

SECTION 2. PROJECT DESCRIPTION AND COVERED ACTIVITIES

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2.0 PROJECT DESCRIPTION AND COVERED ACTIVITIES

2.1 Project Description

LADWP's ongoing activities include water gathering, water distribution, hydroelectric power production, power transmission activities, and continuation of other land uses. These other land uses include irrigated agriculture, livestock grazing, recreation, fire and weed management, and road maintenance and closures, and habitat enhancements for Covered Species. LADWP operates and maintains extensive man-made and natural waterways. This includes 1,300 mi of unpaved roads, 450 mi of natural waterways, 84 mi of aqueducts, and 111 mi of man-made ditches and canals with several hundred water diversions.

For water gathering and distribution, LADWP performs routine maintenance and operations of facilities in the Plan Area including about 187 flumes and measuring stations, 190 water intake and diversion structures, more than 60 sand traps or sediment basins, and 30 spillgates. Occasionally, LADWP must respond to infrequent events such as isolated floods or fires that destroy its facilities and affect aquatic, riparian, and upland habitats. Operations and maintenance of these facilities are described in Section 2.2 and Appendix D.

For power production and transmission, LADWP operates and maintains eight hydroelectric power plants and about 700 miles of transmission and distribution lines. In addition, LADWP operates five dams and their associated reservoirs.

For land management, LADWP manages 64 grazing leases (cattle, sheep, horses, and mules) on 232,000 acres within the Plan Area. These grazing leases follow grazing plans developed by LADWP and the lessees to address livestock management issues, and develop and implement guidelines for better watershed management (see Section 2.2.5 below). A summary of each grazing management plan is provided in Appendix C. LADWP also manages lands used for irrigated agriculture (about 2,000 acres) and outdoor recreation.

LADWP policy does not promote new urban or agricultural development in the Plan Area.

2.2 Description of Activities Covered by Permit

This HCP covers Water Gathering and Water Distribution, Power Production, Power Transmission, as well as the operations and maintenance of existing facilities related to these activities. In addition, Covered Activities include, Irrigated Agriculture, Livestock Grazing, Outdoor Recreation, Road Maintenance and Use by LADWP staff, Weed Management, Fire Management (including wildfire suppression and prescribed fire), Habitat Enhancement, Habitat Creation, and Monitoring.

2.2.1 Water Gathering and Distribution

LADWP's water management and infrastructure, which includes five dams, affects 70 perennial streams, 22 perennial canals, 127 intermittent man-made waterways, 13 ponds/lakes, and 14 intermittent streams/washes (Appendix D).

- "Waterways" are intermittent man-made waterways and perennial waterways in the Plan Area that are part of the LAA system (see descriptions below).
- "Intermittent waterways" include intermittent man-made waterways and intermittent streams, washes, and ponds.
- "Intermittent man-made waterways" are man-made lateral ditches that are used to convey water from a natural or man-made waterway for several purposes (e.g., irrigated agriculture, livestock grazing, and habitat enhancement) and is not intended for return to a natural waterway.
- "Intermittent streams and washes" are natural waterways with intermittent flow.
- "Intermittent ponds" are ponds in which water levels are periodically manipulated including draining the pond, and vegetation is cleared using heavy equipment or fire, as frequently as every year. Ongoing operations and maintenance activities support a nonnative fishery in these ponds.
- "Perennial waterways" include perennial streams, perennial canals, and ponded waters that flow continuously on a year-round basis.
- "Perennial streams" are natural waterways with highly variable year-round flows driven by snow pack and rain events. These waterways support fish and wildlife resources, including riparian vegetation.
- "Perennial canals" are man-made waterways, including ponded waters that typically flow year-round, are used to collect and convey water, and can support fish and wildlife resources, including riparian vegetation.
- "Perennial ponds" are ponds in which the water levels are maintained throughout the year.
- "Other waterways" are those that do not fit neatly into the above categories of waterways. These may include toe drains, well ditches, and Blackrock Waterfowl Management ditches.

Please see Appendix D for a complete list of waterways and activities.

LADWP operates and maintains its water delivery system to ensure operation to its designed capacity, and to deliver water efficiently to its customers. Activities that are typically performed in any waterway of this delivery system include: operating and maintaining dams, measuring stations, flumes, intake and diversion structures, culverts, sand traps, and spillgates; mowing, slushing, and cleaning obstructions; preparing waterways for high seasonal flows and water flow management; spot clearing obstructions (e.g., sediment and vegetation plugs/blockages, beaver dams, downed trees, and emergent aquatic vegetation); and replacing, maintaining, and/or removing existing facilities, when and where needed. Information on each of these

activities is provided below. For atypical events/emergencies, LADWP may perform additional activities described in Activity 15 below.

LADWP has a Long-Term Lake or Streambed Alteration Agreement for Routine Maintenance Activities in Inyo and Mono Counties and a Long-Term Agreement Regarding Proposed Routine Maintenance Activities for the Lower Owens River Project (hereinafter "1602 Agreement") with CDFW, in accordance with Fish and Game Code § 1602. These two 1602 Agreements allow LADWP to perform specified routine maintenance work in specific waterways and establish protective measures for fish and wildlife resources. If non-routine work is conducted, LADWP may need to obtain additional authorization.

2.2.2 Types of Water Gathering and Distribution Facilities and Activities

All facilities described below require access by personnel, vehicles, and/or construction/heavy equipment.

- 1. Dams.** In general, dams are operated for water gathering; power production is an ancillary benefit. Operations vary depending on the runoff year and downstream operational needs (i.e., water demand). Operations and maintenance activities includes conducting Division of Dam Safety California Department of Water Resources surveys, and removing vegetation from the dam face using chemical or mechanical methods.
- 2. Measuring Stations and Flumes.** Measuring stations and flumes are used to measure water flow in waterways. Maintenance work related to measuring stations and flumes includes the mowing of vegetation to provide access along the channel banks and the removal of sediment within an area 100 feet upstream and 100 feet downstream of measuring stations to allow for unobstructed water flow, and the accurate reading of water flow, in waterways, LADWP may perform the work described in this subsection with construction equipment, a crane with a clamshell, or dragline attachments, provided that LADWP: 1) restricts the work to an area within 100 feet upstream and 100 feet downstream of the measuring station; (and up to 328 feet upstream and downstream within the Lower Owens River Project), and up to 25 feet away from the bank(s) to provide access to the facility 2) places sediment on existing adjacent spoils sites so that material will not wash back into the waterway, and 3) will not stockpile sediment on existing riparian and/or wetland habitat.
- 3. Intake and Diversion Structures.** Diversion structures, including intake and spreading diversion structures, divert water from one waterway into another waterway. Sediment is removed above or below intake structures. Sediment removal occurs within an area 100 feet upstream and 100 feet downstream of intake structures. LADWP may perform the work described in this subsection with construction equipment, or by flushing, provided that LADWP: 1) restricts the sediment removal to an area within 100 feet upstream and 100 feet downstream of the intake structure (and up to 325 feet upstream and downstream within the Lower Owens River Project), and up to 25 feet away from the bank(s) to provide access to the facility;

- 2) places sediment on existing adjacent spoils sites so that material will not wash back into the waterway, and 3) will not stockpile sediment on existing riparian vegetation. These activities occur within a “work area” that includes the structure, 100 feet upstream and 100 feet downstream of the structure (325 feet in the Lower Owens River Project Area) and 25 feet away from the banks.
4. **Spreading Basins.** Spreading basins are manmade flat-bottom basins that may have water diverted into them during high runoff years. The water percolates into the ground to recharge ground water for storage and future use. Occasional maintenance may occur to ensure the integrity of the berms or to till the bottom using heavy equipment.
 5. **Sand Traps.** Sand traps occur mainly above the entrance of creeks into the LAA or at the confluence of waterways. LADWP typically mows vegetation around sand traps to allow for unobstructed water flow and to reduce sediment accumulation in waterways. The amount of sediment that needs to be removed depends on the size and location of the sand trap and the time of year. LADWP may perform the maintenance work described in this subsection with construction equipment. LADWP will stockpile sediment on existing adjacent spoil sites so that material will not wash back into the waterway, and will not stockpile sediment on existing riparian and/or wetland habitat. If this is not possible, LADWP will transport removed sediment to an appropriate disposal site.
 6. **Spillgates.** Spillgates are structures designed to spill excess water from one waterway to a different waterway whenever channel capacity is exceeded. They can also be used as diversion structures. Spillgates are cleaned and repaired using heavy equipment because sediment accumulation can cause the spillgates to leak. Spillgates are located along waterways and consist of release gates constructed of wood, concrete, or steel where water flows discharge into man-made ditches. Sediment accumulation can cause damage to spillgates. LADWP may maintain its spillgates by cleaning and repairing them using construction equipment. LADWP will stockpile the sediment on existing adjacent spoils sites so that material will not wash back into the waterway, and will not stockpile sediment on existing riparian and/or wetland habitat, or removed sediment will have to be transported to an appropriate disposal site.
 7. **Culverts.** Culverts are structures designed to convey water, typically under roadways. Typically these are either round or rectangular and range in size from a few inches to up to 15 feet across. Blockages prevent culverts from functioning properly. LADWP cleans hundreds of culverts by flushing or using hand tools or heavy equipment. Material removed from blockages would be transported to an appropriate disposal site or placed on existing adjacent spoils sites so that material will not wash back into the waterway and would not be stockpiled on existing riparian and/or wetland habitats.

- 8. Mowing.** LADWP mows vegetation to provide access to ditches, canals, and all associated facilities to perform maintenance. LADWP also mows vegetation along banks to provide an unimpaired view for routine patrol and inspection activities. LADWP performs mowing with mechanical mowing devices and hand tools. LADWP may perform the mowing described in this subsection provided that grading on banks does not occur, vegetation is cut or mowed down to no lower than 2 inches, and LADWP leaves intact any trees with a diameter-at-breast height (hereinafter "DBH") of 4 inches or greater, except for tamarisk or "saltcedar," Russian olive trees, black locust, acacia, and elm trees, may be removed regardless of their DBH.
- 9. Slushing.** The purpose of slushing is to remove aquatic growth in man-made waterways to ensure constant water flow. LADWP would accomplish this task by dragging large flat pieces of metal through a waterway to dislodge or cut the aquatic growth at its base. The current would carry the slushed materials down the waterway where it may be removed mechanically or allowed to pass downstream. Removed materials would be transported to an appropriate disposal site or placed on existing adjacent spoils sites so that material will not wash back into the waterway and would not be stockpiled on existing riparian and/or wetland habitats.
- 10. Burning.** The purpose of burning is to remove vegetation or reduce the vegetation biomass prior to vegetation removal using another method (e.g., mowing). Burning improves and maintains water conveyance and enhances habitat (see Section 5). Typically, LADWP uses fuses or a drip torch and walks along the intermittent man-made waterway or pond, igniting vegetation with a DBH of less than 4 inches.
- 11. Cleaning Obstructions, Such as Debris, Sediment, and Vegetation, in Waterways.** Removed materials would be transported to an appropriate disposal site or placed on existing adjacent spoils sites so that material will not wash back into the waterway and would not be stockpiled on existing riparian and/or wetland habitats.

 - a. Removing spot obstructions from man-made waterways. LADWP would remove obstructions, such as trash or upland or instream vegetation, from waterways to maintain flow. LADWP would use heavy equipment to remove the obstruction.
 - b. Cleaning man-made waterways. LADWP uses a scraper or other heavy equipment up to the entire length of an intermittent man-made waterway or uses heavy equipment in perennial canals to maintain the capacity of such a waterway or canal.
 - c. Removing spot obstructions from perennial streams and intermittent streams and washes to facilitate within channel flow. LADWP would remove spot obstructions including sediment and vegetation plugs/blockages, beaver dams, downed trees, emergent aquatic

vegetation, and trash using heavy equipment, helicopters, explosives, or watercraft.

12. Preparing Waterways for High Seasonal Flows and Water Flow Management (with the exception of the LORP, see No. 14. below). Prior to expected runoff, structures are cleaned of debris and sediment. Obstructions are removed. Removed materials would be transported to an appropriate disposal site or placed on existing adjacent spoils sites so that material will not wash back into the waterway and would not be stockpiled on existing riparian and/or wetland habitats. Gates are checked to ensure they operate properly and repaired as necessary.

13. Replacing, Maintaining, and/or Removing Existing Facilities.

- a. On intermittent waterways, LADWP would replace existing facilities when water is not in such a waterway, and the new facility would be substantially similar to the facility being replaced.
- b. On perennial waterways, LADWP would replace existing facilities (e.g., measuring stations, etc.) in perennial waterways with new facilities that are substantially similar in function and footprint to the existing facility. LADWP would place sediment catchment structures (e.g. straw bale gabions) in the waterway when necessary to minimize sediment movement down the waterway, and mow vegetation with a DBH of up to 4 inches (see Mowing above).

14. LORP Seasonal Habitat Flow Preparation and Management. In addition to the base flow, LADWP may increase the flow into the Lower Owens River seasonally to help create and sustain healthy and diverse riverine, wetland, and riparian habitats (LADWP 2004). To prepare for the increased flows, LADWP needs to protect their structures (including roads) from damage that could result from these flows. LADWP would monitor for and remove debris from its structures (see 1 through 3, 5 through 7, 11, and 12 above), use sandbags (sand from nearby sand traps) and perform earthwork to secure banks, and remove aquatic vegetation to facilitate efficient sediment transport and flow measuring capabilities in the Lower Owens River.

15. Atypical events/emergencies have occurred in the past, and LADWP anticipates they will occur in the future. These events/emergencies include:

- Floods, mudflows
- High runoff
- Rain on snow events
- Dewatering creeks due to anchor ice
- Unusual ice formations
- Plugs/obstructions that impact flow/dewater creeks
- Structure failures including LADWP or Southern California Edison dams

- Wildfires
- Invasive species (e.g., quagga mussels) in waterways, ponds, reservoirs, and facilities and subsequent impacts
- Major wind events
- Power outages/fluctuations that cause facility damage
- Highway/road failure or destabilization
- Air, water, or land craft accidents with associated hazardous materials spills (e.g., vehicles in canals, diesel in water),
- Wastewater treatment spills
- Arson, vandalism, illegal dumping, and hazardous materials spills (e.g., 50 gallon drum in waterway)
- Terrorist acts
- Earthquakes

To respond to any of these events on any waterway or pond, LADWP would conduct activities 2, 3, 5, 6, 7, 11, and 13 above. Additional activities may include sand bagging, berm creation, temporary road creation, or cross-country travel by vehicles and heavy equipment, and implementing appropriate response methods for hazardous materials spills. Response activities may occur outside the specified work window (Appendix D).

16. Maintain Groundwater Pumps. In the Owens Valley, LADWP operates numerous groundwater pumps. To operate and maintain these pumps, LADWP must have year-round access. This requires the periodic use of motorized vehicles and heavy equipment such as backhoes, graders, etc., on existing roads. In addition, vegetation is removed from pump enclosures using mechanical equipment or herbicides. LADWP is not seeking coverage for the activity of groundwater pumping.

2.2.3 Operations and Maintenance of Hydroelectric Power Production, Water Storage Facilities, and Power Transmission Activities

LADWP owns, operates, and maintains five dams, their associated reservoirs, eight hydroelectric power plants (Table 2-1), 300 miles of transmission lines, and 400 miles of distribution lines in Inyo and Mono Counties. The infrastructure footprints of power plants and dams, including power houses, penstocks, storage yards, facility areas, and power lines, will not substantially change for the duration of this HCP. Typically, the operations and maintenance activities occur within the footprint of these existing facilities.

Table 2-1. LADWP Hydroelectric Reservoirs, Power Plants, and Dams in Inyo/Mono Counties, CA

Water Body and Power Plant Name	Date Commissioned	Facility Footprint (Acres)
Grant Reservoir	1940	1,100
Crowley Reservoir/Long Valley Dam	1941	4,480
Owens River Upper Gorge Power Plant	1953	18
Owens River Middle Gorge Power Plant	1952	8
Owens River Control Gorge Power Plant	1952	24
Pleasant Valley Reservoir/Power Plant	1957/1958	140
Tinemeha Reservoir	1928	800
Big Pine Creek/Power Plant	1925	30
Division Creek/Power Plant	1909	30
Cottonwood Power Plant ^{1,2}	1908-1909	30
Haiwee Reservoir Complex/Power Plant ^{1, 3}	1913/1927	1,760

¹ Located on Los Angeles Aqueduct

² Power generated from Cottonwood Creek penstock

³ Two reservoirs connected by a channel

Operations and Maintenance associated with Dams and Power Plants

The operations and maintenance of water gathering for hydropower generation are described in “Water Gathering and Distribution” above. Additional activities associated with maintenance of dams and hydroelectric facilities include:

1. Mowing. Vegetation is mowed to provide access for operations and maintenance of dams and hydroelectric plants. Occasional vegetation removal also occurs along penstocks, siphons, and concrete channels associated with power plants based on operational and maintenance needs. LADWP would mow using hand-operated power tools, and heavy equipment. LADWP would mow in such a way that grading on banks does not occur and that vegetation is cut or mowed to no lower than 2 inches. LADWP would prune trees under distribution lines. Mowed vegetation is cut into small pieces and left onsite to decompose.
2. Fencing. LADWP maintains fences around some power-producing facilities. Access to the fence is usually via existing roads. Any fence materials removed from the site would be properly disposed of.

These activities are conducted year-round.

Operations and Maintenance of Electrical Transmission and Distribution Facilities

Operations and maintenance of LADWP electrical transmission and distribution facilities in the Plan Area consist of Transmission Lines and Facilities and Distribution Lines and Facilities.

Transmission Lines and Facilities

Overhead Transmission Division of LADWP (OHT) maintains more than 300 miles of transmission lines and patrol roads in the Plan Area. These lines are inspected following schedules and guidelines established by the State of California's Public Utilities Commission General Order 95 (G.O. 95) (California Public Utilities Commission 2012a), North American Electrical Reliability Corporation's (NERC) Reliability Standards for Facilities Design, Connection, and Maintenance (NERC 2013), and Western Electricity Coordinating Council (WECC).

Access to lines and facilities for biannual circuit inspections is done by helicopter and ground vehicle. Ground inspections include checking tower footings, guy tensions, and looking for damage.

Climbing inspections of towers are done on a one-year schedule for critical towers and 10-year basis for others. Critical towers include towers that cross major highways, waterways, or utility lines.

OHT washes porcelain insulators in the Plan Area using a snorkel type insulator washer with de-mineralized water. The normal wash schedule is every 360 days; however, factors such as circuit relays, dust levels, and fires will shorten this schedule.

OHT maintains the mandated clearance distance of vegetation from energized circuits as dictated in G.O. 95 by mowing and tree-trimming. Line clearance is currently performed annually by contract crews or LADWP's Transmission personnel. Areas not accessible via patrol roads are accessed by foot.

OHT accesses ground facilities using existing patrol roads. Patrol roads are maintained by occasionally grading them with heavy equipment (see Road Maintenance and Use by LADWP Staff).

Distribution Lines and Facilities

Owens Valley Electric System (OVES) maintains more than 400 miles of distribution lines, poles, transformers cross-arms, insulators, and distribution stations in the Inyo and Mono Counties. These features are patrolled and inspected on schedules and guidelines established by the California Public Utilities Commission's G.O. 95 and General Order 165 (G.O. 165) California Public Utilities Commission (2012a, b).

All lines and facilities in the Plan Area are inspected at least every two years. However, OVES personnel regularly inspect lines and facilities following high winds, fires, and other factors that might jeopardize system reliability. G.O. 165 also dictates that all poles are intrusively inspected every 10 years. To conduct these inspections crews use established patrol roads. OVES installs and/or replaces approximately 120 poles, 200 cross arms, and 30 transformers a year.

Mandated clearance distances vary depending on the type of facility. For poles that carry certain types of equipment and hardware, a 10-ft minimum clearance is required [see Section 1254 (Minimum Clearance Provisions) of the California Code of Regulations (CCR 2004)]. When necessary to achieve this clearance zone, a backhoe, mower, or other hand equipment is used to clear vegetation the required distance. For energized circuits, the mandated clearance varies depending on the type

and amount of electricity (see G.O. 95). Line clearance is currently performed annually by contract crews or in-house personnel. Areas not accessible via patrol roads are accessed by foot.

OVES maintains existing patrol roads (see **Road Maintenance and Use by LADWP Staff**). All crews have been directed to stay on existing roads and no new roads are scheduled to be constructed.

2.2.4 Irrigated Agriculture

LADWP provides water to the lessees of irrigated agricultural lands. There are about 22,100 acres of irrigated agricultural lands; about 2,000 acres are for crops (e.g., alfalfa) and the remainder are irrigated pastures used for livestock grazing (see Livestock Grazing below). These lands are supplied with up to 5 acre-feet of water per acre delivered during the growing season (April 1 – September 30) from both surface and ground water sources (see Appendix A for maps). In general, for lands using surface water from a natural waterway, the availability of water may be reduced in dry years. Most irrigation systems are operated and maintained by LADWP and consist of pumps with center-pivot sprinkler systems, flood irrigation, and irrigation ditches that deliver water from the Owens River, creeks, and from groundwater sources. The practice of delivering water and the delivery systems have been in place for more than 100 years.

Irrigated lands may be maintained using various management activities including rotational grazing strategies, fertilization, and mowing. Irrigated lands are jointly assessed by LADWP and lessees to ensure that desirable plant and livestock productivity are optimized while detrimental effects to soil and water resources are minimized using Natural Resources Conservation Service (NRCS) irrigated pasture condition scoring evaluation.

2.2.5 Livestock Grazing (including fencing)

The majority of City lands in the Plan Area are fenced and leased for livestock grazing, and have been for more than 100 years. These include about 232,000 acres of non-irrigated lands and about 20,000 acres of irrigated pasture (see Appendix A for maps). Currently there is no livestock grazing on City lands in the Mono Basin and this is not expected to change in the near future. LADWP livestock grazing leases are primarily for cattle but also include sheep and pack stock (horses and mules).

Grazing and the operations and maintenance of grazing facilities are important in maintaining the multiple and sustainable-uses for City lands (MOU, 1997). LADWP has developed grazing management plans and ensures that these plans are implemented through annual monitoring. These plans include allowable utilization rates of forage, maintaining fences, temporal restrictions for some non-irrigated lands, and restricting placement of supplements (e.g., protein blocks) in the floodplain. In addition, LADWP may construct and maintain fences or stock water wells to manage livestock distribution. A map and summary of each lease is included in Appendix A.

2.2.6 Outdoor Recreation (including fencing)

Most of the Plan Area, including existing roads, is open to the public for outdoor recreation activities including picnicking, fishing, hiking, biking, off-highway vehicle use, sightseeing, camping in developed campgrounds, hunting, and bird-watching. These activities will continue in the future and likely increase in popularity. LADWP leases some land to Inyo County for camping (e.g., Long Valley Campground, etc.) and to Mono County for recreational purposes (e.g., Whitmore Pools). The Counties are responsible for the development, management, and operation of these lands. Camping is not permitted on City lands outside these developed campgrounds.

LADWP developed a Recreation Plan for the Plan Area (OVLMP, LADWP 2010). The Recreation Plan established rules for recreational users to follow, describes how LADWP monitors natural and cultural resources for damages caused by recreational use, and outlines appropriate corrective action that may be implemented to halt the damage and improve the condition. Prior to plan development, LADWP Watershed Resources Staff solicited comments from all MOU Parties and the public and prioritized recreational projects based on this information, in-house knowledge, and the urgency of resolution of the issues due to safety or other concerns. Examples of actions included in the Recreation Plan are posting signs and installing kiosks for public information and education; installing barriers and walk-throughs, creating designated parking areas, closing and/or rerouting roads, installing sanitation facilities to manage recreational user patterns; and contacting law enforcement to address violations.

2.2.7 Road Maintenance and Use by LADWP Staff

About 1,300 miles of paved and unpaved roads occur in the Plan Area. LADWP does not anticipate creating any new roads except when needed to respond to an emergency. LADWP has no plans to pave any unpaved roads. LADWP does not repave paved roads; however, as they degrade LADWP will maintain them as they do unpaved roads. LADWP maintains unpaved roads by occasionally grading them with heavy equipment. Gravel or other types of road base materials may be added if needed at problem areas. Pre-grading meetings are held with affected landowners (e.g., BLM, State, Forest Service, etc.) to discuss scope of grading activities.

Redundant roads or roads not needed for LADWP operations and maintenance activities may be closed in the future. Methods to close roads include placement of obstacles to block access (e.g., boulders, gates, railroad ties, and ripping roads to break up compaction and stimulate revegetation, and possibly reseeding reclaimed road surfaces).

LADWP is not seeking coverage on maintenance of County Roads in the Plan Area.

2.2.8 Weed Management

For the purposes of this HCP, a “weed” is defined as a plant that is undesirable in the Plan Area and can include both native and nonnative species growing in an undesirable location. Currently, perennial pepperweed (*Lepidium latifolium*) and Canada thistle (*Cirsium arvense*) are the most abundant weeds treated in the Plan Area.

Weed management in the Plan Area is primarily the responsibility of LADWP. However, within the LORP, the Inyo/Mono Agricultural Commissioner's Office (AgComm) is responsible for weed management and the Inyo County Water Department implements the Saltcedar Program (*Tamarix ramosissima*), a program to eradicate saltcedar within the LORP (AgComm 2010). LADWP is only seeking coverage for their weed management activities.

LADWP identifies, documents, treats, and monitors weeds within the Plan Area. To identify the presence of weeds, LADWP surveys much of the Owens River, around seeps and springs, and after water spreading. In addition, LADWP has trained their staff to identify weed occurrences while conducting operations and maintenance activities. To document the extent of a weed occurrence, LADWP conducts surveys typically from March through October. To comply with state law, LADWP treats all weeds on the California Department of Food and Agriculture's Noxious Weed List. In addition, weeds may be treated to ensure water gathering and power production activities are not impeded or to promote multiple-use (e.g., cattail removal on Buckley Pond, willow removal from irrigated pastures).

When weeds are found, treatment methods include mechanical (hand tools, mechanized tools, heavy equipment) and chemical treatment methods following applicable state and federal regulations related to their use. Application of herbicides to known weed locations is via a low-volume sprayer attached to a vehicle such as an ATV or truck or a low-volume backpack sprayer carried by a person on foot. Having the ability to treat a site on foot results in less disturbance, better directed applications, and more thorough coverage. When possible, existing roads are used, but sometimes cross-country travel is necessary to access the treatment sites. Once weeds have been eradicated from a treated area, LADWP conducts surveys for at least five years to ensure that eradication has been successful.

2.2.9 Wildfire Management and Prescribed Fire

Wildfires are unintentional fires including unauthorized human-caused fires, unwanted wildland fires, and escaped prescribed fire projects. Prescribed fires are authorized fires intentionally set by humans for land management. The LADWP Fire Management Plan (Appendix C) provides guidance and direction for wildland fire suppression and prescribed fire, and outlines steps for reducing natural resource impacts.

The Plan Area within Inyo County is within a State Responsibility Area, which means CalFire makes decisions regarding wildfire suppression activities using the incident command system. Within the Plan Area in Mono County, the wildland fire agencies in the area (CalFire, BLM, U.S. Forest Service) and LADWP have an agreement in place to collaborate on suppressing fires in the region. LADWP is not seeking coverage for CalFire's activities.

LADWP creates firebreaks around some communities. Historically, LADWP would mow firebreaks around Bishop, Big Pine, Independence, and Lone Pine. Recently most of these communities have created Fire Safe Councils that maintain these firebreaks. LADWP annually mows a firebreak around some of Bishop that varies from 25 to 200 feet wide.

Prescribed fire is used to reduce fuel load, reduce biomass, and control woody plant encroachment on some LADWP lands. Additional benefits to the ecosystem include nutrient recycling and improved forage conditions. LADWP may burn from 0 to 1,000 acres annually depending on weather conditions and availability of staff. LADWP or a lessee may propose areas to burn. LADWP resource staff evaluates the merits of the proposal, and if they determine the proposed fire would be beneficial, the burn is authorized according to the following procedures:

- A burn plan is developed that includes goals, resource objectives, resource concerns, rehabilitation needs, and maps that contain locations of fire breaks.
- An Incident Action Plan is also developed and includes: objectives, fire prescriptions, a safety plan, medical plan, communications plan, division plan, Incident Command System (ICS) plan, fire plan, escaped fire analysis, travel plan, and maps.
- A smoke management plan is developed and adopted by the Great Basin Unified Air Pollution Control District (GBUAPCD, 2004).
- If the burn is proposed by the lessee, the lessee works cooperatively with LADWP and any of its federal and state cooperators to conduct the burn.
- If the burn is proposed by LADWP, the department conducts the burn with or without federal and state cooperators.
- Activities conducted during a prescribed burn may include the creation of fire breaks by either mowing/black lining (burn the mowed area) or grading (on previously disturbed sites) and foaming around items to prevent their ignition (e.g., trees). Drip torch or fuses are used to start the fire. On site water tenders remain on roads and obtain water from the municipal supply or if needed a nearby waterway
- Post wildfire or prescribed fire recovery activities include adjusting flow management, resting grazing leases, limiting access or monitoring.

2.2.10 Habitat Enhancement and Habitat Creation Activities

Many activities described above are also used for habitat enhancement and habitat creation. Habitat enhancement and habitat creation activities may result in a temporary reduction in the quality or quantity of habitat for Covered Species and their occasional take. LADWP would develop, implement, and monitor these activities. Covered Activities include: water gathering (including re-watering the Lower Owens River), closing roads that cause natural resource impacts, fencing to manage access and movement of recreationists and livestock, implementing livestock grazing and recreation management plans, implementing LADWP's weed management and fire management plans, revegetating areas with native plants, and rotational flooding and burning of wetlands. These activities are intended to improve overall habitat conditions for a variety of plant and wildlife species including but not limited to the Covered Species.

In addition, habitat creation and enhancement specific activities include: additional Water Supply (e.g. 1600 acre-foot mitigation, enhanced flows to promote burn area recovery and riverine health), planting and seeding native species, rotational flooding, and supplying LORP water.

2.2.11 Monitoring Activities

LADWP conducts extensive monitoring of biological and cultural resources throughout the Plan Area. These activities include fisheries monitoring (e.g., trout surveys), vegetation surveys (e.g., rare plant monitoring), bird surveys, forage utilization surveys, vegetation mapping, monitoring to avoid disturbance to historic and prehistoric resources, monitoring for compliance with best management practices, etc. The field season for monitoring is usually April to October. Access to or near the monitoring locations is by existing roads and walking. Equipment used is mostly handheld and includes tape measures, cameras, tablets, binoculars, electroshocking equipment (for fisheries monitoring), dip nets, portable audio devices, and various sensors and probes, etc.

2.2.12 Activities Not Covered by the Permit

LADWP activities not covered by this Plan are construction, operations, and maintenance of communication facilities; groundwater pumping; and public purpose and commercial leases (e.g., WMRC; Inyo County campgrounds; CDFW hatcheries; sanitary landfills; aggregate mines; wood gathering; filming for motion pictures, television show, commercials, and music videos; airports; and bee keeping, etc.) other than for livestock grazing. LADWP's current communication facilities are outside the Plan Area or are not located in the range of the Covered Species. They are shared with other agencies.