ORIGINAL

LEBOEUF, LAMB, GREENE & MACRAE
L.L.P.
A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

NEW YORK
WASHINGTON
ALBANY
BOSTON
DENVER
HARRISBURG
HARTFORD
JACKSONVILLE

1875 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20009-5728
(202) 986-8000
TELEX: 440274 FACSIMILE: (202) 986-8102

WRITER'S DIRECT DIAL:
(202) 986-8031

LOS ANGELES
NEWARK
PITTSBURGH
SALT LAKE CITY
SAN FRANCISCO

BRUSSELS
LONDON
MOSCOW

94 NOV -1 AM 8:32
REGULATORY COMMISSION

November 1, 1994

N

BY HAND

P-11504-000

The Honorable Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Elsinore Valley Municipal Water District: Application for Preliminary Permit and Request for a Consolidated Application Process Treatment, Project No. P-11504-000

Dear Secretary Cashell:

Attached for filing please find an original and fourteen copies of the Elsinore Valley Municipal Water District's ("District") application for preliminary permit for the Lake Elsinore Pumped Storage Project ("Project").

By this letter, the District also formally requests that the Project be processed by the Commission under its Consolidated Application Process ("CAP") using a third-party contractor in the environmental evaluation process.

In support of the permit application and its request for CAP processing, the District states as follows:

I. PROJECT DESCRIPTION

The Project will be a 250-MW high-head pumped storage project, located in the Cleveland National Forest in Riverside County, California, that would use Lake Elsinore as the lower

FERC DOCKETED
NOV - 1 1994

9411030121

1379 0000

reservoir. The upper reservoir would be created in Morrell Canyon.

Lake Elsinore is the subject of the Lake Elsinore Management Project ("Management Project"), a $39.9 million phased-construction program designed to stabilize water levels at Lake Elsinore -- which historically has varied from flooded to drought-depleted -- for recreation, irrigation and flood control purposes. The goals of the Management Plan are being met by restructuring Lake Elsinore's boundaries; constructing a lake-type inlet channel; constructing water wells on, and a causeway to, a man-made island in the Lake; constructing overflow weirs; and creating wetland and riparian habitat; and providing for a long-term supplemental water supply using reclaimed water when available.[1]

Under a 1985 contract, the Bureau of Reclamation ("Reclamation") has provided the District with $26 million in loans and grants for the construction of certain Management Project facilities. Pursuant to the contract, the District agreed to ensure the maintenance of the Management Project's structures and to ensure that the level of Lake Elsinore is maintained within certain limits. In addition, pursuant to 1992 California legislation, the District has acquired the State of California's water rights in Lake Elsinore. Easements for flood and water storage are being acquired under the terms of the contract.[2]

The District will design and construct the Project to ensure that it not interfere with the District's responsibilities under the 1985 contract, its responsibilities to the State of California under the 1992 legislation, or its responsibilities under the Management Program.

II. HISTORY OF THE PRELIMINARY PERMIT APPLICATION

The District previously filed an application for preliminary permit for the Project on March 9, 1992. However, that application was preceded by a preliminary permit application filed by the Cities of Anaheim, Azusa, Banning, Colton and

---

[1] The District is one of five agencies of the Lake Elsinore Management Authority, a joint powers authority created in 1988 to oversee construction of the Management Project.

[2] California State Assembly Bill No. 1697 added Section 14670.67 to the California Government.

Riverside, California ("Cities") February 28, 1992. The Director of the Division of Project Review issued the Cities a preliminary permit on June 30, 1992. City of Anaheim, California, et al., 59 FERC ¶ 62,357 (1992). By order issued July 27, 1992, the Director rescinded the Cities' permit on the grounds that the June 30, 1992 order failed to consider the District's late motion to intervene and the Cities' answer to the motion. By letter issued October 15, 1992, the Director granted the District's request for an opportunity to submit additional information to substantiate its plan for its project.[3] Upon review of the District's supplemental information, the Commission reissued the preliminary permit to the Cities on May 17, 1993. City of Anaheim, California, et al., 63 FERC ¶ 62,159 (1993).

After issuance of the preliminary permit to the Cities, the Cities and the District began to explore ways in which all of their interests in the Project could be accommodated.[4] As a result of these discussions, the Cities and the District agreed that the District should develop the Project, and that the Cities and the District would either negotiate a long-term purchase agreement for power or the Cities would be entitled to a right of first refusal on a portion of the capacity and associated energy of the Project. Under this arrangement, both the Cities and the District gain a significant benefit. The Cities have the right to negotiate the purchase of a portion of the capacity and energy on a long-term basis that they contemplated when they obtained their preliminary permit at negotiated or competitive rates without having to attempt to license and construct the Project, and the District starts its licensing process with an identified, potential purchaser, which should attract potential lenders. Consequently, the Cities filed an application to surrender their license. On September 30, 1994, the Commission issued a notice of the surrender. According to that notice, the Cities' permit

---

[3] The District argued that its proposal was "better adapted" than the Cities, inter alia, that only it could control the property and water rights necessary to construct and operate the Project in lieu of the passage of the Energy Policy Act of 1992 provisions precluding licensees from exerting federal eminent domain authority over state property set aside for recreation and fish and wildlife purposes.

[4] The Commission has been informed of these discussions in each of the Cities' six-month progress reports. See Letters to Lois D. Cashell from Brian J. Brady, Assistant General Manager -- Electric Services, City of Anaheim, California, dated, December 11, 1992, November 1, 1993 and May 5, 1994.

would remain in effect through the thirtieth day after the notice or through November 1, 1994.

The District wishes to point out that the arrangement that it has made with the Cities to give the Cities a first priority to purchase a portion of the capacity and associated energy from the Project does not abuse the municipal preference established in Section 7(a) of the Federal Power Act. 16 U.S.C. § 800(a). The issue of abuse of the municipal preference only rises where a municipality uses its preference to somehow give a competitive advantage to a non-municipal preference entity. See Gregory Wilcox, 24 FERC ¶ 61,317 at 61,682 (1983):

> All that need be established is that the actions of the municipal and non-municipal entity were coordinated in a manner that used the municipal preference available to the municipality to place the non-municipal applicant in a competitively advantageous position.

Because the District is qualified to claim and, in fact, claims the municipal preference, no non-municipal entity is being placed at a competitive advantage by the District filing its preliminary permit application on this date. Consequently, the filing of the District's application does not run afoul of the municipal preference.

III. REQUEST FOR CAP TREATMENT

The District requests that the Commission process this application under its CAP procedures in order to expedite the licensing of this Project. To that end, the District agrees to fund the Commission's use of a third-party contractor for purposes of meeting the requirements of the National Environmental Policy Act. 42 U.S.C. § 4321 et seq (1988). To initiate the CAP process, the District requests an opportunity to meet with the Commission Staff to discuss the Project and a potential third party contractor.

IV. CONCLUSION

The Elsinore Valley Municipal Water District respectfully submits the attached application for preliminary permit for filing with the Secretary and requests that the Project be evaluated under the CAP procedures. A copy has been served on the Commission's Region 9 Regional Director.

If the Commission Staff has any questions, they should contact the undersigned or James Laughlin (Special Projects) or John Hoagland (Acting General Manager) of the District at (909) 674-3146. Thank you for your consideration.

Very truly yours,

Amy S. Koch

Counsel for
The Elsinore Valley
Municipal Water District

cc: Mr. Fred Springer (OHL)
Ms. Kristina Nygaard (OGC)
Region 9 Regional Engineer

P-11504-000

94 NOV -1 AM 8:33

REGULATORY COMMISSION

P-11504-000

BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR PRELIMINARY PERMIT
LAKE ELSINORE PUMPED STORAGE PROJECT

ELSINORE VALLEY MUNICIPAL WATER DISTRICT
LAKE ELSINORE, CALIFORNIA

OCTOBER 1994

BLACK & VEATCH

Contents

Before the
Federal Energy Regulatory Commission

Application for Preliminary Permit
Lake Elsinore Pumped Storage Project
Initial Statement

1. The Elsinore Valley Municipal Water District (EVMWD) applies to the Federal Energy Regulatory Commission for a preliminary permit for the proposed Lake Elsinore Pumped Storage water power project, as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act, while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

2. The location of the proposed project is:

State or territory:	California
County:	Riverside
Township or nearby town:	Elsinore
Stream or other body of water:	Lake Elsinore

Lake Elsinore is located approximately 60 miles southeast of Los Angeles and about 25 miles inland from the Pacific Ocean.

3. The exact name, business address, and telephone number of the applicant are:

Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92531
(909) 674-3146

The exact name and business address of each person authorized to act as agent for the applicant in this application are:

John E. Hoagland
Acting General Manager
Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92531
(909) 674-3146

Copies of all pleadings and correspondence should be sent to:

Amy S. Koch
LeBoeuf, Lamb, Greene, & MacRae
1875 Connecticut Avenue, N.W.
Suite 1200
Washington, DC 20009

Both Mr. Hoagland and Ms. Koch should be added to the Secretary's Official Service List for this proceeding.

4. The Elsinore Valley Municipal Water District is a California special district formed pursuant to the Municipal Water District Law of 1911 (California Water Code Section 71000 et seq) and is claiming preference under Section 7(a) of the Federal Power Act. Pursuant to California Water Code Section 71662, the District may utilize any part of its water, and any part of its works, facilities, improvements, and property used for the development, storage, and transportation of water to provide, generate, and deliver hydroelectric power, and may acquire, construct, operate, and maintain any and all works, facilities, improvements, and property necessary or convenient for such utilization. A copy of the referenced California Water Code Section 71662 is provided in the Appendix to this application.

5. The proposed term of the requested permit is 36 months.

6. The lower reservoir is Lake Elsinore, an existing natural lake. The lake bed of Lake Elsinore is owned by the City of Lake Elsinore. The Elsinore Valley Municipal Water District owns the water rights to the lake water and the ground water under the lake. There are no other existing project facilities.

7. The EVMWD has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project.

8. The name and address for the county in which any part of the project, and any Federal facilities that would be used by the project, would be located are listed below:

   Riverside County Administrative Officer
   4040 Lemon St.
   Riverside, CA 92501

9. A portion of the project, Lake Elsinore, is located within the boundaries of the City of Lake Elsinore. Additionally, the unincorporated Lakeland Village is in the immediate vicinity of the project.

10. The names and addresses of every city, town, or similar local political subdivision with a population of at least 5,000 which is located within 15 miles of the project dams are listed below:

    City of Perris
    City Hall
    101 N.D. Street
    Perris, CA 92570
    Attention: Carl Parsons, Planning Director

    City of Lake Elsinore
    City Hall
    130 S. Main St.
    Lake Elsinore, CA 92530
    Attention: Ron Molendyk, City Manager

City of Temecula
City Hall
43174 Business Park Drive
Temecula, CA 92590-3606
Attention: Ron Bradley, City Manager

City of Canyon Lake
31532 Railroad Canyon Road
Suite 101
Canyon Lake, CA 92587
Attention: Jeff Butzlaff, City Manager

City of Murrieta
City Hall
26442 Beckman Court
Murrieta, CA 92562
Attention: Stephen Harding, City Manager

11. Every irrigation district, drainage district, or similar special purpose political subdivision in which any part of the project would be located, or that owns, operates, maintains, or uses any project facilities that would be used by the project, are listed as follows:

Santa Ana Watershed Project Authority
11615 Sterling Ave.
Riverside, CA 92503
Attention: Neil Cline, General Manager

Metropolitan Water District of Southern California
P.O. Box 54153
Terminal Annex
Los Angeles, CA 90054
Attention: John Wodraska, General Manager

Western Municipal Water District
450 Alessandro Blvd.
P.O. Box 5286
Riverside, CA 92517-5286
Attention: Don Harriger, General Manager

Eastern Municipal Water District
P.O. Box 8300
San Jacinto, CA 92581-8300

Murrieta County Water District
42290 Ivy Street
P.O. Box 949
Murrieta, CA 92364

Rancho California Water District
28061 Diaz Road
P.O. Box 9017
Temecula, CA 92589

Lee Lake Water District
510 West Chase Drive
Suite 103
Corona, CA 91720

Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92502-1033
Attention: Ken Edwards, Chief Engineer

12. Other than Lakeland Village, there are no other political subdivisions in the general area of the project that there is reason to believe would likely be interested in, or be affected by, the application. Lakeland Village is an unincorporated village located in Riverside County. No one officially represents or speaks for the village concerning county matters.

13. All Indian tribes that may be affected by the project are listed below:

The Pechanga Indian Reservation
P.O. Box 1477
Temecula, CA 92593
Attention: Raymond Basquez, Chair of Cultural Committee

14. Verification

This Preliminary Permit Application is executed in the State of California, County of Riverside by:

John E. Hoagland
Acting General Manager
Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92531

Being duly sworn, deposes and says that the contents of this application are true to the best of his knowledge or belief. The undersigned applicant has signed the application this 17th day of October 1994.

ELSINORE VALLEY MUNICIPAL WATER DISTRICT

By: John E. Hoagland
John E. Hoagland
Acting General Manager

Subscribed and sworn to before me, a Notary Public of the State of California, this 17th day of OCTOBER 1994.

Sharon L. Smith
Notary Public

SEAL

My commission expires 1-17-98

SHARON L. SMITH
COMM. # 1013139
Notary Public — California
RIVERSIDE COUNTY
My Comm. Expires JAN 17, 1998

1.0 Exhibit 1
Project Description

1.1 Description of Project Works

The proposed project consists of the following principle features:

- A dam, spillway, and appurtenant works across the Morrell Canyon, creating an upper reservoir for the project.
- An approach channel connecting the upper reservoir to the upper intake/outlet near the rim of the canyon.
- An upper intake/outlet with trash racks and gates to direct flows into or out of the water conductor.
- A high-head water conductor system consisting of:
  - -- A vertical shaft from the upper intake/outlet to the power station level.
  - -- A horizontal tunnel leading to a manifold.
  - -- Three penstock tunnels each serving a pump/turbine.
- An underground powerhouse containing the pumping/generating units and associated equipment for the control, protection, and maintenance of the power plant.
- A low-head water conductor system consisting of:
  - -- Draft tube extensions from the pump/turbine.
  - -- A gate shaft and gallery.
  - -- A manifold that merges the draft tube extensions.
  - -- A tailwater tunnel.
  - -- A tunnel portal and control structure that joins the tailwater tunnel.
  - -- A cut-and-cover conduit.
  - -- A lower intake/outlet structure in Lake Elsinore.
- An access tunnel from the powerhouse cavern to the surface.
- A transmission line to intertie with an existing power transmission line.
- An existing natural lake, Lake Elsinore, as the lower reservoir.

Each of the features is briefly described below.

The physical dimensions and elevations of structures and the type and ratings of equipment indicated in this and the other application exhibits were developed for conceptual level feasibility evaluations. Structural dimensions, elevations, and equipment types and ratings may be changed later as a result of additional project evaluations if analysis at that time indicates that such changes are necessary or

desirable. However, such changes are not anticipated to be of sufficient magnitude to substantially change the discussion.

All elevations indicated in this and other application exhibits are stated in terms of feet-mean sea level datum. The configuration of the facilities described in this exhibit are provided on the drawings and maps included in Exhibit 4.

1.1.1 Morrell Canyon Creek Dam, Spillway, and Appurtenant Works

The upper reservoir would be created by a dam across the Morrell Canyon Creek and a dike along the northeast edge of the reservoir. The dam would be constructed in a narrow section of the Morrell Canyon. The dam would be about 120 feet high above the stream bed. It would be of the concrete-face rockfill type, since rockfill can be readily obtained from the granodiorite at the site. The dam would be founded on competent rock which is expected to be within a short depth from the surface.

The dike would be constructed across a low swale which extends northeasterly from the Morrell Canyon toward the rim of the Elsinore Mountains. The dike would vary in height to a maximum of 50 feet above existing grade. It would be of the concrete-face rockfill type. The dike would also be founded on competent rock which is expected to be within a short depth of the surface.

A combined spillway and low-level outlet works structure would be constructed. The spillway would be sized to provide sufficient capacity to pass the maximum pumping discharge in the event of inadvertent over-pumping of the power plant. The capacity would be sufficient to handle the maximum overflow requirement under the maximum spillway design flood inflow. An appropriate amount of surcharge would be provided in the dam to route the spillway design flood.

The outlet works would be provided with low-level outlet valves to pass required flows under normal operating conditions to maintain the flow down the canyon.

1.1.2 Approach Channel

The approach channel would be an excavated canal designed to pass flow in both the generating and pumping directions. The invert of the channel would be set at Elevation 2,750 feet above mean sea level (msl) to permit passing the required power plant discharge at the minimum reservoir level. The overall length of the channel is about 600 feet.

1.1.3 Upper Intake/Outlet

The upper intake/outlet would be of the morning glory type, provided with a set of fixed trash racks and bulkhead gates which would permit the intake to be closed to service the high-head water conductors without emptying the upper reservoir.

1.1.4 High-Head Water Conductor System

The high-head water conductor system would be vertical shafts and a horizontal tunnel excavated in rock and lined with concrete. The vertical shaft would be approximately 12 feet in diameter and approximately 1,650 feet long. The horizontal tunnel, approximately 12 feet in diameter and 3,500 feet long, would terminate in a concrete manifold that would be divided into three 10 foot diameter penstock tunnels, approximately 200 feet long, which would be concrete and steel lined. The entire high-head water conductor system is expected to be in relatively sound granodiorite, which should be massive and competent. The rock mass surrounding the water conductor is expected to resist the internal water pressure. However, in the vicinity of the powerhouse cavern, the penstock steel would be designed to resist the bulk of the internal water pressure.

1.1.5 Powerhouse

The powerhouse would be underground, located far enough in the mountain to be in the massive granodiorite. The powerhouse would be about 70 feet wide, 160 feet high, and 350 feet long, and consist of three unit bays containing the pumping/generating units and an erection and service bay. Access would be by means of a near horizontal access tunnel to one end of the power station and a vertical shaft from the other end.

Each of the three pump/turbines would be of the vertical, reversible Francis type, rated to produce 80 MW at the minimum operating head. The units would operate in the pumping mode when they rotate in the opposite direction. They would be designed to pump approximately 90 percent of the generating discharge over the complete cycle of operation. The units would be set at about 120 feet below the minimum water surface in Lake Elsinore to provide sufficient submergence of the machinery.

The generator/motor would be directly connected to the pump/turbine and rated to match the maximum output and input of the pump/turbine.

Each generator would be connected to a power transformer located in a vault between the units, and provided with fire protection equipment. High voltage buses would be placed in the access tunnel to the switchyard on the surface.

The powerhouse would be provided with an appropriate type of starting equipment to start the units in the pumping mode.

1.1.6 Low-Head Water Conductor System

The low-head water conductor system begins with an extension of the 10 foot diameter draft tube tunnels from each of the three pump/turbines to merge into a single tailrace tunnel. The 17 foot diameter tailrace tunnel will extend approximately 5,700 feet, terminating at a combination tunnel portal and control structure. At this point, the tunnel will be connected to a cut-and-cover conduit that extends to the lower intake in Lake Elsinore. The tailrace tunnels would be concrete lined. The control structure would be built in an excavated vertical shaft, and would be provided with bulkhead gates to permit unwatering of the tunnel. The cut-and-cover conduit would be built of reinforced concrete. A short flume section may be constructed to permit aeration of discharges in the generating mode. Flows will only be conveyed in this flume during the generating mode. In the pumping mode, flows would be conveyed from the intake in the lower reservoir to the units. The lower intake would likely be a morning glory type intake structure with a concrete cover to suppress vortex formation.

Rock conditions are expected to be favorable in the powerhouse area but deteriorate towards the lake. The control structure would be located in favorable rock, but the rest of the tunnel will likely encounter weathered rock or rock subjected to faulting. The cut-and-cover section would likely be founded on unconsolidated soil and may require special treatment during construction.

1.2 Reservoir Data

The existing Lake Elsinore will be used as the lower reservoir. The normal maximum surface elevation for Lake Elsinore is 1,249 feet. At this elevation, the lake has a surface area of 3,412 acres with a capacity of 68,006 acre-feet. The upper reservoir will be created by constructing two dams across Morrell Canyon. The normal maximum surface elevation for the upper reservoir will be 2,860 feet. At this elevation, the reservoir will have a surface area of about 80 acres with a capacity of 2,000 acre-feet.

1.3 Description of Transmission Lines

Potential locations for electrical interties include a 115 kV substation and a 230 kV transmission line. The 115 kV substation, operated by Southern California Edison, is located in the Lake Elsinore area near the intersection of Corydon and Mission Trail roads. (Refer to Figures 1 and 3.) The transmission line, operated by San Diego Gas & Electric, extends west from County Route S16 along the San Diego/Riverside county line into Camp Pendleton. This line also extends south from County Route S16 and the county line. The county line lies about 30 miles south of the Lake Elsinore area.

Both transmission line alternatives use the same route near the project site. The transmission line will extend from the powerhouse cavern to the surface through the access tunnel. Once at the surface, the transmission line will follow the access road. From the end of the access road, the transmission line will be aligned in a generally northeast direction until intersecting Grand Avenue. At this point, the line will turn and follow the Grand Avenue right-of-way southeast for approximately 1,800 feet to the intersection of Grand Avenue and Corydon Road. At this point, the two alternative transmission line routes separate. From the intersection of Grand Avenue and Corydon Road, the first alternative will turn northeast and follow the Corydon Road right-of-way for approximately 6,000 feet where it will tie into the Southern California Edison 115 kV substation near the intersection of Corydon Road and Mission Trail Road. This transmission line would be approximately 5.5 miles long. (Refer to Figure 1.)

The route of the second transmission line alternative will continue on Grand Avenue southeast towards Wildomar. Before reaching Wildomar, the transmission line will turn easterly towards Interstate 15. Once on the interstate right-of-way, the transmission line will follow the interstate south to the Riverside/San Diego county line. The new transmission line will intertie with a San Diego Gas & Electric 230 kV transmission line which is located along the county line. This alternative route would be approximately 34 miles long. (Refer to Figure 3.)

Further studies will determine exact transmission line requirements and intertie locations.

1.4 Description of Pump/Turbine Motor/Generators, Installed Capacity, and Annual Energy Production

The facility will consist of three pump/turbines, each rated to produce 80 MW at the minimum operating head of 1,500 feet. The estimated annual production for the project would be 520,000 MWh from an installation of 240 MW generating on an 8 hour cycle, 5 days a week.

1.5 Lands of the United States Enclosed within the Project Boundary

The following lands of the United States comprising a portion of the Cleveland National Forest, are enclosed within the proposed project boundaries:

Parcel #	Description
385 120 005	638.54 acres more or less in portion of Section 22, T6S R5W, further described as follows:
	Portion of NE 1/4 NE 1/4
	NW 1/4 NE 1/4
	SE 1/4 NE 1/4
	SW 1/4 NE 1/4
	NE 1/4 NW 1/4
	NW 1/4 NW 1/4
	SE 1/4 NW 1/4
	SW 1/4 NW 1/4
	NE 1/4 SE 1/4
	NW 1/4 SE 1/4
	SE 1/4 SE 1/4
	SW 1/4 SE 1/4
	NE 1/4 SW 1/4
	NW 1/4 SW 1/4
	SE 1/4 SW 1/4
	SW 1/4 SW 1/4
385 120 007	560.00 acres more or less in portion of Section 23, T6S R5W, further described as follows:
	NE 1/4 NE 1/4
	NW 1/4 NE 1/4
	SE 1/4 NE 1/4
	SW 1/4 NE 1/4
	NE 1/4 NW 1/4
	NW 1/4 NW 1/4
	SE 1/4 NW 1/4
	SW 1/4 NW 1/4
	SE 1/4 SE 1/4
	SW 1/4 SE 1/4
	NE 1/4 SW 1/4
	NW 1/4 SW 1/4
	SE 1/4 SW 1/4
	SW 1/4 SW 1/4

1.6 Resource Utilization

The Lake Elsinore Pumped Storage Project offers an opportunity for the multipurpose use of Lake Elsinore as a flood control, recreation, water storage, and water power facility. The pumped storage project may enhance the lake quality by

aeration and mixing. Development of the Lake Elsinore Pumped Storage Project will enable EVMWD to make a significant contribution to the energy needs of the region.

2.0 Exhibit 2
Studies and Investigations

2.1 Study Plan

The Elsinore Valley Municipal Water District plans to conduct several studies and investigations to determine the technical and economic feasibility of the Lake Elsinore Pumped Storage Project, taking into consideration its potential environmental impacts, and to obtain the necessary information for preparing an application for license for the project. These studies and investigations include the following:

- Reconnaissance Feasibility Study--The Reconnaissance Feasibility Study will confirm that a more detailed examination of the development is warranted. The study will also provide the technical and environmental information required to prepare the Initial Consultation Package as part of the first stage of agency consultation under FERC regulations.
- Site Topographic Survey/Mapping--A site survey will be conducted and topographic mapping prepared to more accurately define the surface contours for use in the planned studies and investigations.
- Environmental Field Investigations--Field investigations will be conducted to aid in environmental resource characterization and determination of potential environmental impacts. Input provided by the resource agencies and public during the Initial Consultation Stage will largely define study requirements and issues of primary concern. Field investigations may include, but may not be limited to, the following:
  - Cultural Resource Study.
  - Terrestrial Habitat Evaluation.
  - Threatened and Endangered Species Survey.
- Geotechnical Field Investigations--Field geologic and geotechnical investigations will involve field exploration activities including, but not limited to:
  - Core drilling of bedrock.
  - Soil drilling in unconsolidated deposits.
  - Geophysical profiling (surface seismic refraction/reflection surveys).
  - Geologic mapping in the proposed upper reservoir area, at the site of other proposed facilities, and along fault traces (also requiring study of air photos).

- -- Fault investigations (including geologic mapping, trenching, and possibly drilling and geophysics).
- -- Excavation of exploratory adits.
- -- Laboratory testing and analysis of rock and soil samples.

Data will be gathered by using several investigative techniques such as those listed above. Initially, published geological data and maps will be reviewed. The review period will be followed by regional, broad-scale, and local geologic mapping. Subsurface conditions will be explored with the use of drill holes, pits, adits, shafts, chambers, and geophysical techniques such as refraction, seismic, or resistivity surveys. In addition to direct observation of core and samples, the field data obtained from drill holes may include vane shear tests, penetration tests, permeability tests, dilatometer tests, and various geophysical logs such as gamma ray-neutron, sonic velocity, density, temperature, and others.

Core and/or soil borings will be done at the abutments and along the axis of the dam, along the axis of the dike, at the inlet/outlet works, and powerhouse, along the access tunnel and conduits. Test pits will be excavated at the dam quarry site, access tunnel portal, and the cut-and-cover portion of the tailrace conduit. Further testing of soil and rock may be undertaken in the field such as jacking tests or test grouting programs, or the materials may be subjected to laboratory classification, strength testing, or other specialized tests. The scope and methods of exploration and testing programs depend largely upon the site geology and how knowledge of it evolves, and the nature of the structures being considered.

- Feasibility Study--A detailed Feasibility Study will be prepared to confirm the project's technical, economic, and financial feasibility. The results of the environmental and geotechnical field investigations will be used in the feasibility assessment. The Feasibility Study will take into consideration factors which may include, but may not be limited to, the following:
  - -- Need for power.
  - -- Alternate project configurations.
  - -- Hydrology.
  - -- Geology.
  - -- Project cost estimates.
  - -- Economic evaluation.

- -- Financial analysis.
- -- Social, environmental, and institutional impacts.
- -- Project development schedule.

It is anticipated that no new roads will be needed to carry out these investigations. Existing roads will provide access to most of the investigation sites. Areas that are not serviced by existing roads will be reached by using off-road type vehicles.

2.2 Work Plan for New Dam Construction

A study to determine the most suitable dam design will be performed. Detailed data concerning geology and foundation conditions at the dam site, obtained from the geologic/geotechnical study described in Section 2.1 above, will be evaluated to determine the most suitable dam alignment. Testing of local materials to determine strength, handling, and permeability characteristics will be performed to aid in dam design. A test fill may also be performed to verify assumed material placement characteristics.

All field studies, tests, and other activities to be conducted under the permit will not adversely affect cultural resources and endangered species of the area. Only temporary minor alterations or disturbances of the project area's lands and waters are expected by such activities. All land disturbed or altered will be adequately restored to natural conditions as part of these studies.

All necessary studies described herein will be completed within the 36 month period of the Preliminary Permit. A preliminary milestone schedule for these studies is as follows:

Item	Months After Receipt of Preliminary Permit	
	Begin Study	Complete Study
Reconnaissance Feasibility Study	0	3
Site Survey/Mapping	3	8
Environmental Field Investigations	10	16
Geotechnical Field Investigations	10	16
Feasibility Study	12	19

3.0 Exhibit 3
Statement of Costs and Financing

3.1 Estimated Costs for Studies and Investigations

The estimated cost of carrying out the studies and investigations is $300,000 to $500,000. The source of funding will be the Elsinore Valley Municipal Water District.

3.2 Market for Power

The power that is produced will be sold to local public utilities, or other possible purchasers who are identified during the course of the feasibility studies. EVMWD will not be directly utilizing the power output.

4.0 Exhibit 4
Project Maps

The Lake Elsinore Pumped Storage Project is depicted on the following figures:

- Figure 1--Facilities Layout Plan With Affected Federal Properties.
- Figure 2--Water Conductor Profile.
- Figure 3--Location of 230 kV Transmission Lines for Potential Interties.

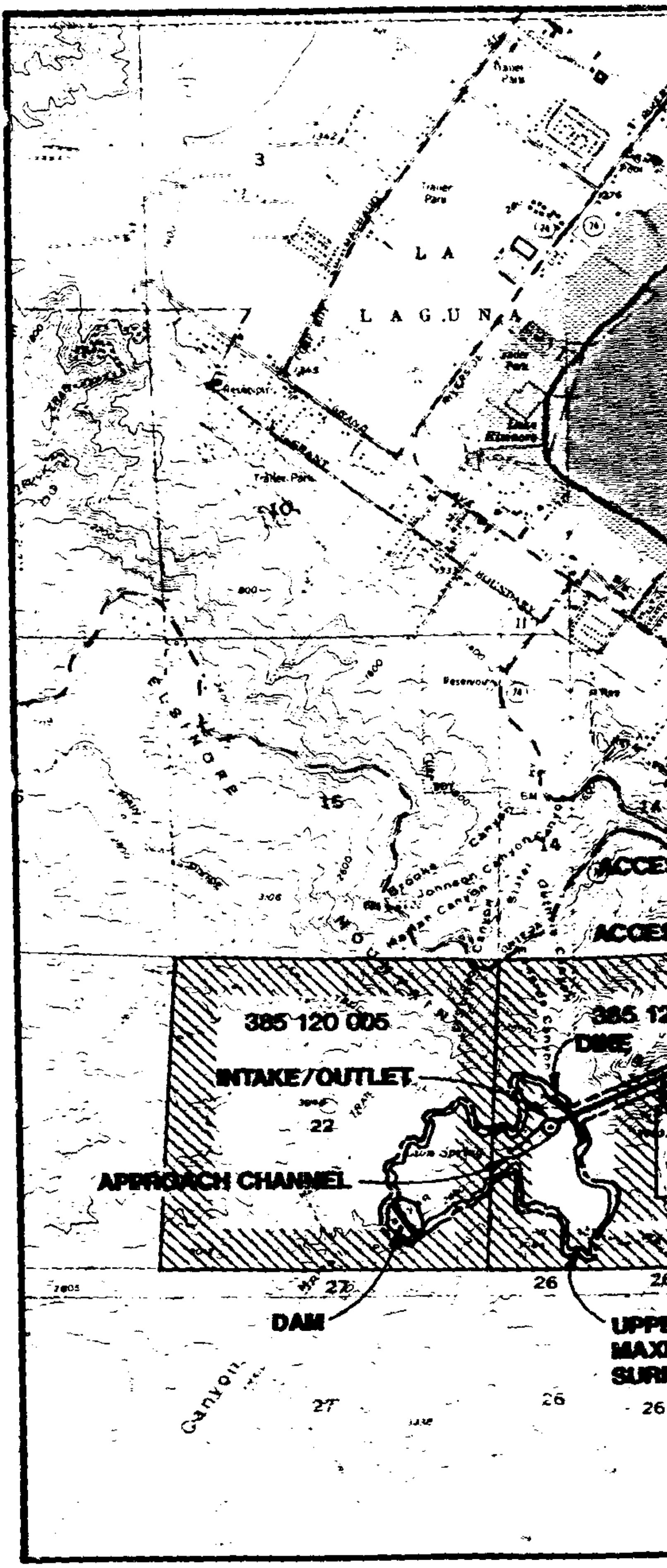
There are no areas within or in the vicinity of the proposed project boundary which are included in or have been designated for study for inclusion in the National Wild and Scenic Rivers System. No project areas have been designated or recommended as wilderness or wilderness study areas under the provisions of the Wilderness Act.

The project boundary is shown on Figure 1. The project boundary around the upper reservoir is the 2,868 foot msl contour line along the northwest and southeast side of Morrell Canyon. The southwestern boundary of the upper reservoir will consist of a dam across a narrow section of Morrell Canyon. The northeastern boundary of the upper reservoir will be determined by a dike that runs northwest/ southeast and lies about 800 feet northeast of an existing main divide truck trail.

The surface project boundary over the project water conductors will consist of 25 feet on either side of the water conductor center line. The surface property will extend 10 feet beyond the boundary dimensions of the powerhouse.

Lake Elsinore will also be contained within the project boundary. The project boundary around Lake Elsinore will be the 1,255 foot msl contour line.

The surface project boundary for the powerhouse access tunnel will extend 25 feet on either side of the tunnel center line. An access road will continue approximately 1,800 feet northeast from the access tunnel portal to an existing road with a right-of-way of 40 feet.



L A G U N A
Trailer Park
Lake Elsinore
Reservoir
Brooke Canyon
385 120 005
DIKE
INTAKE/OUTLET
APPROACH CHANNEL
DAM
Canyon

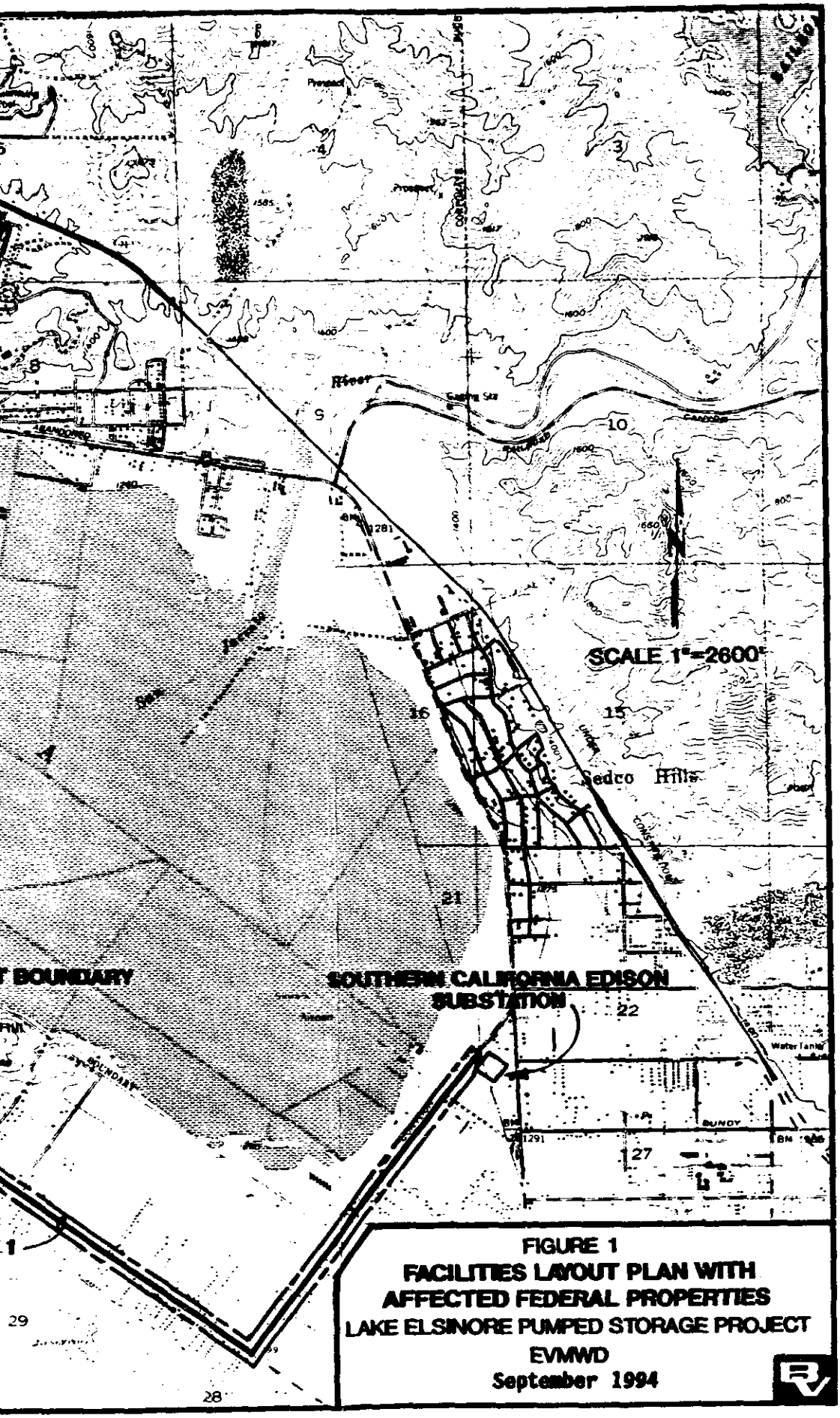


FIGURE 1
FACILITIES LAYOUT PLAN WITH AFFECTED FEDERAL PROPERTIES
LAKE ELSINORE PUMPED STORAGE PROJECT
EVMWD
September 1994

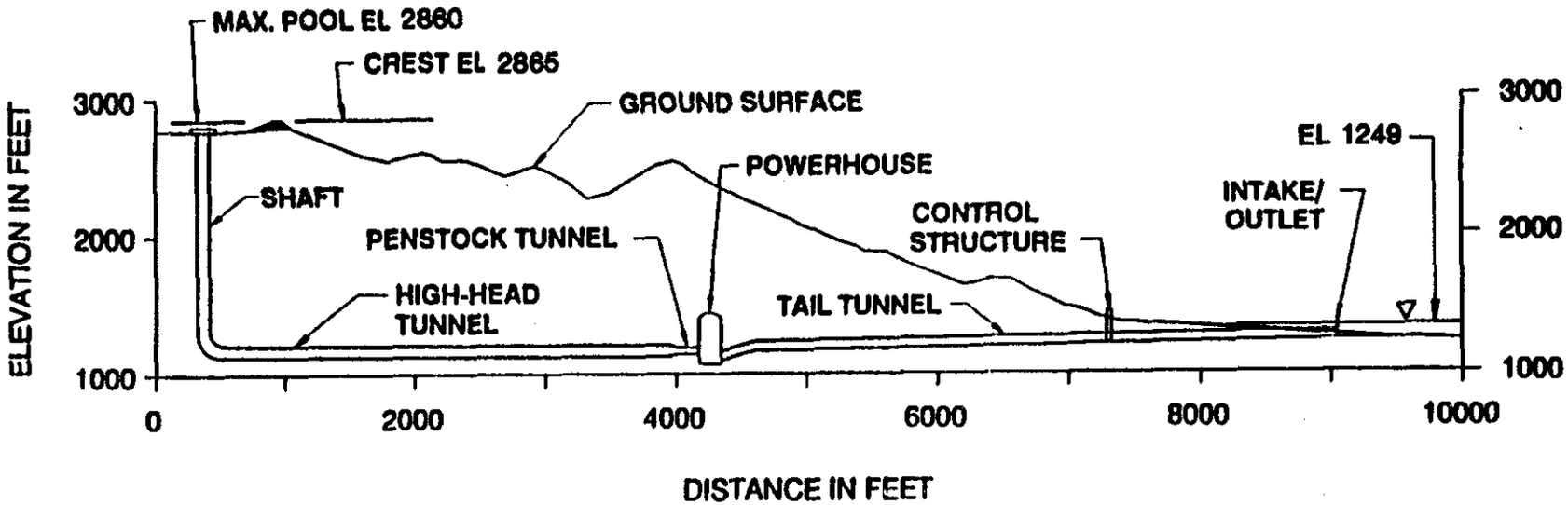


FIGURE 2
WATER CONDUCTOR PROFILE
LAKE ELSINORE PUMPED STORAGE PROJECT
EVMWD
September 1994

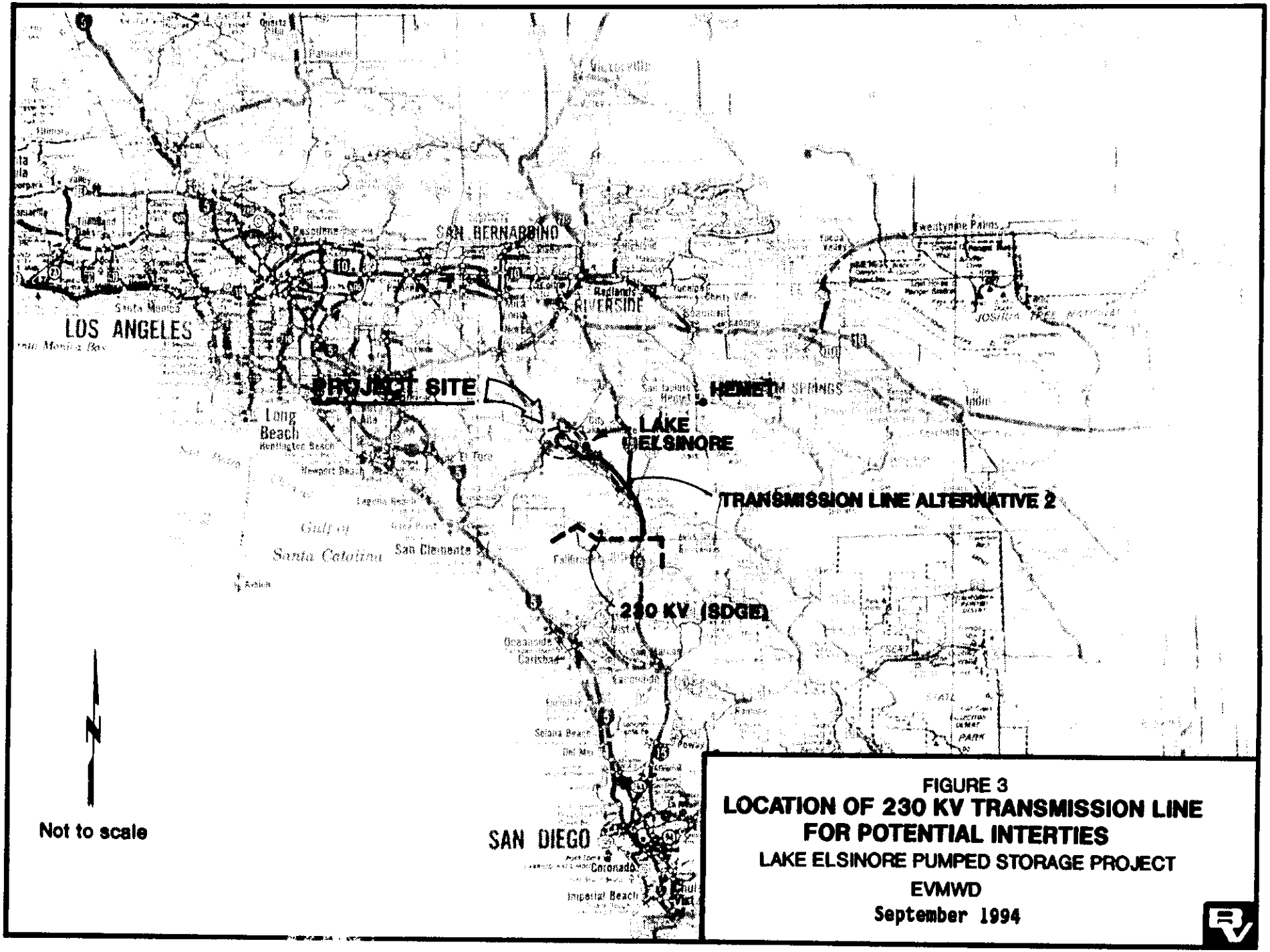


FIGURE 3

LOCATION OF 230 KV TRANSMISSION LINE FOR POTENTIAL INTERTIES

LAKE ELSINORE PUMPED STORAGE PROJECT

EVMWD

September 1994

Appendix

California Water Code
Section 71662
1994

EVMWD
101294

California Water Code

Sections 71000 - 73001

(Municipal Water District Law of 1911)

1994

Chapter 3 Other Functions

Article 1 Recreation

§ 71660 Construction and regulation of recreation facilities; misdemeanor violations and infractions

A district may construct, maintain, improve, and operate public recreational facilities appurtenant to facilities operated or contracted to be operated by the district. It may by ordinance provide regulations binding upon all persons to govern the use of such facilities, including regulations imposing reasonable charges for the use thereof. Violation of district regulations relating to vehicle or boat speed limits, defacement of district property, the use, possession or discharge of firearms, weapons or fireworks, the creation of fire hazards, being under the influence of intoxicating beverages or dangerous drugs, or remaining on, or reentering district premises after an authorized district officer or employee has specifically withdrawn consent for a person to utilize district facilities, is a misdemeanor. Violation of any other regulation of the district adopted pursuant to this section is an infraction.

History: Amended by Stats 1978 Ch 127.

§ 71661 Construction of recreational facilities not appurtenant to district water reservoir by Big Bear Municipal Water District

In addition to the activities authorized by Section 71660, the Big Bear Municipal Water District may construct, maintain, improve, and operate public recreational facilities which are not appurtenant to a water reservoir operated by the district, when such proposal is approved by a majority of the qualified voters of the district voting at a special district election held pursuant to Part 4 (commencing with Section 71450) of Division 20.

This section, applicable only to the Big Bear Municipal Water District, is necessary because of the unique and special recreational problems of the area within such district.

History: Enacted by Stats 1975 Ch 479.

§ 71662 Use of water and facilities for hydroelectric power

A district may utilize any part of its water, and any part of its works, facilities, improvements, and property used for the development, storage, and transportation of water pursuant to Chapter 2 (commencing with Section 71610) to provide, generate, and deliver hydroelectric power, and may acquire, construct, operate, and maintain any and all works, facilities, improvements, and property necessary or convenient for such utilization.

History: Enacted by Stats 1977 Ch 146.

§ 71663 Provision of hydroelectric power to federal, state or private entities; use or exchange of power; "public agency"

A district may (a) pursuant to contract, provide, sell, and deliver hydroelectric power to the United States of America or any board, department or agency thereof, to the State of California for the purposes of the State Water Resources Development System, and to any public agency, private corporation, or other person or entity, or any combination thereof, engaged in the sale of electric power at retail; or (b) use all or any