

Chapter 1. Introduction

PROPOSED PROJECT AND PROJECT OBJECTIVE

The California State Water Resources Control Board (SWRCB) proposes to amend the City of Los Angeles' water right licenses for diversions from streams tributary to Mono Lake. The license amendments will require adequate flows in the streams below the diversions for protection of fish and will include requirements for protection of public resource values in the lake and in its basin. Specifically, SWRCB proposes to establish, through prescribed regulatory procedures:

- # instream flow requirements for the Mono Lake tributaries from which the city diverts water, including Rush, Parker, Walker, and Lee Vining Creeks, as necessary to comply with the Public Trust Doctrine and with the California Fish and Game Code and judicial rulings requiring that license conditions be sufficient to maintain fisheries equivalent to prediversion levels and
- # water surface elevation requirements for Mono Lake and other conditions necessary to provide appropriate protection of public trust resources and beneficial uses of Mono Lake and its tributaries.

For purposes of the California Environmental Quality Act (CEQA), the project is the establishment of required conditions for Mono Lake and the diverted streams and the modification of the City of Los Angeles' diversions to conform to those requirements by amendment of its water right licenses. The purpose of the project is to ensure that continued export of surface waters from Mono Basin by the Los Angeles Department of Water and Power (LADWP) conforms to state law, including legal requirements to restore and protect public trust resources.

PROJECT LOCATION AND ENVIRONMENTAL CONTEXT

Mono Lake and the diverted tributary streams are located in Mono County, California, in a closed basin east of the crest of the Sierra Nevada (Figure 1-1). (A small portion of the basin lies in Mineral County, Nevada.) The lake (Figure 1-2), because of its great age, has become hypersaline and alkaline through evaporation in the arid Great Basin environment, giving rise to a unique ecological system of lake-dwelling invertebrates preyed on by large numbers of migrating and nesting birds.

For the more than 50 years since 1941, portions of the waters of four of the major tributary streams (Figure 1-3), which flow from the eastern slopes of the snowy Sierra Nevada, have been exported south from Mono Basin via the Mono Craters Tunnel to the Upper Owens River by LADWP.

Commingling with waters of the Upper Owens River and other Owens Basin streams, the diverted waters then flow south to a regulating reservoir, Lake Crowley, impounding the Owens River (Figure 1-4). Continuing to increase from other tributary inflows, these waters pass through three power generating stations and two other impoundments (i.e., Pleasant Valley Reservoir and Tinemaha Reservoir) until they enter the city's aqueduct south of Bishop in Inyo County (Figure 1-5). The double-barreled aqueduct leads to a reservoir in Los Angeles County, from which water is distributed to commerce and the populace. Mono Basin exports make up about one-fifth of the waters delivered through the aqueduct.

CITY OF LOS ANGELES WATER RIGHTS

In 1940, the City of Los Angeles was granted permits by the State of California allowing the appropriation of the flows from Rush, Lee Vining, Parker, and Walker Creeks into its newly constructed Mono Basin export system. Limited capacity of the Los Angeles aqueduct downstream prevented full appropriation of Mono Basin waters for many years. By 1970, however, the aqueduct system had been expanded, and full diversion during periods of average runoff became common.

In 1974, SWRCB issued licenses confirming the city's right to divert water from the Mono Lake tributaries. From 1974 until 1989, the city annually exported an average of 83,000 acre-feet of water from Mono Basin.

EFFECT OF PAST DIVERSIONS ON MONO LAKE AND ITS TRIBUTARIES

Over 50 years of water diversion and basin export by the city (Figure 1-6) have been accompanied by a decline in lake surface elevation of slightly more than 40 feet (Figure 1-7), causing the lake surface area to diminish about 25%. Salinity and alkalinity of the lake waters have increased, bird-nesting islands have lost their security from mainland predators, riparian and freshwater habitats along the tributary streams have been irreversibly lost through erosion, and occasional massive dust storms have been induced from salt efflorescence on exposed lakebeds. Yet the lake's fascinating complex of tufa formations, formed underwater during higher lake levels, has been increasingly exposed for the enjoyment of the curious explorer.

Water exported to the Upper Owens River for conveyance to the city's aqueduct intake has had both beneficial and adverse effects on the river. Water export to the Upper Owens River affects water

management of the entire Owens Basin system of reservoirs, diversions, groundwater withdrawal and recharge, and rangeland irrigation for livestock.

LEGAL HISTORY OF THE MONO LAKE CONTROVERSY

The legal history of the Mono Lake controversy is described in detail in Appendix R.

Water Appropriations and the Public Trust

In 1983, in response to a suit filed by the National Audubon Society, the California Supreme Court held that the public trust mandated reconsideration of the City of Los Angeles' water rights in Mono Basin. The court noted that Mono Lake is a scenic and ecological treasure of national significance and that the lake's value as a recreational and ecological resource was diminished by recession of the water level.

The court found that the city's water rights were granted without consideration of impacts on these resources and that therefore SWRCB or the court should reconsider the city's water rights. The court noted that before continued stream diversions could be approved, the effect of such diversion on interests protected by the public trust should be considered and that harm to those interests should be minimized or avoided if feasible.

Protection of Fisheries

After substantial runoff in the mid-1980s, water and fish were spilled over LADWP's diversion dams on Rush and Lee Vining Creek. Lawsuits by Dahlgren and the Mono Lake Committee seeking streamflow releases to keep these fish in good condition resulted in preliminary injunctions requiring minimum streamflows year-round as follows:

- # Rush Creek - 19 cubic feet per second (issued by Mono County Superior Court in March 1985) and
- # Lee Vining Creek - 5 cubic feet per second (issued by Mono County Superior Court in October 1987).

No minimum streamflows were required for Parker and Walker Creeks, which are tributaries of Rush Creek, and total diversion of these streams during normal runoff conditions continued until 1990.

Two cases subsequently brought by California Trout allowed the California Court of Appeal to apply the public trust doctrine to existing state law for protection of fisheries in diverted streams. In "Caltrout I", the court found that the city's 1974 water rights licenses must be conditioned to allow bypass

streamflow around the diversions sufficient "to keep in good condition any fish that may be planted or exist below the diversion dam" (California Fish and Game Code Section 5937).

In "Caltrout II", the court found that SWRCB must require the city to "release sufficient water . . . to reestablish and maintain the fisheries that existed . . . prior to its diversion of water." The court noted that this requirement is not subject to balancing preservation of public trust values with the city's need for water.

Recent Proceedings

On August 22, 1989, Judge Finney of the Superior Court for El Dorado County, who was assigned all Mono Basin water rights cases by the California Judicial Council, entered a preliminary injunction requiring the City of Los Angeles to maintain the water surface elevation of Mono Lake at 6,377 feet for the remainder of that water year. As subsequently described in Chapter 2, the lake level on that date, and the streamflows that were required a few years earlier (as noted above), are used in this report as the point of reference for evaluating impacts of water diversion alternatives.

On September 29, 1989, after a hearing to consider SWRCB's statement of scope and procedures for its proposed review of the city's water rights, the court issued an order staying further judicial proceedings on the merits of the coordinated Mono Basin water rights cases pending action by SWRCB.

The court has continued to address interim relief issues. Lengthy evidentiary hearings were held in 1990 regarding the propriety of the interim requirements for minimum streamflows and lake level imposed by the court. The results of these hearings (issued in June 1990 and April 1991) were that the minimum lake surface elevation of 6,377 feet was reaffirmed, but that minimum release streamflows, when natural flows allow, should be amended as shown in Table 1-1. These requirements, currently in effect, will remain in effect until the SWRCB process is complete or until revised by the court.

SCOPING OF ENVIRONMENTAL ISSUES

In September 1989, SWRCB held a public scoping workshop in Sacramento to identify environmental issues to be addressed in an environmental impact report (EIR) for the project.

On October 10, 1989, SWRCB established technical advisory groups to assist SWRCB in reviewing the implications of the city's water rights. Five groups were formed to assist in the following resource areas:

- # wildlife, riparian vegetation, wetlands, and land use;
- # fisheries and aquatic resources;
- # hydrology, operations, and water use;

- # water quality; and
- # air quality.

The purpose of these groups was to assist SWRCB staff in identifying and evaluating technical information pertinent to each subject area and to develop the resource issues needing evaluation in the EIR. Meetings of these groups began in October 1989 and extended for different periods, in some cases through 1991.

On January 4, 1990, a notice of preparation of an EIR was circulated to public agencies and released to the public, providing 60 days for submission of comments on the appropriate scope of the report. This notice was mailed to more than 500 groups and individuals and published widely in newspapers. The notice listed 73 environmental issues identified at the public scoping meeting and by the technical advisory groups. Probable environmental effects were tentatively identified as follows:

- # Mono Lake - changes in lake level, volume, and salinity; invertebrate productivity; air quality; wildlife habitat; and aesthetic quality;
- # Mono Lake tributary streams - changes in streamflow, reservoir storage volume, water temperatures, invertebrate populations, channel morphology, riparian vegetation, wildlife and fish populations, and recreation opportunities;
- # Owens River and reservoirs - changes in streamflow, reservoir storage volume, water temperature, invertebrate populations, channel morphology, riparian vegetation, wildlife and fish populations, energy production, and recreation opportunities; and
- # City of Los Angeles - changes in water supply.

The notice of preparation also identified the three documents presenting the most recent scientific information about the Mono Lake ecosystems prior to this report:

- # Mono Basin Ecosystem Study Committee of the National Research Council, National Academy of Sciences (NAS). 1987. *The Mono Basin ecosystem: effects of changing lake level*. Washington, DC.
- # Botkin, D. B. et al. 1988. *The future of Mono Lake: report of the Community and Organization Research Institute (CORI) blue ribbon panel*. Report No. 68 of the Water Resources Center, University of California. Riverside, CA.
- # Inyo National Forest. 1990. *Final environmental impact statement and comprehensive management plan, Mono Basin National Forest Scenic Area*. Washington, DC.

In March 1990, SWRCB staff reviewed submitted comments, prepared a scope of work for the EIR, and requested proposals for preparation of the EIR from more than 40 resource-management

consultants. Four proposals were submitted, and the proposing consultants were interviewed by the following three review teams:

- # SWRCB staff;
- # Los Angeles Department of Water and Power staff; and
- # a team composed of representatives of
 - Mono Lake Committee,
 - California Trout,
 - Audubon Society,
 - U.S. Forest Service, Inyo National Forest,
 - Mono County, and
 - California Department of Fish and Game.

The review teams submitted recommendations to SWRCB staff, and in June 1990, Jones & Stokes Associates of Sacramento was selected as SWRCB's prime consultant, with EDAAW of San Francisco selected to evaluate the visual resource issues. Detailed work planning was initiated shortly thereafter and continued for various topic areas through March 1991.

In preparing this report, the SWRCB consultant has used information from the NAS report, the CORI report, and the U.S. Forest Service's environmental impact statement for the Mono Basin National Forest Scenic Area. In addition, the SWRCB consultant has used numerous other technical studies and reports prepared by various experts on the Mono Basin under the direction of SWRCB staff. These reports are identified as Mono Basin Auxiliary Reports and are cited throughout the document.

Additional technical experts were consulted throughout the development of study protocols and development of the resource chapters of this EIR. The SWRCB consultant and SWRCB staff have worked closely with the California Department of Fish and Game (DFG) and its technical consultants conducting instream flow studies on the Mono Lake tributaries and the Upper Owens River to obtain current information regarding streamflows and fishery habitat conditions. This report is the result of the combined efforts of the SWRCB consultant, SWRCB staff, the participants in the technical advisory groups, and the numerous other technical experts.

SUBSEQUENT ENVIRONMENTAL IMPACT REPORT PROCESS

This report is being circulated for 90 days to interested parties for review and submission of written comments. Following this period, public hearings will be held in Sacramento to receive evidence related to the amendment of the City of Los Angeles' water right licenses.

Based on submitted comments, modifications to this draft report may be made before any SWRCB decisions. Modifications may include examination of modified alternatives adjusted for impact mitigation purposes. Responses to comments and a final EIR will be prepared before final SWRCB decisions are made.

INTENDED USES OF THIS DOCUMENT

SWRCB will use this document to evaluate the environmental impacts of various alternatives available for establishing required fishery protection flows and appropriate measures to protect public trust resources. SWRCB will make decisions regarding fishery protection measures and public trust resources following a public hearing process during which this document and other evidence will be considered.

SWRCB will incorporate appropriate instream flow requirements, lake elevation requirements, and any measures necessary to protect public trust resources into the city's water right licenses.

This document will also be used to evaluate the potential for Mono Lake to be designated as an Outstanding National Resources Water (ONRW) pursuant to the Clean Water Act.

CHARACTER AND ORGANIZATION OF THE EIR

This EIR evaluates a series of water-rights alternatives, each of which represents a lake-level target and minimum streamflows based on assumed stream diversion rules. The lake-level targets were developed by SWRCB staff during the scoping process. Chapter 2, "Project Alternatives and Points of Reference", describes seven such alternatives, ranging from no restrictions on diversion to no diversion, and their development using complex numerical hydrologic models. Because a computerized model was used to formulate alternatives, the alternatives can be modified and evaluated during the EIR review and public hearing processes to assist SWRCB's decisions.

Chapter 3 is an assessment of environmental benefits and adverse effects in each of 14 resource topic areas. By presenting an examination of the wide range of alternatives, this report reveals the full range of possible benefits and impacts for any SWRCB decision. The resources examined in separate subchapters include:

- # hydrology - Chapter 3A,
- # water quality - Chapter 3B,
- # vegetation - Chapter 3C,
- # fishery resources - Chapter 3D,
- # Mono Lake aquatic productivity - Chapter 3E,
- # wildlife - Chapter 3F,
- # land use - Chapter 3G,
- # air quality - Chapter 3H,

- # visual resources - Chapter 3I,
- # recreation - Chapter 3J,
- # cultural resources - Chapter 3K,
- # Los Angeles water supply - Chapter 3L,
- # power generation - Chapter 3M, and
- # economics - Chapter 3N.

Each chapter is arranged with text first, followed by all cited tables, followed by all cited figures.

A summary comparison of impacts and benefits of the alternatives and other discussions required by CEQA is contained in the preceding "Summary" section of this report.

This report is supplemented by a separate volume of appendices that contain important scientific and historical data on which conclusions of this report are drawn. The appendices are listed in the table of contents of the EIR.

Portions of the EIR and appendices are supported by a series of auxiliary reports, which are hereby incorporated by reference into this EIR. A list of these reports appears in an appendix to this EIR. These reports were prepared by SWRCB's contractor, its subcontractors, and other entities contracting directly to LADWP. These reports provide background information drawn on for preparation of this report, subject to interpretation by SWRCB's staff and its contractor. The information and conclusions of auxiliary reports are solely the responsibilities of the authors. Copies of these reports are available for the cost of reproduction from the SWRCB's Division of Water Rights.

DEFINITION OF KEY TERMS

Much of the terminology used in this report is defined in the resource chapter to which it is applicable. CEQA gives rise to additional terminology used in this report, which is defined in the State CEQA Guidelines and in manuals to CEQA's use (e.g., Bass and Herson 1992).

A key term from CEQA is "significant effect", which is a substantial adverse impact on the physical environment. In this report, because benefits to public resource values are also disclosed, "significance" applies to both beneficial and adverse effects. Statutory responsibilities to mitigate adverse impacts, if feasible, or to find that a project's benefits outweigh its unavoidable impacts, are triggered by a determination of significance.

Terms used repeatedly in this report, especially the names of organizations and units of water measure, are referred to by their acronyms, which are usually defined in each chapter. A few of the more common terms are listed below:

Organizations

- # California State Water Resources Control Board (SWRCB)
- # Los Angeles Department of Water and Power (LADWP)
- # U.S. Forest Service (USFS)
- # Mono Lake Committee (MLC)
- # California Department of Fish and Game (DFG)
- # Mono Basin Water Rights Draft Environmental Impact Report (Mono Basin EIR)

Water Measures

- # acre-foot (af) - volume of water 1-foot deep over 1 acre (325,000 gallons)
- # thousand acre-feet (TAF)
- # cubic feet per second (cfs) - flow rate of water

CITATIONS

Bass, Ronald E., and Albert I. Herson. 1992. Successful CEQA compliance: a step-by-step approach. January. First edition. Solano Press Books. Point Arena, CA.