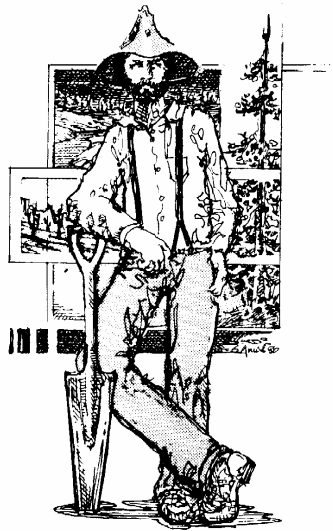


# LOWER OWENS RIVER PROJECT RIPARIAN VEGETATION INVENTORY 2000 CONDITIONS

*Prepared for:*

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## EXECUTIVE SUMMARY

The Lower Owens River Project (LORP) riparian area follows the Owens River from the Los Angeles Aqueduct diversion to the Delta Habitat Area (DHA) on the Owens Lake bed. The LORP riparian area is 6,437 acres and includes 53.3 linear miles of the Owens River channel. A vegetation inventory was conducted. This vegetation inventory may serve as a baseline for monitoring future changes following implementation of the Lower Owens River Project (LORP). Viewed from a historic perspective, the inventory also serves as an integrated expression of past changes that may help to guide future management. It is hoped that this study will facilitate better understanding the lower Owens River.

Existing information pertinent to vegetation resources in the LORP area was reviewed and assembled. Mapping was conducted from high-resolution (2 foot pixels) digital orthophotos viewed at 1:1,000 to 1:6,000 scales. Map units denote areas of distinctive soil, hydrologic and vegetative character. Field descriptions of soil, hydrologic and vegetative attributes of 50 parcels in 12 study areas were conducted. Vegetative, soil and hydrologic criteria listed in the Wetland Delineation Manual were used to determine the wetland status of each map parcel. Jurisdictional wetlands have hydric soil, wetland hydrology and hydrophytic vegetation. The accuracy of mapping was assessed in fall, 2002. This report is compiled as digital WORD (doc) and ADOBE (pdf) files on DVD. Arc-View shapefiles, TIFF images, and Access tables are also compiled on the disk (see [APPENDIX A](#)).

The LORP riparian area was divided into 4,072 parcels, each consisting of a dominant landtype, water regime and vegetation type. Four landtypes were identified based on soil, morphology and position relative to environmental gradients. The *floodplain landtype* includes land influenced by contemporary stream processes, including channels and ponds; surfaces were typically less than 2 feet above alluvial groundwater level. The *low terraces landtype* includes historic floodplains that have been left high-and-dry by channel incision; surfaces were typically 2 to 5 feet above alluvial groundwater level. *High terraces* were typically greater than 5 feet above alluvial groundwater level. *Eolian land* is characterized by a veneer of loose, wind-blown sand underlain by terrace or floodplain sediments. Hydric soil was evident throughout the floodplain landtype and in isolated depressions on low terraces. Hydric soil was generally not present on convex and even terrace surfaces, nor was it present in eolian land.

Water regimes identified in the LORP riparian area were based on the frequency and duration of flooding, and/or depth to saturated conditions. *Permanently flooded, saturated, and high water table regimes* were flooded or saturated near the surface and wetland hydrology is present. *Low and very low water table regimes* were not flooded or saturated near the surface and wetland hydrology is absent.

Vegetation types were identified based on community physiognomy and plant species composition. Two levels of vegetation types were identified: 1) Series were identified based on prominent overstory species; 2) associations were identified based on overstory and understory species composition. Major vegetation types include *alkali marsh (bulrush-cattail)*, *wet alkali*

*meadow (saltgrass-rush), alkali meadow (saltgrass), Goodding-red willow (Goodding-red willow/bulrush-cattail, Goodding-red willow/creeping wildrye-saltgrass, and Goodding-red willow/scrub), rabbitbrush-NV saltbush (rabbitbrush-NV saltbush/saltgrass-alkali sacaton and rabbitbrush-NV saltbush).* Hydrophytic vegetation (albeit sometimes scant) was dominant in all of these major vegetation types. Hydric soil, wetland hydrology and hydrophytic vegetation definitive of jurisdictional wetland were present in about 1,843 acres (28.6 percent) of the LORP riparian area.

The distributions of landtypes, water regimes, and vegetation types are influenced by valley form, channel/floodplain morphology, and hydrologic variables. These three parameters were used to define four reach types in the LORP riparian area: 1) *dry incised floodplain* (Reach 2); *wet incised floodplain* (Reaches 1, 3, and 5), *graded wet floodplain* (Reach 6), and *aggraded wet floodplain* (Reach 4). Reach types corresponded with distinctive assemblages of landtypes, water regimes and vegetation types. Reaches are expected to respond to LORP applications in distinctive manners and will serve as an integrated unit for interpretations guiding adaptive management.

The accuracy of preliminary mapping presented in a draft report dated September 2002 was evaluated. The goal was 95 percent overall accuracy. The accuracy of preliminary mapping was predicted to be 92.5 percent. Preliminary mapping was therefore refined using a high resolution, color infrared, ICONOS satellite image. Most of the typical mapping errors were evident from the ICONOS image. Refined mapping presented in this report is expected to exceed the goal of 95 percent overall accuracy.