta maculata</i>	Apiaceae	Spotted water hemlock	8	P	N	Herb	Yes		Yes		
CONIU	<i>Conium</i> sp.	Apiaceae	Poison hemlock	7	B	E	Herb	Yes	Yes	Yes	Yes	
SISU2	<i>Sium suave</i>	Apiaceae	Water-parsnip, Hemlock	2,5,6,7	P	N	Herb	Yes				
APCA	<i>Apocynum cannabinum</i>	Apocynaceae	Hemp dogbane	4,7,8	P	N	Herb	Yes		Yes		
ASFA	<i>Asclepias fascicularis</i>	Apocynaceae	Narrow-leaf milkweed	2,3,4,7,8	P	N	Herb	Yes		Yes		
ASCLE	<i>Asclepias</i> sp.	Apocynaceae	Milkweed	1,4,8	P	N	Herb	Yes				
ASSP	<i>Asclepias speciosa</i>	Apocynaceae	Showy milkweed	2,3,4,5,6,7,8	P	N	Herb	Yes		Yes		
ARCA51	<i>Arida carmosa</i>	Asteraceae	Shrubby alkali aster	1,2,3,4,7,8	P	N	Shrub	Yes				
ARDO3	<i>Artemisia douglasiana</i>	Asteraceae	Douglas mugwort	4,7,8	P	N	Herb	Yes				
ARDR4	<i>Artemisia dracunculus</i>	Asteraceae	Tarragon	2,4,7,8	P	N	Herb	Yes				
BASA4	<i>Baccharis salicifolia</i>	Asteraceae	Mulefat /Water wally	4	P	N	Shrub	Yes				
BICE	<i>Bidens cernua</i>	Asteraceae	Nodding bur-marigold	7	A	N	Herb	Yes				
BICEC	<i>Bidens cernua</i> var. <i>cernua</i>	Asteraceae	Nodding bur-marigold	2	A	N	Herb	Yes				
BIFR	<i>Bidens frondosa</i>	Asteraceae	Sticktight/Beggars tick	1,2,3,4,6,7	A	N	Herb	Yes				
BIDEN	<i>Bidens</i> sp.	Asteraceae	Beggars tick	1	A	N	Herb	Yes				
CIIN	<i>Cichorium intybus</i>	Asteraceae	Common chicory	1,4,6,7,8	P	E	Herb	Yes			Yes	
CIMO	<i>Cirsium mohavense</i>	Asteraceae	Mojave thistle	2,3,4,7,8	BP	N	Herb	Yes				
CIVU	<i>Cirsium vulgare</i>	Asteraceae	Bull thistle	2,3,4,6,7,8	B	E	Herb	Yes	Yes	Yes	Yes	
CONYZ	<i>Conyza</i> sp.	Asteraceae	Horseweed	4	A	N	Herb	Yes				
CRRU3	<i>Crepis runcinata</i>	Asteraceae	Fiddleleaf hawksbeard	0,8	P	N	Herb	Yes				
CRRUH	<i>Crepis runcinata</i> ssp. <i>hallii</i>	Asteraceae	Hall's meadow hawksbeard	4	P	N	Herb	Yes				Yes
CREPI	<i>Crepis</i> sp.	Asteraceae	Hawksbeard	4	ABP	N	Herb	Yes				
ERAL23	<i>Ericameria albidia</i>	Asteraceae	White-flowered rabbitbrush	1,2,3,4,7	P	N	Shrub	Yes				Yes
ERNAO	<i>Ericameria nauseosa</i> var. <i>oreophila</i>	Asteraceae	Rubber rabbitbrush	4,5,7	P	N	Shrub	Yes				
ERCA20	<i>Erigeron canadensis</i>	Asteraceae	Canada horseweed	2,3,4,6,7,8	A	N	Herb	Yes			Yes	
ERLO	<i>Erigeron lonchophyllus</i>	Asteraceae	Shortray fleabane daisy	7	AB	N	Herb	Yes				
EUOC4	<i>Euthamia occidentalis</i>	Asteraceae	Western goldenrod	2,3,5,6,7,8	P	N	Herb	Yes				
GNPA	<i>Gnaphalium palustre</i>	Asteraceae	Lowland cudweed	2,3,7	A	N	Herb	Yes				
GRSQ	<i>Grindelia squarrosa</i>	Asteraceae	Curly-cup gumweed	4,5,8	B	E	Herb	No		Yes	Yes	
HEAN3	<i>Helianthus annuus</i>	Asteraceae	Annual sunflower	1,2,4,5,6,7,8	A	N	Herb	Yes			Yes	
HENU	<i>Helianthus nuttallii</i>	Asteraceae	Nuttall's sunflower	2,3,4,7	P	N	Herb	Yes				
HELIA3	<i>Helianthus</i> sp.	Asteraceae	Sunflower	4	AP	N	Herb	Yes				

IVAX	<i>Iva axillaris</i>	Asteraceae	Poverty weed	1,2,3,4,6,7,8	P	N	Herb	Yes				Yes
LASE	<i>Lactuca serriola</i>	Asteraceae	Prickly lettuce	2,3,4,5,6,7,8	A	E	Herb	Yes				Yes
LACTU	<i>Lactuca</i> sp.	Asteraceae	Lettuce	4	AP		Herb	Yes				Yes
LACO13	<i>Laennecia coulteri</i>	Asteraceae	Coulter's horseweed	2,4,6,7	A	N	Herb	Yes				Yes
PLSE	<i>Pluchea sericea</i>	Asteraceae	Arrow weed	7	P	N	Shrub	Yes				
PSLU6	<i>Pseudognaphalium luteoalbum</i>	Asteraceae	Jersey cudweed	3,4,5,7	A	E	Herb	Yes				Yes
PSST7	<i>Pseudognaphalium stramineum</i>	Asteraceae	Cotton-batting cudweed	2,6,7	AB	N	Herb	Yes				
PYRA	<i>Pyrrocoma racemosa</i>	Asteraceae	Gold-wand aster	1,2,3,4,7,8	P	N	Herb	Yes				
PYRAS	<i>Pyrrocoma racemosa</i> var. <i>sessiliflora</i>	Asteraceae	Clustered gold-wand aster	5,6,7	P	N	Herb	Yes				
SEIN2	<i>Senecio integerrimus</i>	Asteraceae	Lambstongue ragwort	7	BP	N	Herb	Yes				
SESE2	<i>Senecio serra</i>	Asteraceae	Tall ragwort	7	P	N	Herb	Yes				
SETR	<i>Senecio triangularis</i>	Asteraceae	Arrowleaf ragwort	1	P	N	Herb	Yes				
SOLID	<i>Solidago</i> sp.	Asteraceae	Goldenrod	1,4,7	P		Herb	Yes				
SOSP3	<i>Solidago spectabilis</i>	Asteraceae	Showy goldenrod	2,3,7	P	N	Herb	Yes				
SOAS	<i>Sonchus asper</i>	Asteraceae	Prickly sow thistle	2,3,4,5,7	A	E	Herb	Yes				Yes
STPA4	<i>Stephanomeria pauciflora</i>	Asteraceae	Common wire-lettuce	1,2,4,7,8	P	N	Shrub/Herb	No				
SYFR2	<i>Symphotrichum frondosum</i>	Asteraceae	Leafy aster	2,3,7	A	N	Herb	Yes				
SYLAH6	<i>Symphotrichum lanceolatum</i> var. <i>he</i>	Asteraceae	Siskiyou aster	1,6,7	P	N	Herb	Yes				
XANTH2	<i>Xanthium</i> sp.	Asteraceae	Cocklebur	1,4,6	A		Herb	Yes	Yes			Yes
XAST	<i>Xanthium strumarium</i>	Asteraceae	Rough cocklebur	1,2,3,4,5,6,7,8	A	N	Herb	Yes	Yes			Yes
HECU3	<i>Heliotropium curassavicum</i>	Boraginaceae	Salt heliotrope	1,2,3,4,5,6,7,8	P	N	Herb	Yes				
HELIO3	<i>Heliotropium</i> sp.	Boraginaceae	Heliotrope	4			Herb	Yes				
HECA7	<i>Hesperochiron californicus</i>	Boraginaceae	California hesperochiron	2,4,7	P	N	Herb	Yes				
HEPU6	<i>Hesperochiron pumilus</i>	Boraginaceae	Dwarf hesperochiron	4	P	N	Herb	Yes				
MYSC	<i>Myosotis scorpioides</i>	Boraginaceae	Common forget-me-not	4,7	P	E	Herb	Yes				Yes
PLCU2	<i>Plagiobothrys cusickii</i>	Boraginaceae	Cusick's popcorn flower	2	A	N	Herb	Yes				
PLPA	<i>Plagiobothrys parishii</i>	Boraginaceae	Parish's popcornflower	2,5,7	A	N	Herb	Yes				Yes
LEDED	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	Brassicaceae	Common pepperweed	4	A	N	Herb	Yes				
LEDI2	<i>Lepidium dictyotum</i>	Brassicaceae	Alkali pepperweed	4	A	N	Herb	Yes				
LELA2	<i>Lepidium latifolium</i>	Brassicaceae	Perennial pepperweed	1,4,6,7,8	P	E	Herb	Yes	Yes	Yes	Yes	
NAOF	<i>Nasturtium officinale</i>	Brassicaceae	Water cress	2,4,5,7	P	N	Herb	Yes				
ROPAP	<i>Rorippa palustris</i> var. <i>palustris</i>	Brassicaceae	Western bog yellow cress	2,3	ABP	N	Herb	Yes				
ROSI2	<i>Rorippa sinuata</i>	Brassicaceae	Spreading yellow cress	2,4,8	P	N	Herb	Yes				
THCR	<i>Thelypodium crispum</i>	Brassicaceae	Crisped thelypodium	2,4,7	AB	N	Herb	Yes				
THIN	<i>Thelypodium integrifolium</i>	Brassicaceae	Tall thelypodium	7	B	N	Herb	Yes				
THINA	<i>Thelypodium integrifolium</i> ssp. <i>affine</i>	Brassicaceae	White tall thelypodium	2,4,5,7	B	N	Herb	Yes				
THINC	<i>Thelypodium integrifolium</i> ssp. <i>complanatum</i>	Brassicaceae	Purple tall thelypodium	8	B	N	Herb	Yes				
THELY	<i>Thelypodium</i> sp.	Brassicaceae	Thelypodium	4		N	Herb	Yes				
CERE2	<i>Celtis reticulata</i>	Cannabaceae	Western hackberry	2	P	N	Shrub	Yes				Yes
SPMA2	<i>Spergularia marina</i>	Caryophyllaceae	Sand spurrey	2	A	N	Herb	Yes				
STLO2	<i>Stellaria longipes</i>	Caryophyllaceae	Longstalk starwort	7	P	N	Herb	Yes				
CEDE4	<i>Ceratophyllum demersum</i>	Ceratophyllaceae	Coon's tail	2,7	P	N	Herb	Yes				
ALOC2	<i>Allenrolfea occidentalis</i>	Chenopodiaceae	Iodine bush	1,2,3,4,5,6,7,8	P	N	Shrub	Yes				
ATARE2	<i>Atriplex argentea</i> var. <i>expansa</i>	Chenopodiaceae	Mohave silverscale	2	A	N	Herb	Yes				
ATCO12	<i>Atriplex covillei</i>	Chenopodiaceae	Arrowscale	2,3,4,5,6,7,8	A	N	Herb	Yes				
ATPA3	<i>Atriplex parryi</i>	Chenopodiaceae	Parry's saltbush	1,2,3,4,7,8	P	N	Shrub	Yes				
ATPR	<i>Atriplex prostrata</i>	Chenopodiaceae	Spearscale	1,2,3,4,5	A	E	Herb	Yes				
ATSE2	<i>Atriplex serenana</i>	Chenopodiaceae	Bractscale	2,4,7,8	A	N	Herb	Yes				Yes
ATTO	<i>Atriplex torreyi</i>	Chenopodiaceae	Torrey's saltbush	1,2,3,4,5,6,8	P	N	Shrub	Yes				
ATTR	<i>Atriplex truncata</i>	Chenopodiaceae	Wedgescale	2,3,4,7,8	A	N	Herb	Yes				
BAHY	<i>Bassia hyssopifolia</i>	Chenopodiaceae	Fivehook bassia	1,2,3,4,5,6,7,8	A	E	Herb	Yes	Yes			Yes
CHGL3	<i>Chenopodium glaucum</i>	Chenopodiaceae	Gray pigweed	2	A	E	Herb	Yes				
CHRU	<i>Chenopodium rubrum</i>	Chenopodiaceae	Red goosefoot	7	A	N	Herb	Yes				

KOAM	<i>Kochia americana</i>	Chenopodiaceae	Green molly	1,2,4,6	P	N	Shrub	Yes		
MONU	<i>Monolepis nuttalliana</i>	Chenopodiaceae	Nuttall's poverty weed	2,3	A	N	Herb	Yes		
SATR12	<i>Salsola tragus</i>	Chenopodiaceae	Tumbleweed/Russian-thistle	1,3,4,8	A	E	Herb	No	Yes	Yes
SUCA2	<i>Suaeda calceoliformis</i>	Chenopodiaceae	Low inkweed/Horned sea-blite	5	A	N	Herb	Yes		
SUNI	<i>Suaeda nigra</i>	Chenopodiaceae	Bush inkweed	1,2,3,4,5,6,7,i	P	N	Shrub	Yes		
SUAED	<i>Suaeda</i> sp.	Chenopodiaceae	Seepweed	1	P	N	Shrub/Herb	Yes		
CLEOM	<i>Cleome</i> sp.	Cleomaceae	Bee plant/Spiderflower	4	A		Herb	Yes		Yes
CLBR2	<i>Cleomella brevipes</i>	Cleomaceae	Little stinkweed	2,3,4,7	A	N	Herb	Yes		
CLPA4	<i>Cleomella parviflora</i>	Cleomaceae	Slender cleomella	2,3,4,5,7,8	A	N	Herb	Yes		
CLPL2	<i>Cleomella plocasperma</i>	Cleomaceae	Twisted cleomella	1,2,3,4,8	A	N	Herb	Yes		
CLEOM2	<i>Cleomella</i> sp.	Cleomaceae	Cleomella/Stinkweed	1,4,8	A	N	Herb	Yes		
PELU5	<i>Peritoma lutea</i>	Cleomaceae	Yellow bee plant	1,2,4,5,6,7,8	A	N	Herb	Yes		Yes
CRTR5	<i>Cressa truxillensis</i>	Convolvulaceae	Spreading alkali weed	2,4,5,6,7	P	N	Herb	Yes		
DAGL2	<i>Datisca glomerata</i>	Datisceae	Durango root	2,4,7	P	N	Herb	Yes	Yes	Yes
ELAN	<i>Elaeagnus angustifolia</i>	Elaeagnaceae	Russian olive	1,2,3,4,5,7,8	P	E	Shrub	Yes		Yes
ASAR4	<i>Astragalus argophyllus</i>	Fabaceae	Silverleaf milkvetch	4	P	N	Herb	Yes		Yes
ASARA	<i>Astragalus argophyllus</i> var. <i>argophylli</i>	Fabaceae	Silverleaf milkvetch	4,3	P	N	Herb	Yes		Yes
GLLE3	<i>Glycyrrhiza lepidota</i>	Fabaceae	American licorice	1,2,4,6,7,8	P	N	Herb	Yes		Yes
HOOB2	<i>Hosackia oblongifolia</i>	Fabaceae	Streambank bird's-foot trefoil	7	P	N	Herb	Yes		
HOOBO2	<i>Hosackia oblongifolia</i> var. <i>oblongifolia</i>	Fabaceae	Streambank bird's-foot trefoil	2,5	P	N	Herb	Yes		
LOCO6	<i>Lotus corniculatus</i>	Fabaceae	Birdsfoot trefoil	1,2,4,5,6,7,8	P	E	Herb	Yes		Yes
MELU	<i>Medicago lupulina</i>	Fabaceae	Black medick	5,6,7	A	E	Herb	Yes		Yes
MESA	<i>Medicago sativa</i>	Fabaceae	Alfalfa	1,2,4,6,8	AP	E	Herb	Yes		
MEDIC	<i>Medicago</i> sp.	Fabaceae	Burclover/Alfalfa	0		E	Herb	Yes		
MEAL2	<i>Melilotus albus</i>	Fabaceae	White sweetclover	1	A	E	Herb	Yes		Yes
MEIN2	<i>Melilotus indicus</i>	Fabaceae	Annual yellow sweetclover	7	A	E	Herb	Yes		
PRPU	<i>Prosopis pubescens</i>	Fabaceae	Screw-bean mesquite	2,4,7	P	N	Shrub	Yes		
ROPS	<i>Robinia pseudoacacia</i>	Fabaceae	Black locust	1,2,3,4,6,7,8	P	E	Shrub	Yes	Yes	Yes
ROBIN	<i>Robinia</i> sp.	Fabaceae	Locust	4	P	E	Shrub	Yes	Yes	Yes
TRFR2	<i>Trifolium fragiferum</i>	Fabaceae	Strawberry clover	5,6,7	P	E	Herb	Yes		Yes
TRVA	<i>Trifolium variegatum</i>	Fabaceae	White-tipped clover	2,7	A	N	Herb	Yes		
TRWO	<i>Trifolium wormskioldii</i>	Fabaceae	Cows clover	2,3,4,5,6,7	P	N	Herb	Yes		
FRSA	<i>Frankenia salina</i>	Frankeniaceae	Alkali heath	2,4,7,8	P	N	Shrub	Yes		
CENTA2	<i>Centaurium</i> sp.	Gentianaceae	Centaury	4	A		Herb	Yes		
ZEEEX	<i>Zeltnera exaltata</i>	Gentianaceae	Exalted centaury	1,2,3,4,5,6,7,i	A	N	Herb	Yes		
JUHI	<i>Juglans hindsii</i>	Juglanaceae	Northern California black walnut	7	P	E	Shrub	Yes		
LYAM	<i>Lycopus americanus</i>	Lamiaceae	American water horehound	7	P	N	Herb	Yes		
LYAS	<i>Lycopus asper</i>	Lamiaceae	Rough bugleweed	3,5,7	P	N	Herb	Yes		
MAVU	<i>Marrubium vulgare</i>	Lamiaceae	Horehound	2,4,7	P	E	Herb	Yes		Yes
MEAR4	<i>Mentha arvensis</i>	Lamiaceae	Wild mint	1,2,3,4,5,6,7,i	P	N	Herb	Yes		
MENTH	<i>Mentha</i> sp.	Lamiaceae	Mint	1,4,6	P		Herb	Yes		
MESP3	<i>Mentha spicata</i>	Lamiaceae	Spearmint	7,8	P	E	Herb	Yes		
MEPI	<i>Mentha x piperita</i>	Lamiaceae	Peppermint	7	P	E	Herb	Yes		
STAL	<i>Stachys albens</i>	Lamiaceae	Whitestem hedgenettle	4, 7	P	N	Herb	Yes		
UTMA	<i>Utricularia macrorhiza</i>	Lentibulariaceae	Common bladderwort	7	P	N	Herb	Yes		
MALE3	<i>Malvella leprosa</i>	Malvaceae	Alkali mallow	2,4,5,7,8	P	N	Herb	Yes	Yes	Yes
MALVE	<i>Malvella</i> sp.	Malvaceae	Mallow	4	P		Herb	Yes		
SIDA	<i>Sida</i> sp.	Malvaceae	Fanpetals	0			Herb	Yes		
SICO2	<i>Sidalcea covillei</i>	Malvaceae	Owens Valley checkerbloom	1,2,4,7,8	P	N	Herb	Yes		Yes
FOPU2	<i>Forestiera pubescens</i>	Oleaceae	Desert olive	1,2,4,5,6,7	P	N	Shrub	Yes		
FOPUP	<i>Forestiera pubescens</i> var. <i>pubescens</i>	Oleaceae	Desert olive	8	P	N	Shrub	Yes		
EPCI	<i>Epilobium ciliatum</i>	Onagraceae	Hairy willow herb	2,3,5,7	P	N	Herb	Yes		
EPCIC	<i>Epilobium ciliatum</i> ssp. <i>ciliatum</i>	Onagraceae	Fringed willow herb	2,3	P	N	Herb	Yes		



EPILO	<i>Epilobium</i> sp.	Onagraceae	Willowherb	4,8		N	Herb	Yes		
LUPA	<i>Ludwigia palustris</i>	Onagraceae	Marsh seedbox	7	P	N	Herb	Yes		
LUPE5	<i>Ludwigia peploides</i>	Onagraceae	Water primrose	2,4,7	P	E	Herb	Yes		
OEEL	<i>Oenothera elata</i>	Onagraceae	Tall yellow evening primrose	7	BP	N	Herb	Yes		
OEELH	<i>Oenothera elata ssp. hirsutissima</i>	Onagraceae	Tall yellow evening primrose	2,6,7	BP	N	Herb	Yes		
OEELH2	<i>Oenothera elata ssp. hookeri</i>	Onagraceae	Hooker's evening-primrose	2,4,6	BP	N	Herb	Yes		
OELO	<i>Oenothera longissima</i>	Onagraceae	Longstem evening primrose	5	B	N	Herb	Yes		
OEVIS	<i>Oenothera villosa ssp. strigosa</i>	Onagraceae	Hairy evening primrose	7	B	N	Herb	Yes		
CAMI12	<i>Castilleja miniata</i>	Orobanchaceae	Creekside Indian paintbrush	7	P	N	Herb	Yes		
CAMI13	<i>Castilleja minor</i>	Orobanchaceae	Small-flowered Indian paintbrush	3,5,7	A	N	Herb	Yes		
CAMIM6	<i>Castilleja minor ssp. minor</i>	Orobanchaceae	Lesser Indian paintbrush	4,7	A	N	Herb	Yes		
CHMA20	<i>Chloropyron maritimum</i>	Orobanchaceae	Saltmarsh bird's-beak	7	A	N	Herb	Yes		
CHMAC	<i>Chloropyron maritimum ssp. canesce</i>	Orobanchaceae	Alkali bird's-beak	1,2,3,4,5,6,8	A	N	Herb	Yes		
OXCO	<i>Oxalis corniculata</i>	Oxalidaceae	Creeping sour clover	1,4,5,8	AP	E	Herb	Yes		Yes
OXALI	<i>Oxalis</i> sp.	Oxalidaceae	Sorrel, Sour clover	4	AP	E	Herb	Yes		Yes
MIGU	<i>Mimulus guttatus</i>	Phrymaceae	Common monkeyflower	2,3,4,5,7	AP	N	Herb	Yes		
MIP18	<i>Mimulus pilosus</i>	Phrymaceae	Hairy monkeyflower	2,4,7	A	N	Herb	Yes		
MISU2	<i>Mimulus suksdorfii</i>	Phrymaceae	Suksdorf miniature monkeyflower	4	A	N	Herb	Yes		
CAHE3	<i>Callitriche heterophylla</i>	Plantaginaceae	Larger water-starwort	2,7	A	N	Herb	Yes		
PLLA	<i>Plantago lanceolata</i>	Plantaginaceae	English plantain	1,2,4,5,6,7	P	E	Herb	Yes	Yes	Yes
PLMA2	<i>Plantago major</i>	Plantaginaceae	Broadleaf plantain	1,2,3,4,5,6,7,8	P	E	Herb	Yes		Yes
VEAM2	<i>Veronica americana</i>	Plantaginaceae	American brooklime	2,7	P	N	Herb	Yes		
VEAN2	<i>Veronica anagallis-aquatica</i>	Plantaginaceae	Water speedwell	2,4,7	BP	E	Herb	Yes		
VEPE2	<i>Veronica peregrina</i>	Plantaginaceae	Neckweed	7	A	N	Herb	Yes		
VEPEX2	<i>Veronica peregrina ssp. xalapensis</i>	Plantaginaceae	Purslane-speedwell	2	A	N	Herb	Yes		
BIBI5	<i>Bistorta bistortoides</i>	Polygonaceae	American bistort	6	P	N	Herb	Yes		
GOLU	<i>Goodmania luteola</i>	Polygonaceae	Yellow spinecape	3,4,7	A	N	Herb	Yes		Yes
PEAM8	<i>Persicaria amphibia</i>	Polygonaceae	Longroot smartweed	7	P	N	Herb	Yes		
PEHY6	<i>Persicaria hydropiper</i>	Polygonaceae	Marshpepper	2,7	P	E	Herb	Yes		
PELA22	<i>Persicaria lapathifolia</i>	Polygonaceae	Curlytop knotweed	2,6,7	A	N	Herb	Yes	Yes	
PEMA24	<i>Persicaria maculosa</i>	Polygonaceae	Peach-leaved lady's thumb	2,3,4,6,7	A	E	Herb	Yes	Yes	Yes
POAVD	<i>Polygonum aviculare ssp. depressum</i>	Polygonaceae	Common knotweed	2,4,5,6,7	A	E	Herb	Yes		Yes
PODO4	<i>Polygonum douglasii</i>	Polygonaceae	Douglas' knotweed	6	A	N	Herb	No		
POSA23	<i>Polygonum salicifolium</i>	Polygonaceae	Willow-leaved knotweed	7	P	E	Herb	Yes		
RUCA	<i>Rumex californicus</i>	Polygonaceae	Toothed willow dock	4	P	N	Herb	Yes	Yes	Yes
RUCO2	<i>Rumex conglomeratus</i>	Polygonaceae	Clustered dock	2,7	P	E	Herb	Yes	Yes	
RUCR	<i>Rumex crispus</i>	Polygonaceae	Curly dock	1,2,3,4,5,6,7,8	P	E	Herb	Yes	Yes	Yes
RUFU3	<i>Rumex fueginus</i>	Polygonaceae	Golden dock	2,3	AB	N	Herb	Yes	Yes	
RUSA	<i>Rumex salicifolius</i>	Polygonaceae	Willow dock	4,7	P	N	Herb	Yes	Yes	Yes
RUMEX	<i>Rumex</i> sp.	Polygonaceae	Dock/Sorrel	4,8			Herb	Yes	Yes	Yes
RUVI	<i>Rumex violascens</i>	Polygonaceae	Violet dock	6	AB	N	Herb	Yes	Yes	
POOL	<i>Portulaca oleracea</i>	Portulacaceae	Common purslane	2,4,7	A	E	Herb	Yes		Yes
AQFO	<i>Aquilegia formosa</i>	Ranunculaceae	Western Columbine	4,7	P	N	Herb	Yes		
CLI12	<i>Clematis ligusticifolia</i>	Ranunculaceae	Virgin's bower	1,2,4,7	P	N	Shrub	Yes		
RAAQ	<i>Ranunculus aquatilis</i>	Ranunculaceae	White water buttercup	4,7	P	N	Herb	Yes		
RAAQD	<i>Ranunculus aquatilis</i> var. <i>diffusus</i>	Ranunculaceae	Thread-leaf water buttercup	2,3,4,5	P	N	Herb	Yes		
RACY	<i>Ranunculus cymbalaria</i>	Ranunculaceae	Alkali buttercup	2,3,4,5,7	P	N	Herb	Yes		
RAHY	<i>Ranunculus hydrocharoides</i>	Ranunculaceae	Frog's-bit buttercup	2,4,7	P	N	Herb	Yes		Yes
IVKI	<i>Ivesia kingii</i>	Rosaceae	Alkali mousetail	1,4,3	P	N	Herb	Yes		Yes
IVKIK2	<i>Ivesia kingii</i> var. <i>kingii</i>	Rosaceae	Alkali mousetail	1,4,3	P	N	Herb	Yes		Yes
POBI7	<i>Potentilla biennis</i>	Rosaceae	Biennial cinquefoil	2,4, 5	AB	N	Herb	Yes		
POGR9	<i>Potentilla gracilis</i>	Rosaceae	Slender cinquefoil	7	P	N	Herb	Yes		
POGRE	<i>Potentilla gracilis</i> var. <i>elmeri</i>	Rosaceae	Alkali cinquefoil	2,4,7	P	N	Herb	Yes		

POGRF	<i>Potentilla gracilis</i> var. <i>flabelliformis</i>	Rosaceae	Slender cinquefoil	2	P	N	Herb	Yes			
ROSA5	<i>Rosa</i> sp.	Rosaceae	Rose	4,7	P		Shrub	Yes			
ROWO	<i>Rosa woodsii</i>	Rosaceae	Wood's rose	1,2,3,4,6,7,8	P	N	Shrub	Yes			
ROWOU	<i>Rosa woodsii</i> var. <i>ultramontana</i>	Rosaceae	Intermountain rose	1,2,3,4,5,6,8	P	N	Shrub	Yes			
POFR2	<i>Populus fremontii</i>	Salicaceae	Fremont's cottonwood/Alamo	1,2,3,4,5,6,7,i	P	N	Shrub	Yes			
POFRX?	<i>Populus fremontii</i> x (hybrid)	Salicaceae	Cottonwood hybrid	7	P		Shrub	Yes			
POFRN?	<i>Populus fremontii</i> x <i>nigra</i> ?	Salicaceae	Cottonwood hybrid	7	P		Shrub	Yes			
POPUL	<i>Populus</i> sp.	Salicaceae	Cottonwood/Poplar	4	P		Shrub	Yes			
POTR5	<i>Populus tremuloides</i>	Salicaceae	Quaking aspen	7,8	P	N	Shrub	Yes			
SAEX	<i>Salix exigua</i>	Salicaceae	Coyote willow/Narrow-leaf willow	2,3,4,5,6,7,8	P	N	Shrub	Yes			
SAGO	<i>Salix gooddingii</i>	Salicaceae	Goodding's black willow	4,6,7,8	P	N	Shrub	Yes			
SALA3	<i>Salix laevigata</i>	Salicaceae	Red willow	1,2,3,4,5,6,7,i	P	N	Shrub	Yes			
SALA6	<i>Salix lasiolepis</i>	Salicaceae	Arroyo willow	0,4,7,8	P	N	Shrub	Yes			
SAVE4	<i>Sarcobatus vermiculatus</i>	Sarcobataceae	Greasewood	1,2,3,4,5,6,7,i	P	N	Shrub	Yes			
ANCA10	<i>Anemopsis californica</i>	Saururaceae	Yerba mansa	1,2,3,4,5,6,7,i	P	N	Herb	Yes			
NIAT	<i>Nicotiana attenuata</i>	Solanaceae	Coyote tobacco	1,2,4,6,7,8	A	N	Herb	Yes			
SOAM	<i>Solanum americanum</i>	Solanaceae	American black nightshade	4,7	A	N	Herb	Yes	Yes		
TACH2	<i>Tamarix chinensis</i>	Tamaricaceae	Five-stamen tamarisk	8	P	E	Shrub	Yes	Yes	Yes	Yes
TAPA4	<i>Tamarix parviflora</i>	Tamaricaceae	Four-petaled tamarisk	1,2,4	P	E	Shrub	Yes	Yes		Yes
TARA	<i>Tamarix ramosissima</i>	Tamaricaceae	Saltcedar	1,2,3,4,5,6,7,i	P	E	Shrub	Yes	Yes	Yes	Yes
TAMAR2	<i>Tamarix</i> sp.	Tamaricaceae	Tamarisk/Salt Cedar	8	P	E	Shrub	Yes	Yes		Yes
URDI	<i>Urtica dioica</i>	Urticaceae	Stinging nettle	4,7,8	P	N	Herb	Yes			
URDIH	<i>Urtica dioica</i> ssp. <i>holosericea</i>	Urticaceae	Stinging nettle	2,4,5,6,7	P	N	Herb	Yes			
URDIC	<i>Urtica</i> sp.	Urticaceae	Stinging nettle	3,4	P			Yes			
VEBR	<i>Verbena bracteata</i>	Verbenaceae	Bigbract verbena	4,8	AB	N	Herb	Yes			
VINE	<i>Viola nephrophylla</i>	Violaceae	Northern bog violet	2,7	AP	N	Herb	Yes			
VISO	<i>Viola sororia</i>	Violaceae	Common blue violet	7	AP	N	Herb	Yes			
PARTH3	<i>Parthenocissus</i> sp.	Vitaceae	Virginia creeper/Woodbine	1	P		Shrub	Yes			Yes
PAV15	<i>Parthenocissus vitacea</i>	Vitaceae	Woodbine	5,7	P	N	Shrub	Yes			Yes
<b>Monocotyledons</b>											
SALA2	<i>Sagittaria latifolia</i>	Alismataceae	Broadleaf arrowhead	4,2,7	P	N	Herb	Yes			
LEGI	<i>Lemna gibba</i>	Araceae	Inflated duckweed	5,7	P	N	Herb	Yes			
LEMI3	<i>Lemna minor</i>	Araceae	Common duckweed	2,3,5,7	P	N	Herb	Yes			
LEMI6	<i>Lemna minuta</i>	Araceae	Least duckweed	2,3,5	P	N	Herb	Yes			
LEMNA	<i>Lemna</i> sp.	Araceae	Duckweed	1,6,7,8	P	N	Herb	Yes			
LEVA	<i>Lemna valdiviana</i>	Araceae	Valdivia duckweed	2	P	N	Herb	Yes			
SPPO	<i>Spirodela polyrrhiza</i>	Araceae	Greater duckweed	2,3,5	P	N	Herb	Yes			
ASOF	<i>Asparagus officinalis</i>	Asparagaceae	Garden asparagus	1,2,4,6,7,8	P	E	Herb	Yes			
ASPAR	<i>Asparagus</i> sp.	Asparagaceae	Asparagus	1	P	E	Herb	Yes			
AMNE3	<i>Amphiscirpus nevadensis</i>	Cyperaceae	Nevada bulrush	1,2,3,4,7	P	N	Grass	Yes			
BORO5	<i>Bolboschoenus robustus</i>	Cyperaceae	Sturdy bulrush	7	P	N	Grass	Yes			
CAAT3	<i>Carex athrostachya</i>	Cyperaceae	Slenderbeak sedge	6	P	N	Grass	Yes			
CAAU3	<i>Carex aurea</i>	Cyperaceae	Golden sedge	7	P	N	Grass	Yes			
CANE2	<i>Carex nebrascensis</i>	Cyperaceae	Nebraska sedge	1,2,5,6,7,8	P	N	Grass	Yes			
CAPE42	<i>Carex pellita</i>	Cyperaceae	Woolly sedge	2,3,6,7	P	N	Grass	Yes			
CAPR5	<i>Carex praegracilis</i>	Cyperaceae	Clustered field sedge	1,2,3,4,5,7,8	P	N	Grass	Yes			
CASI2	<i>Carex simulata</i>	Cyperaceae	Alalogue sedge	1,6,7	P	N	Grass	Yes			
CYES	<i>Cyperus esculentus</i>	Cyperaceae	Taboose/Yellow nutgrass	1	P	N	Grass	Yes	Yes		
CYLA2	<i>Cyperus laevigatus</i>	Cyperaceae	Smooth flatsedge	7	P	N	Grass	Yes			
CYNI2	<i>Cyperus niger</i>	Cyperaceae	Black flatsedge	7	P	N	Grass	Yes			
CYSQ	<i>Cyperus squarrosus</i>	Cyperaceae	Bearded flatsedge	2,7	A	N	Grass	Yes			
ELMA5	<i>Eleocharis macrostachya</i>	Cyperaceae	Pale spikerush	1,3,4,5,6,7	P	N	Grass	Yes			

ELPA3	<i>Eleocharis palustris</i>	Cyperaceae	Common spikerush	1,3,4,5,6,7,8	P	N	Grass	Yes				
ELPA4	<i>Eleocharis parishii</i>	Cyperaceae	Parish spikerush	1,2,3,4,5,6,7	P	N	Grass	Yes				
ELRO2	<i>Eleocharis rostellata</i>	Cyperaceae	Walking spikerush	2,3,5,7	P	N	Grass	Yes				
ELEOC	<i>Eleocharis</i> sp.	Cyperaceae	Spikerush	1,4,6,7,8			Grass	Yes				
FITH	<i>Fimbristylis thermalis</i>	Cyperaceae	Hot springs fimbristylis	7	P	N	Grass	Yes				Yes
LIMI12	<i>Lipocarpa micrantha</i>	Cyperaceae	Smallflower halfchaff sedge	7	A	N	Grass	Yes				
LIOC3	<i>Lipocarpa occidentalis</i>	Cyperaceae	Western halfchaff sedge	7	A	N	Grass	Yes				
SCAC3	<i>Schoenoplectus acutus</i>	Cyperaceae	Hardstem bulrush	4,7	P	N	Grass	Yes				
SCACO2	<i>Schoenoplectus acutus</i> var. <i>occident</i>	Cyperaceae	Common tule	1,2,3,5,6,8	P	N	Grass	Yes				
SCAM6	<i>Schoenoplectus americanus</i>	Cyperaceae	Concave threesquare	1,2,3,4,5,6,7,8	P	N	Grass	Yes				
SCPU10	<i>Schoenoplectus pungens</i>	Cyperaceae	Common threesquare	3,4,5,7	P	N	Grass	Yes				
SCPUL4	<i>Schoenoplectus pungens</i> var. <i>longisp</i>	Cyperaceae	Western common threesquare	3,4,5,7	P	N	Grass	Yes				
SCPUP5	<i>Schoenoplectus pungens</i> var. <i>punger</i>	Cyperaceae	Eastern common threesquare	3,4,5,7	P	N	Grass	Yes				
SCHOE6	<i>Schoenoplectus</i> sp.	Cyperaceae	Blurush	8	P	N	Grass	Yes				
SCMA	<i>Scirpus maritimus</i>	Cyperaceae	Saltmarsh bulrush	1,2,3,4,5,7	P	N	Grass	Yes				
SCMI2	<i>Scirpus microcarpus</i>	Cyperaceae	Panicled bulrush	1,2,4,6,7	P	N	Grass	Yes				
SCIRP	<i>Scirpus</i> sp.	Cyperaceae	Bulrush/Tule	4,8		N	Grass	Yes				
ELCA7	<i>Elodea canadensis</i>	Hydrocharitaceae	Common waterweed	3,5,7	P	N	Herb	Yes				
IRMI	<i>Iris missouriensis</i>	Iridaceae	Western iris	1,2,3,4,6,7,8	P	N	Herb	Yes	Yes			
SIHA2	<i>Sisyrinchium halophilum</i>	Iridaceae	Nevada blue-eyed grass	1,2,3,4,7	P	N	Herb	Yes				Yes
JUBA	<i>Juncus balticus</i>	Juncaceae	Baltic rush	1,2,3,4,5,6,7,8	P	N	Grass	Yes				
JUBU	<i>Juncus bufonius</i>	Juncaceae	Toad rush	2,7	A	N	Grass	Yes				
JUEN	<i>Juncus ensifolius</i>	Juncaceae	Swordleaf rush	1,4,7	P	N	Grass	Yes				
JUMA2	<i>Juncus macrandrus</i>	Juncaceae	Longanther rush	2,6	P	N	Grass	Yes				
JUME4	<i>Juncus mexicanus</i>	Juncaceae	Mexican rush	2,7	P	N	Grass	Yes				
JUNE	<i>Juncus nevadensis</i>	Juncaceae	Sierra rush	7	P	N	Grass	Yes				
JUOR	<i>Juncus orthophyllus</i>	Juncaceae	Straightleaf rush	1,6,7	P	N	Grass	Yes				
JUOX	<i>Juncus oxymiris</i>	Juncaceae	Pointed rush	2	P	N	Grass	Yes				
JURU	<i>Juncus rugulosus</i>	Juncaceae	Wrinkled rush	2,7	P	N	Grass	Yes				
JUTO	<i>Juncus torreyi</i>	Juncaceae	Torrey's rush	1,2,3,7	P	N	Grass	Yes				
JUXI	<i>Juncus xiphioides</i>	Juncaceae	Iris-leaved rush	2,7	P	N	Grass	Yes				
TRCO19	<i>Triglochin concinna</i>	Juncaginaceae	Slender arrowgrass	4,7	P	N	Grass	Yes				
TRCOD	<i>Triglochin concinna</i> var. <i>debilis</i>	Juncaginaceae	Weak arrowgrass	1,3,4,7	P	N	Grass	Yes				
TRMA20	<i>Triglochin maritimum</i>	Juncaginaceae	Seaside arrowgrass	0	P	N	Grass	Yes				
TOVE2	<i>Toxicoscordion venenosum</i>	Melanthiaceae	Meadow death camas	2,3,4,7	P	N	Herb	Yes				
EPGI	<i>Epipactis gigantea</i>	Orchidaceae	Stream orchid	2,3,4,5,7	P	N	Herb	Yes				
PLDIL	<i>Platanthera dilatata</i> var. <i>leucostachys</i>	Orchidaceae	White-flowered bog orchid	4	P	N	Herb	Yes				
PLSP2	<i>Platanthera sparsiflora</i>	Orchidaceae	Sparse-flowered bog orchid	2	P	N	Herb	Yes				
AGEX	<i>Agrostis exarata</i>	Poaceae	Spike bentgrass	7	P	N	Grass	Yes				
AGSC5	<i>Agrostis scabra</i>	Poaceae	Rough bentgrass	7	P	N	Grass	Yes				
AGROS2	<i>Agrostis</i> sp.	Poaceae	Bentgrass	1	P		Grass	Yes				
AGST2	<i>Agrostis stolonifera</i>	Poaceae	Creeping bentgrass	1,7	P	E	Grass	Yes				Yes
CYDA	<i>Cynodon dactylon</i>	Poaceae	Bermudagrass	1,2,3,4,5,6,7,8	P	E	Grass	Yes	Yes		Yes	Yes
DAGL	<i>Dactylis glomerata</i>	Poaceae	Orchardgrass	1,4,6	P	E	Grass	Yes				Yes
DACA3	<i>Danthonia californica</i>	Poaceae	California oatgrass	7	P	N	Grass	Yes				
DECE	<i>Deschampsia cespitosa</i>	Poaceae	Tufted hairgrass	7	P	N	Grass	Yes				
DEDA	<i>Deschampsia danthonioides</i>	Poaceae	Annual hairgrass	7	A	N	Grass	Yes				
DISP	<i>Distichlis spicata</i>	Poaceae	Saltgrass	1,2,3,4,5,6,7,8	P	N	Grass	Yes				
ECCR	<i>Echinochloa crus-galli</i>	Poaceae	Barnyardgrass	1,2,4,6,7	A	E	Grass	Yes				Yes
ELCI	<i>Elymus cinereus</i>	Poaceae	Great Basin wildrye	1,2,3,4,6,7,8	P	N	Grass	Yes				
ELTR	<i>Elymus tritocoides</i>	Poaceae	Beardless/Creeping wildrye	1,2,3,4,5,6,7,8	P	N	Grass	Yes				
ERMEV	<i>Eragrostis mexicana</i> ssp. <i>virescens</i>	Poaceae	Green mexican lovegrass	1,4	A	N	Grass	Yes				
FEAR3	<i>Festuca arundinacea</i>	Poaceae	Tall fescue	1,5,6,7	P	E	Grass	Yes				Yes

FEPE	<i>Festuca perennis</i>	Poaceae	Perennial ryegrass	4,7,8	AP	E	Grass	Yes	Yes
GLST	<i>Glyceria striata</i>	Poaceae	Fowl mannagrass	7	P	N	Grass	Yes	
HOLA	<i>Holcus lanatus</i>	Poaceae	Velvetgrass	1,2,4,6,7	P	E	Grass	Yes	Yes
HOB2	<i>Hordeum brachyantherum</i>	Poaceae	Meadow barley	6,7,8	P	N	Grass	Yes	
HOJU	<i>Hordeum jubatum</i>	Poaceae	Foxtail barley	1,2,3,4,5,6,7,8	A	N	Grass	Yes	
LEOR	<i>Leersia oryzoides</i>	Poaceae	Rice cutgrass	7	P	N	Grass	Yes	
LEFUF	<i>Leptochloa fusca</i> ssp. <i>fascicularis</i>	Poaceae	Bearded sprangletop	1,2,4,7	A	N	Grass	Yes	
MUAS	<i>Muhlenbergia asperifolia</i>	Poaceae	Alkali muhly/scratchgrass	1,2,3,4,6,7,8	P	N	Grass	Yes	
MUF12	<i>Muhlenbergia filiformis</i>	Poaceae	Pullup muhly	7	A	N	Grass	Yes	
MUM12	<i>Muhlenbergia minutissima</i>	Poaceae	Annual muhly	7	A	N	Grass	Yes	
MURA	<i>Muhlenbergia racemosa</i>	Poaceae	Marsh muhly	1	P	E	Grass	Yes	
MURI	<i>Muhlenbergia richardsonis</i>	Poaceae	Mat muhly	1,7	P	N	Grass	Yes	
MURI2	<i>Muhlenbergia rigens</i>	Poaceae	Deer grass	1	P	N	Grass	Yes	
MUHLE	<i>Muhlenbergia</i> sp.	Poaceae	Muhly	1	AP		Grass	Yes	
PAAC5	<i>Panicum acuminatum</i>	Poaceae	Tapered rosette grass	7	P	N	Grass	Yes	
PACA6	<i>Panicum capillare</i>	Poaceae	Witchgrass	1,3,4,6,7,8	A	N	Grass	Yes	
PADI	<i>Panicum dichotomiflorum</i>	Poaceae	Fall panicgrass	1	A	E	Grass	Yes	
PADI6	<i>Paspalum distichum</i>	Poaceae	Knotgrass	1,2,3,4,6,7,8	P	N	Grass	Yes	
PHAR3	<i>Phalaris arundinacea</i>	Poaceae	Reed canarygrass	1,6,7	P	N	Grass	Yes	
PHAU7	<i>Phragmites australis</i>	Poaceae	Common reed	1,2,3,4,5,6,7,8	P	N	Grass	Yes	
POAN	<i>Poa annua</i>	Poaceae	Annual bluegrass	2,4,5,6,7	AB	E	Grass	Yes	Yes
POCO	<i>Poa compressa</i>	Poaceae	Canadian bluegrass	7	P	E	Grass	Yes	
POPA2	<i>Poa palustris</i>	Poaceae	Fowl bluegrass	6,7,4	P	E	Grass	Yes	Yes
POSEJ	<i>Poa secunda</i> spp. <i>juncifolia</i>	Poaceae	Alkali bluegrass	4,7	P	N	Grass	No	
POIN7	<i>Polypogon interruptus</i>	Poaceae	Ditch rabbit-foot grass	5,7	P	E	Grass	Yes	
POMO5	<i>Polypogon monspeliensis</i>	Poaceae	Annual rabbitsfoot grass	1,2,3,4,5,6,7,8	A	E	Grass	Yes	Yes
POLYP2	<i>Polypogon</i> sp.	Poaceae	Rabbitsfoot grass	0,8		E	Grass	Yes	Yes
POVI9	<i>Polypogon viridis</i>	Poaceae	Water bentgrass	0,7	P	E	Grass	Yes	
PUDI	<i>Puccinellia distans</i>	Poaceae	Weeping alkali grass	2,7	P	E	Grass	Yes	
PUNU2	<i>Puccinellia nuttalliana</i>	Poaceae	Nuttall's alkali grass	2	P	N	Grass	Yes	
SEPU8	<i>Setaria pumila</i>	Poaceae	Yellow foxtail millet	2,6	A	E	Grass	Yes	Yes
SPGR	<i>Spartina gracilis</i>	Poaceae	Alkali cord grass	1,3,4,5,6,7,8	P	N	Grass	Yes	Yes
SPOB	<i>Sphenopholis obtusata</i>	Poaceae	Prairie wedgegrass	6	P	N	Grass	Yes	
SPAI	<i>Sporobolus airoides</i>	Poaceae	Alkali sacaton	1,2,3,4,5,6,7,8	P	N	Grass	Yes	
TOPAP3	<i>Torreyochloa pallida</i> var. <i>pauciflora</i>	Poaceae	Weak mannagrass	7	P	N	Grass	Yes	
POBE9	<i>Potamogeton berchtoldii</i>	Potamogetonaceae	Small pondweed	2	P	N	Herb	Yes	
POCR3	<i>Potamogeton crispus</i>	Potamogetonaceae	Curly pondweed	2	P	E	Herb	Yes	Yes
POFO3	<i>Potamogeton foliosus</i>	Potamogetonaceae	Leafy pondweed	2,3	P	N	Herb	Yes	
PONO2	<i>Potamogeton nodosus</i>	Potamogetonaceae	Long-leaf pondweed	1,2,6	P	N	Herb	Yes	
POPU7	<i>Potamogeton pusillus</i>	Potamogetonaceae	Small pondweed	7	P	N	Herb	Yes	
POTAM	<i>Potamogeton</i> sp.	Potamogetonaceae	Pondweed	0,7			Herb	Yes	
RUMA5	<i>Ruppia maritima</i>	Ruppiales	Widgeon ditch-grass	2,3,7	P	N	Herb	Yes	
RUPPI	<i>Ruppia</i> sp.	Ruppiales	Ditch-grass	7	P		Herb	Yes	
MAST	<i>Maianthemum stellata</i>	Ruscaceae	False Solomon's seal	2,4,7	P	N	Herb	Yes	
TYAN	<i>Typha angustifolia</i>	Typhaceae	Narrow-leaved cattail	1,7	P	N	Grass	Yes	
TYDO	<i>Typha domingensis</i>	Typhaceae	Southern cattail	2,3,4,5,7	P	N	Grass	Yes	
TYLA	<i>Typha latifolia</i>	Typhaceae	Common cattail	1,3,4,6,7,8	P	N	Grass	Yes	
TYLAG?	<i>Typha latifolia</i> (x <i>glauca</i> ?)	Typhaceae	Hybrid cattail	7	P	N	Grass	Yes	
TYPHA	<i>Typha</i> sp.	Typhaceae	Cattail	1,4,6,8	P		Grass	Yes	
ZAPA	<i>Zannichellia palustris</i>	Zannichelliaceae	Horned pondweed	2,3,5,7	P	N	Herb	Yes	

SOURCE CODES



- 0 Source unknown
- 1 LADWP 1984-87 Vegetation Inventory. Type-E Vegetation Inventory.
- 2 DeDecker, Mary, Owens Lake Plant List (CNPS field Trip, March 1991).  
A checklist of the flora of the Owens Valley, June 1974.
- 3 Forbes, H. C., W. R. Ferren and J. R. Haller, 1988. The vegetation and flora of Fish Slough and vicinity.
- 4 ICWD re-inventory of vegetation on LADWP lands, rare plant surveys, and riparian monitoring (1991-2014).
- 5 LORP Tech. memo from Gary Ahlborn, October 1997. Ecosystem Sciences. Plant species observed in the Balckrock waterfowl habitat area.
- 6 Resource Concepts, Inc. November 1998. Type-E Vegetation Parcel Inventory. Report prepared for Inyo County Water Department and LADWP.
- 7 Springs and Seeps data, 1998-1999, Ecosystem Science subcontractors.
- 8 LADWP 2004-2012 reinventory of vegetation on LADWP lands

**Life Cycle (germination through death)**

- A Completing lifecycle in one year or growing season, all non-woody species.
- B Completing lifecycle in two years or growing seasons, often with rosette the first growing season and generally flowering only in the second, usually non-woody above ground..
- P Living more than two years or growing seasons, herbaceous or woody species.

**Provenance**

- E Non-native to area or region, introduced either purposely or accidentally.
- N Native to area or region, believed to have been present prior to human activities.

**Lifeform**

- Herb Plant with little or no woody tissues above ground, above ground parts are less than one year or growing season old, also know as forbs.
- Grass True grass (Poaceae) or grass like plants, all monocots, also known as graminoid.
- Shrub Perennial plant with some or all aboveground stems woody, includes subshrubs, shrubs and trees. Subshrubs can persist as herbaceous perennials when young or if conditions are harsh.

**Phreatophyte (obligate phreatophyte requires ground water all or most of the time, facultative phreatophyte can live with or without ground water, non-phreatophyte does not require groundwater to live.**

- Yes Requires at least some groundwater to survive in our area, rarely if ever found in places without relatively shallow groundwater.
- No Does not require groundwater to survive in our area, may be found in areas with or without relatively shallow groundwater.

**Noxious** Very invasive weedy species often impedes growth of native species. Some California noxious species are only sparingly found in Owens Valley.

**Toxic** Toxic to livestock and humans if ingested, and in some cases dermal contact can cause a negative reaction.

**Weedy in OV** Species that are especially weedy in Owens Valley, most noxious species are also weedy in Owens Valley.

**Rare or uncommon** Species that are listed as rare in California or the United States, or species that are rare to uncommon in the Owens Valley.

## 8. PROPERTY DATA SHEET

Use the Property Data Sheet to list the owner(s) of all parcels included in the proposed project. Indicate and attach all required documents including any clarifying comments below. Attach additional sheets if necessary.

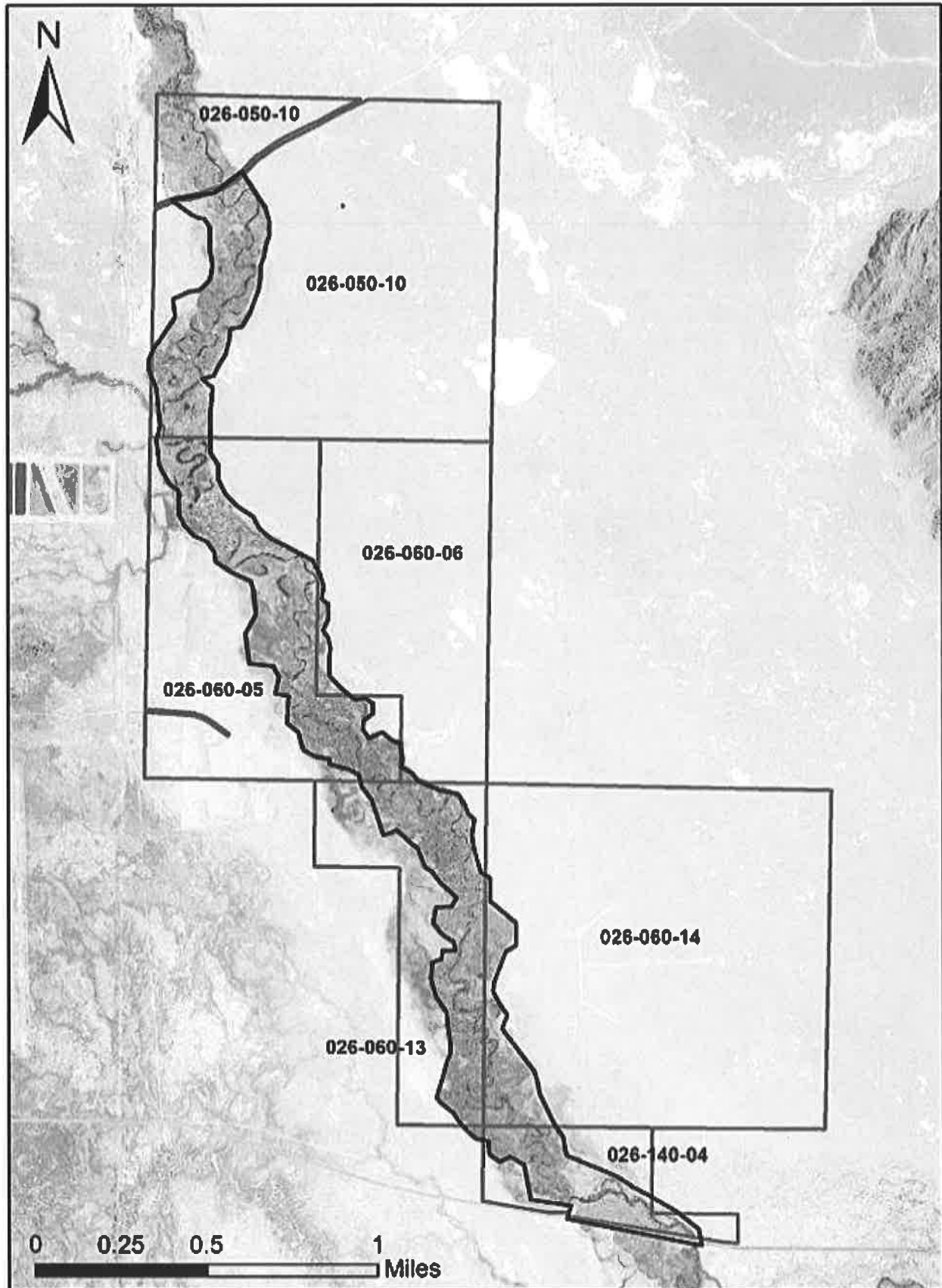
No	Owner Name	Assessor Parcel Number(s)	Acreage	If parcel(s) owned by applicant(s), indicate type of ownership			For all parcels, indicate document used to demonstrate ownership and attach a copy of each document-clearly labeled with the APN-to this document	If parcel(s) not owned by applicant(s) indicate document verifying Permission to Develop and attach					Entity to perform O&M	# of years O&M to be performed
				Fee Simple	Easement	Other (describe)		O&M * Agreement	Lease	JPA	Letter from Owner	Other (describe)		
1	LADWP	026-050-10-00	640.0				INYO COUNTY ASSESSOR PARCEL QUEST DATA							
2	↓	026-060-05-00	360.0											
3		026-060-06-00	280.0											
4		026-060-13-00	200.0											
5		026-060-14-00	640.0											
6		026-140-04-00	480.0											
7														
8														
9														
10														

Comments:

\* LAND TENURE AND O&M AGREEMENT WITH LADWP IS PENDING GRANT AWARD (SEE LADWP LETTER)

Total Number of Parcels: 6 Total Number of Acres: 2600.0

**Project Boundary and Inyo County Assessor's parcels within project.**



**Property Detail**

Inyo, CA DAVE STOTTLEMYRE, ASSESSOR

Parcel # (APN): **026-050-10-00** Use Description: **AGRICULTURAL**Parcel Status: **ACTIVE**Owner Name: **CITY OF LOS ANGELES DWP**Mailing Address: **300 MANDICH ST BISHOP CA 93514**Situs Address: **LONE PINE CA 93545**

Legal

Description:

**ASSESSMENT**Total Value: **\$994,095**Use Code: **550**

Zoning:

Land Value: **\$994,095**Tax Rate Area: **059001**

Census Tract:

Impr Value:

Year Assd: **2015**

Improve Type:

Other Value:

Property Tax:

Price/SqFt:

% Improved

Delinquent Yr

Exempt Amt:

HO Exempt?: **N****SALES HISTORY**

	<u>Sale 1</u>	<u>Sale 2</u>	<u>Sale 3</u>	<u>Transfer</u>
Recording Date:				
Recorded Doc #:				
Recorded Doc Type:				
Transfer Amount:				
Sale 1 Seller (Grantor):				
1st Trst Dd Amt:	Code1:	2nd Trst Dd Amt:	Code2:	

**PROPERTY CHARACTERISTICS**Lot Acres: **640.000**

Year Built:

Fireplace:

Lot SqFt: **27,878,400**

Effective Yr:

A/C:

Bldg/Liv Area:

Heating:

Units:

Total Rooms:

Pool:

Buildings:

Bedrooms:

Stories:

Baths (Full):

Park Type:

Style:

Baths (Half):

Spaces:

Construct:

Site Infnce:

Quality:

Garage SqFt:

Building Class: **V**

Timber Preserve:

Condition:

Ag Preserve: **Y**

Other Rooms:



**Property Detail**

Inyo, CA DAVE STOTTLEMYRE, ASSESSOR

Parcel # (APN): **026-060-05-00** Use Description: **AGRICULTURAL**Parcel Status: **ACTIVE**Owner Name: **CITY OF LOS ANGELES DWP**Mailing Address: **300 MANDICH ST BISHOP CA 93514**Situs Address: **450 SUB STATION RD LONE PINE CA 93545**

Legal

Description:

**ASSESSMENT**Total Value: **\$798,826**Use Code: **550**

Zoning:

Land Value: **\$798,826**Tax Rate Area: **059001**

Census Tract:

Impr Value:

Year Assd: **2015**

Improve Type:

Other Value:

Property Tax:

Price/SqFt:

% Improved

Delinquent Yr

Exempt Amt:

HO Exempt?: **N****SALES HISTORY**

	<u>Sale 1</u>	<u>Sale 2</u>	<u>Sale 3</u>	<u>Transfer</u>
Recording Date:				
Recorded Doc #:				
Recorded Doc Type:				
Transfer Amount:				
Sale 1 Seller (Grantor):				
1st Trst Dd Amt:		Code1:	2nd Trst Dd Amt:	Code2:

**PROPERTY CHARACTERISTICS**Lot Acres: **360.000**

Year Built:

Fireplace:

Lot SqFt: **15,681,600**

Effective Yr:

A/C:

Bldg/Liv Area:

Heating:

Units:

Total Rooms:

Pool:

Buildings:

Bedrooms:

Stories:

Baths (Full):

Park Type:

Style:

Baths (Half):

Spaces:

Construct:

Site Inflnce:

Quality:

Garage SqFt:

Building Class: **V**

Timber Preserve:

Condition:

Ag Preserve: **Y**

Other Rooms:

**Property Detail**

Inyo, CA DAVE STOTTLEMYRE, ASSESSOR

Parcel # (APN): **026-060-06-00**Use Description: **AGRICULTURAL**Parcel Status: **ACTIVE**Owner Name: **CITY OF LOS ANGELES DWP**Mailing Address: **300 MANDICH ST BISHOP CA 93514**Situs Address: **LONE PINE CA 93545**

Legal

Description:

**ASSESSMENT**

Total Value:	Use Code: <b>550</b>	Zoning:
Land Value:	Tax Rate Area: <b>059001</b>	Census Tract:
Impr Value:	Year Assd: <b>2015</b>	Improve Type:
Other Value:	Property Tax:	Price/SqFt:
% Improved	Delinquent Yr	
Exempt Amt:	HO Exempt?: <b>N</b>	

**SALES HISTORY**

	<u>Sale 1</u>	<u>Sale 2</u>	<u>Sale 3</u>	<u>Transfer</u>
Recording Date:				
Recorded Doc #:				
Recorded Doc Type:				
Transfer Amount:				
Sale 1 Seller (Grantor):				
1st Trst Dd Amt:	Code1:	2nd Trst Dd Amt:	Code2:	

**PROPERTY CHARACTERISTICS**

Lot Acres: <b>280.000</b>	Year Built:	Fireplace:
Lot SqFt: <b>12,196,800</b>	Effective Yr:	A/C:
Bldg/Liv Area:	Total Rooms:	Heating:
Units:	Bedrooms:	Pool:
Buildings:	Baths (Full):	Park Type:
Stories:	Baths (Half):	Spaces:
Style:	Garage SqFt:	Site Inflnce:
Construct:		Timber Preserve:
Quality:		Ag Preserve: <b>Y</b>
Building Class:		
Condition:		
Other Rooms:		

**Property Detail**

Inyo, CA DAVE STOTTEMYRE, ASSESSOR

Parcel # (APN): **026-060-13-00** Use Description: **AGRICULTURAL**  
 Parcel Status: **ACTIVE**  
 Owner Name: **CITY OF LOS ANGELES DWP**

Mailing Address: **300 MANDICH ST BISHOP CA 93514**  
 Situs Address: **LONE PINE CA 93545**  
 Legal  
 Description:

**ASSESSMENT**

Total Value: <b>\$369,827</b>	Use Code: <b>550</b>	Zoning:
Land Value: <b>\$369,827</b>	Tax Rate Area: <b>059001</b>	Census Tract:
Impr Value:	Year Assd: <b>2015</b>	Improve Type:
Other Value:	Property Tax:	Price/SqFt:
% Improved	Delinquent Yr	
Exempt Amt:	HO Exempt?: <b>N</b>	

**SALES HISTORY**

	<u>Sale 1</u>	<u>Sale 2</u>	<u>Sale 3</u>	<u>Transfer</u>
Recording Date:				
Recorded Doc #:				
Recorded Doc Type:				
Transfer Amount:				
Sale 1 Seller (Grantor):				
1st Trst Dd Amt:	Code1:	2nd Trst Dd Amt:	Code2:	

**PROPERTY CHARACTERISTICS**

Lot Acres: <b>200.000</b>	Year Built:	Fireplace:
Lot SqFt: <b>8,712,000</b>	Effective Yr:	A/C:
Bldg/Liv Area:	Total Rooms:	Heating:
Units:	Bedrooms:	Pool:
Buildings:	Baths (Full):	Park Type:
Stories:	Baths (Half):	Spaces:
Style:	Garage SqFt:	Site Infnce:
Construct:		Timber Preserve:
Quality:		Ag Preserve: <b>Y</b>
Building Class: <b>V</b>		
Condition:		
Other Rooms:		

**Property Detail**

Inyo, CA DAVE STOTTLEMYRE, ASSESSOR

Parcel # (APN): **026-060-14-00** Use Description: **AGRICULTURAL**  
 Parcel Status: **ACTIVE**  
 Owner Name: **CITY OF LOS ANGELES DWP**

Mailing Address: **300 MANDICH ST BISHOP CA 93514**  
 Situs Address: **LONE PINE CA 93545**  
 Legal  
 Description:

**ASSESSMENT**

Total Value: <b>\$852,081</b>	Use Code: <b>550</b>	Zoning:
Land Value: <b>\$852,081</b>	Tax Rate Area: <b>059001</b>	Census Tract:
Impr Value:	Year Assd: <b>2015</b>	Improve Type:
Other Value:	Property Tax:	Price/SqFt:
% Improved	Delinquent Yr	
Exempt Amt:	HO Exempt?: <b>N</b>	

**SALES HISTORY**

	<u>Sale 1</u>	<u>Sale 2</u>	<u>Sale 3</u>	<u>Transfer</u>
Recording Date:				
Recorded Doc #:				
Recorded Doc Type:				
Transfer Amount:				
Sale 1 Seller (Grantor):				
1st Trst Dd Amt:	Code1:	2nd Trst Dd Amt:	Code2:	

**PROPERTY CHARACTERISTICS**

Lot Acres: <b>640.000</b>	Year Built:	Fireplace:
Lot SqFt: <b>27,878,400</b>	Effective Yr:	A/C:
Bldg/Liv Area:	Total Rooms:	Heating:
Units:	Bedrooms:	Pool:
Buildings:	Baths (Full):	Park Type:
Stories:	Baths (Half):	Spaces:
Style:	Garage SqFt:	Site Infnce:
Construct:		Timber Preserve:
Quality:		Ag Preserve: <b>Y</b>
Building Class: <b>V</b>		
Condition:		
Other Rooms:		



**Property Detail**

Inyo, CA DAVE STOTTLEMYRE, ASSESSOR

Parcel # (APN): **026-140-04-00** Use Description: **AGRICULTURAL**  
 Parcel Status: **ACTIVE**  
 Owner Name: **CITY OF LOS ANGELES DWP**

Mailing Address: **300 MANDICH ST BISHOP CA 93514**Situs Address: **LONE PINE CA 93545**

Legal

Description:

**ASSESSMENT**

Total Value: <b>\$656,813</b>	Use Code: <b>550</b>	Zoning:
Land Value: <b>\$656,813</b>	Tax Rate Area: <b>059001</b>	Census Tract:
Impr Value:	Year Assd: <b>2015</b>	Improve Type:
Other Value:	Property Tax:	Price/SqFt:
% Improved	Delinquent Yr	
Exempt Amt:	HO Exempt?: <b>N</b>	

**SALES HISTORY**

	<u>Sale 1</u>	<u>Sale 2</u>	<u>Sale 3</u>	<u>Transfer</u>
Recording Date:				
Recorded Doc #:				
Recorded Doc Type:				
Transfer Amount:				
Sale 1 Seller (Grantor):				
1st Trst Dd Amt:	Code1:	2nd Trst Dd Amt:	Code2:	

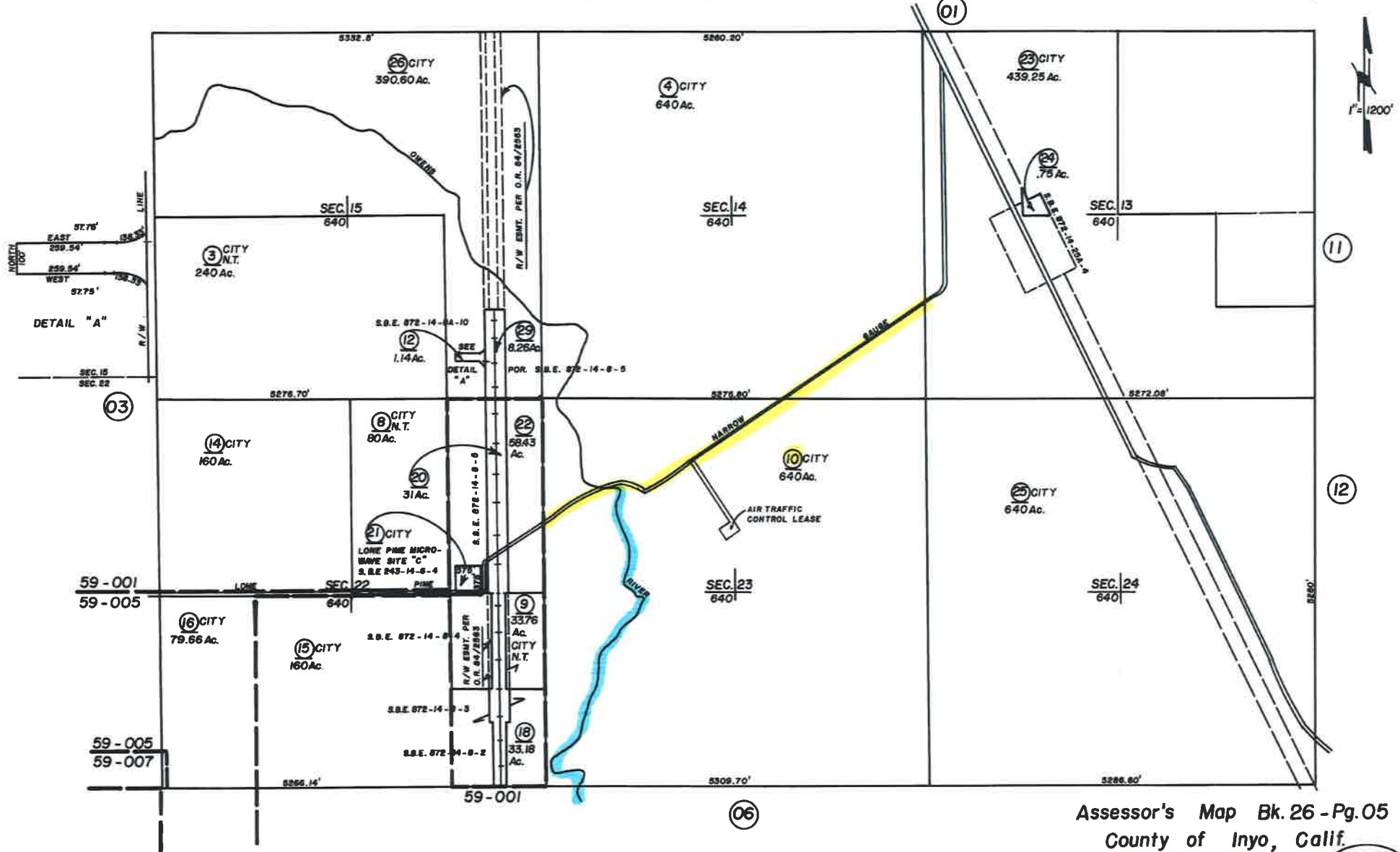
**PROPERTY CHARACTERISTICS**

Lot Acres: <b>480.000</b>	Year Built:	Fireplace:
Lot SqFt: <b>20,908,800</b>	Effective Yr:	A/C:
Bldg/Liv Area:		Heating:
Units:	Total Rooms:	Pool:
Buildings:	Bedrooms:	
Stories:	Baths (Full):	Park Type:
Style:	Baths (Half):	Spaces:
Construct:		Site Inflnce:
Quality:	Garage SqFt:	
Building Class: <b>V</b>		Timber Preserve:
Condition:		Ag Preserve: <b>Y</b>
Other Rooms:		

T. 15 S., R. 36 E., M. D. B. & M.

TAX RATE AREA  
59-005 59-001

26 - 05



Assessor's Map Bk. 26 - Pg. 05  
County of Inyo, Calif.  
1950

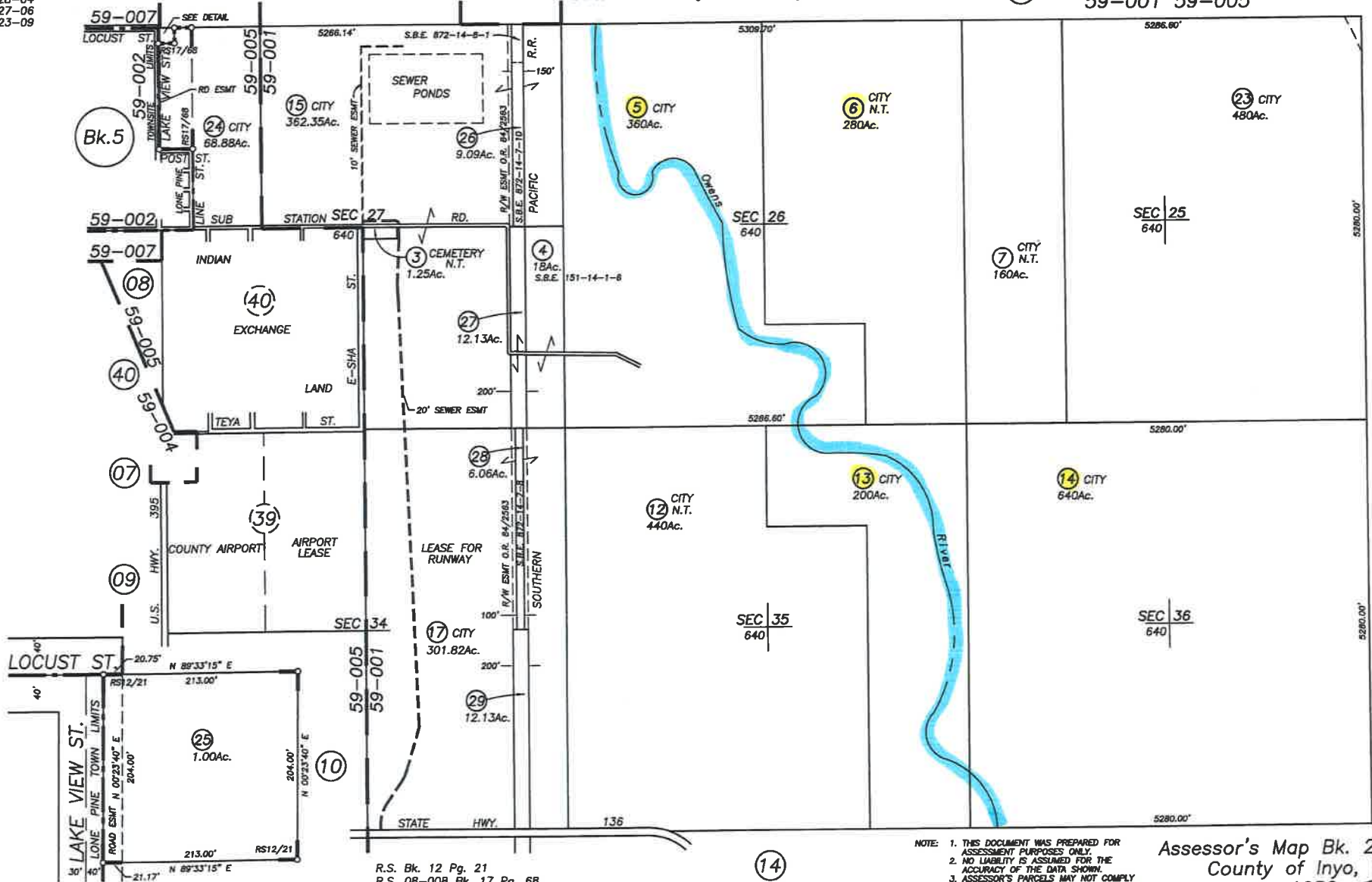


09-16-91  
12-28-04  
06-27-06  
12-23-09

POR. T.15S., R.36E., M.D.B. & M. (05)

TAX RATE AREA  
59-001 59-005

26-06



(12)

R.S. Bk. 12 Pg. 21  
R.S. 08-008 Bk. 17 Pg. 68

(14)

NOTE: 1. THIS DOCUMENT WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.  
2. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN.  
3. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

Assessor's Map Bk. 26 Pg. 06  
County of Inyo, Calif.

1950 (12-23-09 06-27-06)

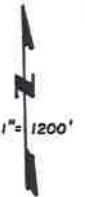
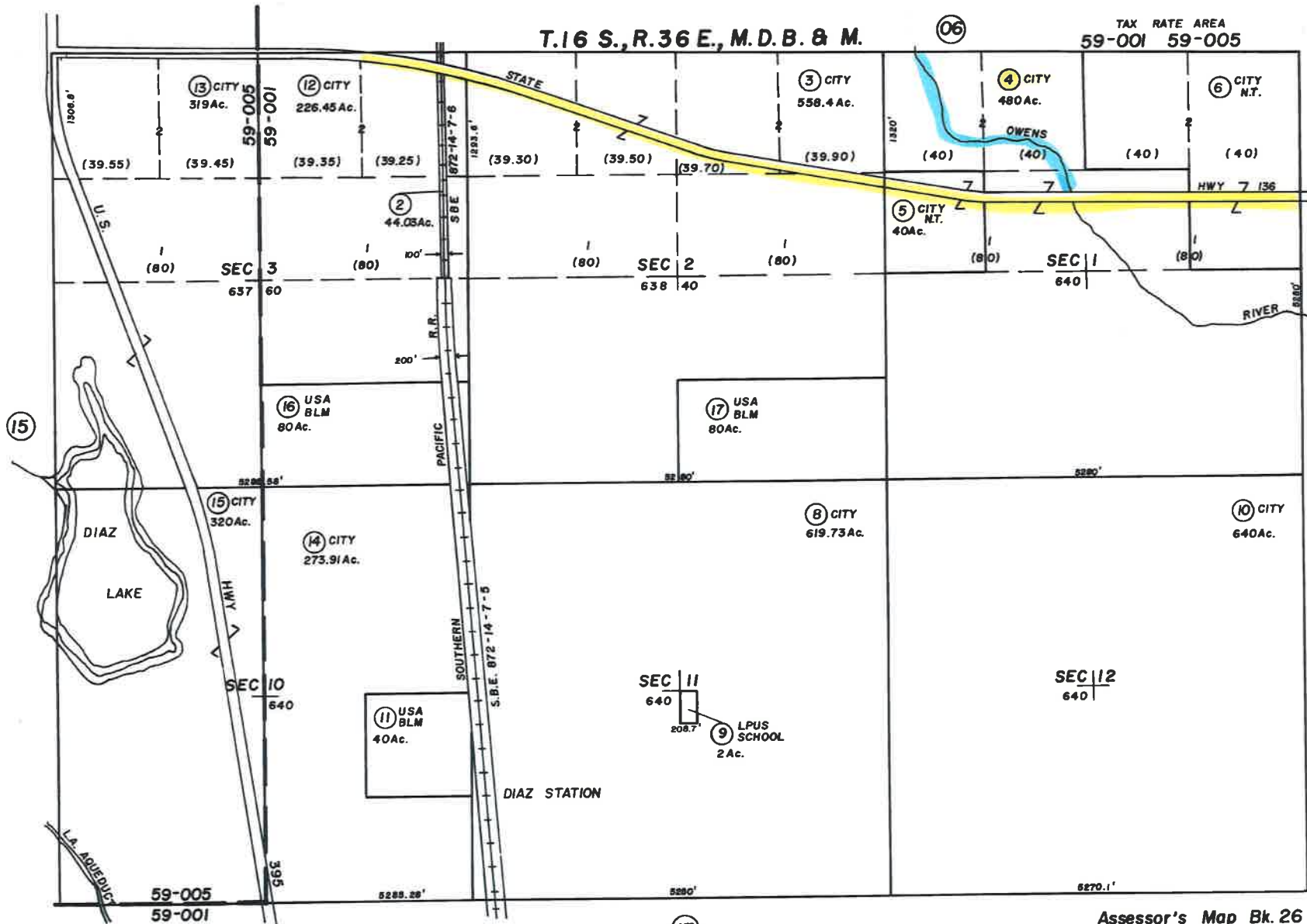
DETAIL  
1"=100'

77  
11-6-86

T.16 S., R.36 E., M.D.B. & M.

TAX RATE AREA  
59-001 59-005

26-14



Assessor's Map Bk. 26 Pg. 14  
County of Inyo, Calif.  
1950

11-6-RL



# OWENS RIVER WATER TRAIL

## IMPLEMENTATION--CONTRACTED/IN-HOUSE

CHANNEL EXCAVATION	Unit Price	Units	Quantity	River Parkways	Local	In-kind	Total
				Request	Contribution	Funding	
Equipment Charge	\$ 64,000.00	-	-	\$ 64,000.00	\$ -	\$ -	\$ 64,000.00
Fuel	\$ 2.54	Gallons	2,300	\$ 5,842.00	\$ -	\$ -	\$ 5,842.00
Track Mats	\$ 5,000.00	-	-	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
Construction Yard Tarps	\$ 500.00	-	-	\$ 500.00	\$ -	\$ -	\$ 500.00
Excavation Labor	\$ 75.00	\$/L.F.	4,106 L.F.	\$ 307,950.00	\$ -	\$ -	\$ 307,950.00
<b>Excavation Subtotal</b>				<b>\$ 383,292.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 383,292.00</b>

## ENTRY/PARKING/STAGING/PATH/LAUNCH--LPNGR

Labor/Equipment--Parking Entry	\$ 2,520.00	-	-	\$ 2,520.00	\$ -	\$ -	\$ 2,520.00
Labor/Equipment--Parking Area	\$ 3,360.00	-	-	\$ 3,360.00	\$ -	\$ -	\$ 3,360.00
Labor/Equipment--Path to River	\$ 1,260.00	-	-	\$ 1,260.00	\$ -	\$ -	\$ 1,260.00
Labor/Equipment--River Entrance	\$ 500.00	-	-	\$ 500.00	\$ -	\$ -	\$ 500.00
Materials--DG	\$ 0.80	Tons	650	\$ -	\$ 520.00	\$ -	\$ 520.00
Material--Geotextile	\$ 1,500.00	-	-	\$ 1,500.00	-	\$ 1,500.00	\$ 3,000.00
Cattle Guard	\$ 5,000.00	-	-	\$ 5,000.00	\$ -	\$ -	\$ 5,000.00
Kiosk/Trash Receptacles	\$ 1,550.00	-	-	\$ 1,550.00	\$ -	\$ -	\$ 1,550.00
<b>LPNGR Improvements Subtotal</b>				<b>\$ 15,690.00</b>	<b>\$ 520.00</b>	<b>\$ 1,500.00</b>	<b>\$ 17,710.00</b>

## EXIT/PARKING/STAGING/PATH/LAUNCH--Hwy 136

Labor/Equipment--Parking Entry	\$ 2,520.00	-	-	\$ 2,520.00	\$ -	\$ -	\$ 2,520.00
Labor/Equipment--Parking Area	\$ 3,360.00	-	-	\$ 3,360.00	\$ -	\$ -	\$ 3,360.00
Labor/Equipment--Path to River	\$ 1,260.00	-	-	\$ 1,260.00	\$ -	\$ -	\$ 1,260.00
Labor/Equipment--River Entrance	\$ 500.00	-	-	\$ 500.00	\$ -	\$ -	\$ 500.00
Materials--DG	\$ 0.80	Tons	650	\$ -	\$ 520.00	\$ -	\$ 520.00
Material--Geotextile	\$ 1,500.00	-	-	\$ 1,500.00	-	\$ 1,500.00	\$ 3,000.00
Kiosk/Trash Receptacles	\$ 900.00	-	-	\$ 900.00	\$ -	\$ -	\$ 900.00
<b>Hwy 136 Improvements Subtotal</b>				<b>\$ 10,040.00</b>	<b>\$ 520.00</b>	<b>\$ 1,500.00</b>	<b>\$ 12,060.00</b>

## Hand Clearing Channel

Equipment	\$ 3,520.00	-	-	\$ 3,520.00	\$ -	\$ -	\$ 3,520.00
<b>Hand Clearing Equipment Subtotal</b>				<b>\$ 3,520.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 3,520.00</b>

## SUBTOTAL CONSTRUCTION COSTS

**\$ 412,542.00 \$ 1,040.00 \$ 3,000.00 \$ 416,582.00**

## PLANNING and DESIGN--CONTRACTED/IN-HOUSE

CEQA Preparation (MND)	\$ 25,500.00	-	-	\$ 23,000.00	\$ 2,500.00	-	\$ 25,500.00
Bio/Arch Surveys	\$ 21,000.00	-	-	\$ 20,000.00	\$ 1,000.00	-	\$ 21,000.00
Final Design Site Plans	\$ 13,500.00	-	-	\$ 13,500.00	-	-	\$ 13,500.00
Signage (Interpretive and Bond Acknowledgement)	\$ 2,550.00	-	-	\$ 2,550.00	\$ 1,000.00	-	\$ 3,550.00
Permits	\$ 23,963.00	-	-	\$ 23,963.00	-	-	\$ 23,963.00

## SUBTOTAL PLANNING and DESIGN

**\$ 83,013.00 \$ 4,500.00 \$ - \$ 87,513.00**

## ADMINISTRATION and PROJECT MANAGEMENT--INYO COUNTY

Administration--Labor	\$ 45.71	hours	80	-	\$ 3,656.80	-	\$ 3,656.80
Project management--Labor	\$ 58.26	hours	150	-	\$ 8,739.00	-	\$ 8,739.00

## SUBTOTAL ADMIN and PROJECT MANAGEMENT

**\$ - \$ 12,395.80 \$ - \$ 12,395.80**

## CONTINGENCY

Contingency	\$ 4,445.00	-	-	-	-	-	-
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## SUBTOTAL CONTINGENCY

**\$ 4,445.00 \$ - \$ - \$ -**

## PROJECT GRAND TOTAL ->

**\$ 500,000.00 \$ 17,935.80 \$ 3,000.00 \$ 516,490.80**



**Owens River Water Trail, Operations and Maintenance Budget**

Task	Labor type	Hourly Labor Rate	Hours	Equipment Type	Hourly Equipment Rate	Hours	Task Cost	Annual Allocation (amortized)	Occurance Interval	Description
Parking Maint	Operator	\$ 59	16	Grader	\$ 40	16	\$ 1,583	\$ 522	3 years	Maintain parking area surface every three years
Hwy 136 road Entrance	Operator	\$ 59	16	Grader	\$ 40	16	\$ 1,583	\$ 791	2 years	Maintain road surface every two years
Mowing	Specialist 3	\$ 38	8	Parks Maintenance	\$ -	0	\$ 306	\$ 612	Twice Yearly	Weed whacking adjacent to parking area, path to river, and river entry twice yearly
Road Maintenance	Operator	\$ 59	80	Grader	\$ 40	80	\$ 7,913	\$ 1,583	5 years	Grade eastside road at five year intervals
Trash barrel pickup	Specialist 3	\$ 38	1.5	Parks Maintenance	\$ -	0	\$ 57	\$ 1,491	26 times annually	Empty two trash barrels in two parking area, on average every two weeks
<b>\$ 11,441</b>								<b>\$ 4,998</b>		

**Inflation schedule (3%/annually)**

Year	Annual Allocation	Admin (10%)
1	\$ 4,998	\$ 5,048
2	\$ 5,148	\$ 5,200
3	\$ 5,303	\$ 5,356
4	\$ 5,462	\$ 5,516
5	\$ 5,626	\$ 5,682
6	\$ 5,794	\$ 5,852
7	\$ 5,968	\$ 6,028
8	\$ 6,147	\$ 6,209
9	\$ 6,332	\$ 6,395
10	\$ 6,521	\$ 6,587
11	\$ 6,717	\$ 6,784
12	\$ 6,919	\$ 6,988
13	\$ 7,126	\$ 7,197
14	\$ 7,340	\$ 7,413
15	\$ 7,560	\$ 7,636
16	\$ 7,787	\$ 7,865
17	\$ 8,021	\$ 8,101
18	\$ 8,261	\$ 8,344
19	\$ 8,509	\$ 8,594
20	\$ 8,764	\$ 8,852

**Unanticipated work (LADWP 2015 rates)**

	Labor (hourly)	Equipment (hourly)
Haul Truck	\$ 37.65	\$ 25.92
Excavator	\$ 46.50	\$ 71.96
Per day	\$ 673.20	\$ 783.04

## 7. PROJECT PERMIT/APPROVAL STATUS

List is not all inclusive. It is Grantee's responsibility to comply with all applicable permits.

Permitting Agency	Type of Requirement	Required?	Applied?	Acquired?	Date Anticipated
<b>State Agencies:</b>					
California Department of Fish and Game	Streambed Alteration Agreement Permit (Section 1600)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
California Department of Fish and Game	Incidental Take Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CalTrans	Encroachment Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Coastal Commission	Coastal Development Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Coastal Commission	Letter of Consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regional Water Quality Control Board	401 Water Quality Certification or Waste Discharge Requirement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
State Water Resources Control Board	Water Rights Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
State Water Resources Control Board	General Industrial Storm Water Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Central Valley Flood Protection Board	Permission to Encroach on Waterways within Designated Floodways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
State Lands Commission	Permit required if using State owned property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
State Office of Historic Preservation	Cultural Resources-Submission of findings to State Historic Preservation Officer (National Historic Preservation Act, Section 106)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Federal Agencies</b>					
U.S. Fish and Wildlife Service (USFWS)	Section 7 consultation if federal nexus (see ACOE), or Section 10 Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
U.S. Army Corps of Engineers (ACOE)	Clean Water Act, Section 404 Permit, will consult w/USFWS & NMFS Section 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
U.S. Army Corps of Engineers	Rivers and Harbors Act, Section 10 Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
U.S. Coast Guard / U.S. Army Corps of Engineers	Rivers and Harbors Act, Section 9 Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
U.S. National Resources Conservation Service	Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
National Marine Fisheries Service (NMFS)	Section 7 consultation if federal nexus see ACOE, or Section 10 Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Local and Regional Planning Agencies</b>					
City/County	Grading Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
City/County	Environmental Health Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
San Francisco Bay Conservation and Development Commission	Any relevant permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tahoe Regional Planning Agency	Any relevant permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Local Resource Conservation District	Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Flood Control Districts	Floodway & Hydrological Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Others (List):</b>					
<b>Describe any potential delays due to permitting (indicate specific permits):</b>					