WATER AT RANCHO MURIETA

WATER RIGHTS, DOMESTIC AND RECLAIMED WATER

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SECTION 1

HISTORY OF RANCHO MURIETA WATER RIGHTS

HISTORY OF WATER RIGHTS

Early appropriative rights for lands now part of Rancho Murieta were involved with the Cosumnes Irrigation Association, including the Fruitridge Investment Co. These rights, under Licenses 537, 2629, and 6238, covered primarily what are now the agricultural lands in the southwest portion of the District, the lands submerged under Clementia Reservoir and areas around the Murieta Parkway gate, the Rancho Murieta Training Center, and Murieta Village.

Early license forms used by the State included a "priority of right" clause that confirmed the date of the right, the amount of water to which the right was entitled, and the purposes of use. This "priority date" is based on the filing date of the application with the State Water Resources Control Board. Early dates and holders were:

License No.	Priority Date	License Date	License Holder
537	25 May 20	10 May 26	Josephine D. Granlees
2629	12 April 21	21 February 44	Cosumnes Irrigation Association
6238	18 November 54	11 April 61	Arthur J. and Josephine Granlees

These licenses are the only early ones that allowed diversion from the Cosumnes River.

Other early licenses for Rancho Murieta lands are tabulated below. None of these licenses involved diversion from the Cosumnes River.

License	First Date	License Date	Holder and Place of Use
6239	18 November 54	11 April 61	A.J. and J.D. Granlees - Lake Jean
8013	29 November 61	1 January 62	George W. Artz, Hal L. Ellis
9925	7 October 66	6 April 67	Guadalupe Reservoir
7744	6 June 60	6 April 66	Artz & Ellis - Original Calero

All water rights are assigned to other holders and all of the above licenses have been reassigned several times, with final assignment to the Rancho Murieta Community Services District in January 1988.

The issuance of Water Right License is the confirmation of the amount and extent of use under the permitted application. A permit is issued to the applicant when it has been determined by the State Board that sufficient unappropriated water exists to meet the amount requested in the application. Issuance of a permit allows the applicant to construct the project and develop the use.

Rancho Murieta has four (4) water right permits: 16762, 16763, 16764, and 16765 (Applications 23416, 23417, 23418, and 23919) that comprise the major sources of water for municipal, industrial, and recreational uses in Rancho Murieta. They were filed by the Pension Trust Fund and established a priority date of 19 December 1969. The last three (3) permits (16763, 16864, and 16765) were granted 18 September 1975. These did not involve diversion from the river. The first (16762), which is the major division permit, was granted 5 August 1980. A suit filed by the Omochumne-Hartnell Water District produced revision in the originally filed application (23416), delaying its approval. The State Water Resources Control Board Order WR79-13 resulting from this suit also affected Licenses 537, 2629, and 6238 in terms of diversion rates, places of use and purposes of use. (See Section 3 for details.)

These four (4) major permits (16762, 16763, 16764, 16765) were originally assigned to Rancho Murieta Properties, Inc. and were reassigned to Rancho Murieta Community Services District as part of the Acquisition and Services Agreement of Improvement District No. 1, as of 14 January 1988.

The net result of all of the above is that Rancho Murieta Community Services District now is the "assigned holder" of all appropriative water rights supplying all water inside the boundaries of Rancho Murieta.

The essential features of the licenses or permits that enable exercise of these rights are discussed in Section 3, following' and copies of all licenses/permits are attached as Appendix A.

Appropriative rights that enable diversion at Granlees Dam and transport through the District via the Cosumnes Irrigation Association ditch, for use outside the District, are not included. Riparian rights, since they are not a "licensed right" are also not included.

SECTION 2

WATER RIGHTS - COMMON USAGE

RANCHO MURIETA COMMUNITY SERVICES DISTRICT - WATER RIGHTS

Riparian Rights

- Is the property right that attaches to the smallest parcel in the chain of title that still remains in contact with stream channel?
- Attach only to the natural flow of the stream.
- Use is common and equal with all other riparians on that stream.
- No license or permit is required.
- Must report usage every three (3) years.
- Each riparian may:
  Take all the water he needs for:
    - Domestic use
    - Watering of domestic animals
    - Even if these two (2) exhaust the stream. These two (2 uses have priority over all others, e.g. irrigation.

Divert a reasonable amount, in relation to other users for other beneficial uses, including irrigation. He may not exhaust the stream for such uses, nor does he have a right to a specific quantity of water.

- Each riparian may not:
    - Divert to storage during wet season for use in dry seasons. (He may hold water in temporary, regulatory storage.)
    - Use riparian water on non-riparian land.
    - Sell the water for use on non-riparian land.

- Riparian rights are superior to appropriative rights, unless patented after the appropriative rights.
- Riparian rights may be impaired by prescription (upstream user takes water for 5 or more years).

Who has riparian rights at or near Rancho Murieta?

1. Anderson Ranch - North of Cosumnes River
    - Inside and outside CSD boundaries
    - Can be served through CIA ditch
2. Jay Schneider (and other South of River users)
    - All outside District boundaries
    - Van Vleck Ranch north of Rancho Murieta
3. RMCSD as holder of rights for RMPI, RMA, etc.
4. All downstream users
    - Omochumne-Hartnell Water District
    - Bill Hutchison
    - John Bozich

Appropriative Rights

- Are inferior to riparian rights
- Are rights to:
    - A specific quantity of water — Water Code Section 1381
    - For a specific Purpose
    - For a specified period each year
    - On a specified are or place of use

    - Are lost by five years of non-use
    - Can be changed:
        - Point of diversion
        - Place of use
        - Kind of use
        - Only by the SWRCB and if the change does not affect other users of the water involved.
- Who, in and near Rancho Murieta, has appropriative rights?
    - RMCSD, as holder of rights previously held by RMPI and CIA, inside CSD.
    - CIA for lands outside of CSD.

Prescriptive Right

- May occur when upstream user makes use of the water from a stream, adverse to the downstream users, for five and more years, without complaint or legal action being taken by downstream users. Prescriptive rights may be lost if downstream users are successful in filing cease and desist actions.

Commonly Used Units

1 cubic foot (cf) = 7.48 U.S. gallons
1 Acre Foot (AF) = 43,560 cf - 325,872 gallons
1 Cubic foot per second (CFS) = 449 gallons per minute (gpm)

SECTION 3

PERMITS AND LICENSES

PERMITS AND LICENSES

Currently, appropriative water rights at Rancho Murieta are exercise through six (6) licenses and three (3) permits, all issued by the State Water Resources Control Board and assigned to the Rancho Murieta Community Services District. The essential features of these licenses/permits are tabulated and discussed in this section, particularly for those that involve diversion from the Cosumnes River. An "Operations Manual for Diversion from the Cosumnes River" detailing criteria for diversions and operating procedures to be used are attached as Appendix B.

Copies of all permits/licenses area also attached as Appendix A.

APPLICATION 23416 (PERMIT 16762)

A. Sources

1. Cosumnes River, primarily at Granlees Dam, but also at other diversion points known as Bass Lake Pump, Old Bridge Pump (north bank), and the Rock Crusher Pump (south bank).

2. Unnamed Streams, as surface runoff. The Permit, paragraph 30, requires that "Permittee shall make all reasonable effort to collect local runoff to the extent local runoff is available in lieu of diverting water from the Cosumnes River". This particularly applies to filling Clementia Reservoir, which drains an approximately 1,100 acre watershed.

B. Transport

1. At Granlees Dam

   Water is diverted at the north end of the north dam into a forebay housing a suction manifold with 13 screens, thence into a wet well accommodating five vertical, multistage turbine pumps. Two pumps are driven by 125 HP electric motors and are each rated at 6 cubic feet per second (2700 gallons per minute). Three pumps, driving by 500 HP motors, are each rated at 15 cfs (5834 gpm). The suction header, screens, electrical supply, and the discharge piping will permit (maximum) operation of the three 500 HP units simultaneously.

   Water is transported to storage via either a 21 inch diameter pipeline to Clementia Reservoir or via a 33 inch diameter pipeline to Calero Reservoir with a take-off into Chesbro Reservoir. Flow rate is indicated and recorded on a round chart, 7 day recorder in the control room, and totalized on an integrating counter.

2. Bass Lake River Pump

   Water is pumped from the Cosumnes River at a deep hole near the South Course No. 9 green via and 8" pipeline, directly into Bass Lake. This pump is currently (October 1990) a pedestal mounted, single suction centrifugal that must be removed during periods of high river flow.

   Flow capacity is approximately 530 gallons per minute (2.24 cfs), depending upon the suction lift as affected by river levels. A totalizing meter records total water pumped.

   This pump may also be used for diversion, under Permit 10144, Application 16142, for summer irrigation of non-riparian golf course lands.

3. Old Bridge Pump

Water can be pumped from Cosumnes River at a location just upstream of the "Yellow Bridge" on the north side of the river. This pump installation is on a steel frame removable during high river flows. The pump discharges through a permanent filter station directly into the North Course irrigation system. Pump capacity is approximately 538 gpm (1.2 cfs). A totalizing meter records total water pumped.

4. Rock Plant Pump

Water can also be diverted from the Cosumnes River at a location on the south side of the river, about 100 yards above the Yellow Bridge. This pump is mounted on a floating steel frame removable during high river flows. The pump, of approximately 500 gpm capacity, now supplies only the RMTC training area, through a booster pump located between South Course No. 1 fairway and No. 18 green.

C. Uses and Places of Use

Uses for water diverted under this permit are specified only as "municipal, industrial and recreational over the entire 3,600 acres, and irrigation of 500 acres net within the gross are of the 2,600 acres". The 500 acre irrigation portion of the permit has always been considered to be for golf course and public parks.

D. Conditions of the Permit

The original permit, December 1969, as amended September 1982, contains 30 separate conditions. Those that will most affect RMCSD installations and operations are discussed below, by Permit paragraph numbers.

5. (a) Six (6) cubic feet per second direct diversion (directly to the water treatment plant).
   (b) Four thousand and fifty (4,050) acre feet to storage.
   A. 3900 acre feet per annum from the Cosumnes River to be stored as follows:
   (1) 1250 afa in Chesbro Reservoir
   (2) 2610 afa in Calero Reservoir
   (3) 850 afa in Clementia Reservoir
   (4) 40 afa in (South Course) Fairway 10 Lake

   The total diverted and stored under (2), (3), and (4) above shall not exceed 2650 acre feet.

   B. 50 afa from surface runoff into Chesbro Reservoir.
   C. 100 afa from surface runoff into Calero Reservoir.

   The total amount to be taken from the source (Cosumnes River) may not exceed 6368 acre feet per water year of October 1 to September 30.

Rates of Diversion Permitted

5. (c) The maximum rate of diversion from the Cosumnes River to off-stream storage shall not exceed 46 cfs. (Plus the 6 cfs direct diversion).

18. Certain terms and conditions, aimed at protection and preservation of fish life, are also imposed:

A. No water shall be diverted when the flow (at the USGS gauging station "Cosumnes River at Michigan Bar") is less than 70 cfs.

B. Only up to 6 cfs shall be diverted when the flow is between 70 and 174 cfs.

C. Only those flows in excess of 175 cfs shall be diverted at all other times. (The 46 cfs maximum diversion rate to storage may not be exceeded.)

Provisions are made for diversion in "dry years" as follows:
If the total amount that could have been diverted under 18 A, B, C above is less than the following amounts, diversion of flows in excess of 70 cfs may be made. Diversion shall not exceed 46 cfs.

	Period	Amount Diverted to Date
(1)	Feb. 1	Less than 400 acre feet
(2)	Mar. 1	Less than 2000 acre feet
(3)	Apr. 1	Less than 4400 acre feet

Once a "dry year" diversion rate has been started, it must continue at that rate until totals permitted diversion to storage is completed. Only reversion to the direct diversion rate (6 cfs) is then permitted.

Stream Flow to Highway 99

21. No water may be diverted, even during the November 1 - June 1 period unless "there is continuous visible surface flow in the bed of the Cosumnes River" from Granlees Dam "to the gauging stating at Highway 99 known as Cosumnes River at McConnell". This gauging stating, as of 10/90, was not in operating condition, nor has it ever been equipped with remote (radio) transmitted readout equipment.

Measuring and Metering Requirements

22. Measuring devices, acceptable to the State Water Resources Control Board to measure accurately the quantity of water diverted from the Cosumnes River, must be installed and maintained.

28. Suitable metering and recording devices shall be installed, operated and maintained in good working order by RMCSD, as follows:

A. Location: Granlees Dam pumps discharge pipe line.
Device: Strip or circular charge recorder, showing rates and times of diversion.

B. CIA canal headworks.

Continuous stage recorder, with stage-flow calibrations made annually.

C. All other diversion points, including:
(1) Bass Lake Pump
(2) Old Bridge Pump
(3) Rock Plant Pump

D. CIA canal, downstream of Laguna Joaquin

E. At any other point where water is withdrawn from storage (except to South Lake 10 and the Water Treatment Plant).
Totalizing meters are considered adequate for installations C 1, 2, 3 and D, E above.

G. Levels at Calero, Chesbro, and Clementia must be measured at least monthly, for reporting to the SWRCB upon request.

Waste Water Utilization

Permit paragraph 24 requires that waste discharge plans be established with the State Regional Water Quality Control Board. The use of treated waste water for irrigation purposes is required by paragraph 26 of the permit.

E. Types of Water Covered by Permit

This permit (16762) is Rancho Murieta's only permit for diversion of water for treatment into potable, domestic uses; termed "municipal" as "purpose of use", paragraph 3. The permit also specifies "industrial" as a purpose of use, which can be presumed to be as either aw or treated water. The purpose of "recreational and irrigation" would seen to be raw water uses only.

F. Operating Procedures

To comply fully with permit conditions, at least the following will have to be done:

1. Diversion period of November 1 to May 31 only, per Permit paragraph 5.
2. Installation; operation and record keeping; and maintenance, including periodic calibration of measuring and metering equipment in at least the following locations in compliance with Permit paragraphs 22, 28, 29:
   a. Pumped diversions at:
      (1) Granlees Dam
      (2) Bass Lake Dam
      (3) Old Bridge Pump
      (4) Rock Plant Pump
      (5) Water Treatment Plant output
      (6) Pressurized raw water irrigation system (South of Highway 16)

   b. Gravity, open ditch flows at:
      (1) CIA ditch headworks
      (2) CIA ditch, downstream of Laguna Joaquin near Lone Pine Drive under-crossing.

   c. Cosumnes River flows at:
      (1) Michigan Bar gauging station
      (2) McConnell gauging station

   d. Reservoir levels at:
      (1) Clementia Reservoir
      (2) Chesbro Reservoir
      (3) Calero Reservoir

3. Operation of Granlees Dam diversion pumps in strict compliance with Permit paragraphs 5, 18, and 21, particularly with relation to flows at Michigan Bar gauging station.

Application 23417 Permit 16763

A. Source: Surface runoff

B. Transport: Natural drainage

C. Use: Recreation, stock watering

D. Permit Conditions:
(1) Dates: November 1 - May 31
(2) AFA: 130

E. Raw water only, for annual replenishment of Laguna Joaquin

F. No operations by RMCSD required, except for regular recording of lake levels

Application 23419, Permit 16764

A. Source: surface runoff

B. Transport: natural drainage

C. Use: recreation, stock watering

D. Permit Conditions:
(1) Dates: November 1 - May 31
(2) AFA 1240

E. Raw water only, for annual replenishing of Clementia Reservoir.

F. No operations by RMCSD required, except for regular recording of reservoir levels.

License 537, Application 1838

A. Source: Cosumnes River

B. Transport: CIA ditch to Laguna Joaquin, pumped to irrigate areas.

C. Use: Irrigation for 22.5 total acres; primarily common areas around Laguna Joaquin, the Murieta Parkway gate, the Rancho Murieta Training Center, and in Murieta Village.

D. Permit Conditions:
(1) Dates : 3/15 - 9/1 each year.
(2) AFA: none specified
(3) Diversion Rate: 0.28 cfs = 126 gpm = 181,000 gpd; as restricted by SWRCB Order WR79-13.

E. Raw Water only.

F. Operations by RMCSD
(1) Diversion at Granlees Dam into CIA ditch.
(2) Correct operation of gates and valves to transport water to Laguna Joaquin.
(a) CIA ditch headworks.
(b) CIA ditch dump gates at Yellow Bridge
(c) CIA ditch valves at:
East of Country Store
Laguna Joaquin levels.
Totalizing meters of pumped irrigation.
CIA ditch flow downstream from Laguna Joaquin.

License 2696, Application 2296

A. Source: Cosumnes River at Granlees Dam

B. Transport: CIA ditch

C. Use: Irrigation of 471 acres only, on agricultural lands within the District, per order WR79-13.

D. Permit Conditions
(1) Dates: 3/1 - 7/10 each year.
(2) AFA: None specified.
(3) Rate: 12.5 cfs = 24.75 AF/day = 3267 AF 3/1-7/10.

E. Raw water only.

F. Operations by RMCSD.
(1) Operation of gates and valves.
(a) CIA ditch headworks
(b) Dump gates, at Yellow Bridge
(c) Valves at:
East of Country Store
Outlet of Laguna Joaquin
(d) Gates on irrigated lands.

(2) Regular recordings of
CIA ditch headworks flow.
Laguna Joaquin pumps to irrigation as recorded by RMA and reported to RMCSD.
CIA ditch flow downstream of Laguna Joaquin after arena recorder.

License 6238, Application 16142

A. Sources: Cosumnes River at Bass Lake pump and natural drainage into Bass Lake

B. Transport: Via pipeline from Bass Lake river pump to Bass Lake.

C. Use: Non-riparian golf course irrigation, per WR79-13.

D. Conditions:

(1) Dates: Pumped diversion = 5/1 - 10/31 yearly
Surface runoff = 10/1 - 5/1 yearly

(2) AFA - surface runoff - 45 AFA
Pumped - none specified.

(3) Rate: 1.24 cfs = 557 gpm = 107,136 cfd

E. Raw water only.

F. RMCSD Operations

(1) Bass Lake River Pump.
Annual installation and removal.
Daily operations, stop/start, suction adjustment.
Regular recording to totalizing meter.

License 6239, Application 16143

A. Source: Unnamed gully.

B. Transport: Surface runoff.

C. Use: Recreation, Lake Jean

D. Permit Conditions:

(1) Dates: 10/1 - 5/1
(2) AFA: 20
(3) Diversion: not applicable.

E. Raw water only.

F. Operations by RMCSD: none required.

Licenses 8013 and 9925, Applications 20057 and 22603

A. Source: Unnamed gully.

B. Transport: Surface runoff.

C. Use: Recreation: Lake Guadalupe.

D. Permit Conditions:

(1) Dates: 11/15 - 4/15

(2) AFA: 8 (8013) plus 5 (9925)

(3) Diversion: N/A

E. Raw water only.

F. RMCSD operations: none required.

License 7744, Application 19477

A. Source: Crevis Creek, unnamed gully

B. Transport: Surface runoff

C. Use: Recreation, original Lake Calero

D. Permit Conditions

(1) Dates: 11/1 - 5/15
(2) AFA 49.26
(3) Diversion: N/A

E. Raw water only.

F. RMCSD Operations: Record reservoir levels only.

SECTION 4

PLANTS - EQUIPMENT- OPERATIONS

DOMESTIC WATER

1. General

The major source of Rancho Murieta's domestic water supply is the Cosumnes River, with a small part from local surface runoff. Appropriative water rights assigned to RMCSD allow diversion only in winter months, when river flows are expected to be high enough to satisfy permit requirements and in quantities adequate to replace annual consumption. Maximum diversion, under Permit 16762, for both direct use and storage, is 6, 368 acre feet.

Water collected or diverted is stored in three (3) lakes within the District: Clementia, Chesbro and Calero. These have a total usable capacity of approximately 4, 174 acre feet. This quantity was based on usages projected at the time of structuring the overall plans for all of Rancho Murieta and was supposed to be adequate to supply the built-out community through two (2) seasons.

Water is withdrawn from the lakes and processed into potable water suitable for all domestic and industrial uses. Treatment, storage and distribution are done on a daily demand basis. Current (1990) usage patterns reflect the extensive use for dwelling unit irrigation, with peak usage in summer months several times the winter or average daily consumption.

The treated water is distributed throughout the District in mains arranged and sized for fire protection, Three (3) gravity storage tanks and one hydro-pneumatic system provides good pressure and adequate fire serves. Hydrants are in integral parts of every area installation and every service is metered, usually on an individual customer basis.

2. Plant and Equipment

a. <u>Diversion</u>

The Granlees Dam and pump station is equipped with two (2) each, 125 HP pumps and three (3) each 500 HP pumps. Maximum flow capacities into the storage lakes is 6 cfs (2,693 gpm) for each 125 HP and 15 cfs (6,732 gpm) for the 500 HP units. Suction screens, approximately 3/8" mesh, are located in the diversion forebay. Electrical power facilities are sized to permit (maximum) operation of the three, 500 HP units; but, because of hydraulic incompatibilities, the 125 HP units and 500 HP units may not be operated simultaneously. Electrical controls are interlocked to achieve this limitation. Flow rate leaving the pump station is indicated and recorded the amount diverted is recorded on a totalizing counter.

b. <u>Surface Runoff</u>

Only Lake Clementia has a significant watershed of about 1,100 acres. All runoff channels into this lake are now natural; no dams, paved channels, etc. are involved.

c. <u>Transport</u>

A 33" diameter pipeline conveys water from the Granlees Pump Station to Lake Calero, the highest altitude storage lake, with a 20" diameter takeoff into Lake Chesbro, the intermediate altitude reservoir. A separate 21" diameter pipeline runs from the pump station to Lake Clementia, whose maximum level is below the treatment plant inlet.

A 30" diameter pump/siphon line enable transfer of stored water from Lake Calero into Lake Chesbro, from which the treatment plant is normally supplied. A pump station with

two each 60 HP pumps of 2,250 gpm total capacity, permit feeding the treatment plant from Lake Clementia.

3. Storage (Raw Water)

The current 1990 capacities of the reservoirs, not including flashboards, are:

Capacities Acre Feet

Lake	Total	Usable
Calero	2,622.5	2,322.5
Chesbro	1,444.0	994.0
Clementia	907.0	857.0
TOTALS	**4,673.5**	**4,173.5**

A system of flashboards has been devised that permits adding approximately two feet of elevation to these three lakes, for a volume increase of about 500 acre feet. This super-elevation storage provides for water lost each year by evaporation, seepage, etc.

The levels of all three lakes are set by earth-fill dams, whose operation and maintenance, etc., are under the jurisdiction of the State board of Dam Safety. All dams have leakage detection equipment and emergency drain gates that are periodically monitored and their operability verified.

All three reservoirs are used for recreation; Calero and Chesbro for non-body contact uses only. Swimming is permitted in Clementia only. Gasoline-powered oat motors are not permitted in any of the lakes, minimizing the input of organics. Clementia Reservoir is not planned to be used in years when full replenishment of one season's consumption is possible by diversion from the river. Clementia water, used as feed to the treatment plant, would require extensive changes in plant operations, primarily because of typically high solids concentrations.

4. Treatment

A. Process Overview

The bulk of the source water that is diverted from the river is of relatively high quality requiring little treatment to render it potable. The Cosumnes watershed is largely rural, with very little potential pollution from industrial sources. Diversion only during winter high-flow periods assures that essentially "snow-melt" water is diverted and stored with suspended solids and bacteria as the only major pollutants.

The relatively long-term storage, up to almost two years, also serves to improve the quality of water eventually entering the treatment plant, primarily by settling of suspended solids. Mechanical aeration is also used in Lake Chesbro to help convert the small amount of soluble iron and manganese into easily-removable forms.

Typical analyses of water, entering the treatment plant from Chesbro Reservoir are:

Parameter	Units	Range of Values
Acidity/Alkalinity	pH	7.2
Total Solids	NTU	0.5
Hardness	MG/L	4.0
Bacteria	MPN	> 2.2

B. Plant Equipment and Operations

1. Facilities and Capacities

a. Treatment Units

Original plans for Rancho Murieta called for four (4) 2 Mgd unit to be built and put on line as the number of equivalent dwelling units served increased. As of fall 1990, two (2) units are in place, the original unit of 1.5 Mgd, the newer unit of the 2.0 Mgd capacity.

b. Common Facilities - these include:

1. Liquid chemicals storage for alum, zinc, orthophosphate, and chlorine. Handling and storage facilities enable accepting truck/trailer quantities.

2. Sludge disposal. Sludge drainage/drying beds are now in place for full future total capacity.

3. Standby power. An engine-generator was installed with the second treatment unit, with capacity to handle all operations of one of these units including pumps that deliver finished water to the storage tanks and distribution system.

4. Laboratory. A laboratory was completed, along with construction of the second treatment unit, with capabilities for handling all normal laboratory work for all four future total units. Inlet and outlet turbidity and outlet chlorine residual are measured continuously for each plant unit.

Other parameters, e.g., bacteria, are measured on samples taken at regular intervals. Periodic analyses are also made and reported as required by the State Department of Health Services.

5. Controls and electrical switchgear. All the controls, indicators, recorders, and electrical switchgear for the existing (1990) two plant units, are located in one room for convenient operation by only one operator. Controls can be set so either or both of the existing units can be started or stopped automatically. This mode of control is now based upon the level of water in the finished water storage tank serving all areas of the District.

c. Metering and Screening

Flow into each unit from Lake Chesbro is metered and controlled at a rate set by the operator to replenish daily consumption A self-cleaning drum screen removes all solids, e.g. fresh-water clams, down to 3/8” mesh size.

d. Chemicals Feed

A central chemical feed room now serves both plant units with makeup tanks and mixers and chemical metering pumps for feeding solutions of alum, polymer, lime and potassium permanganate. Isolated rooms, off the central room contain equipment for blending and feeding zinc orthophosphate and for feeing carbon. Another separate comment feed

room contains equipment for mixing chlorine gas with water and metering those solutions.

The incoming water from the storage lakes does not low require use of the lime feeder, for pH control; the potassium permanganate feeder for iron/manganese control, or the carbon feeder for organics control.

e. Rapid Mix

The chemical feed solutions are added into the screened influent water stream in a rapid mix chamber, containing a high-energy turbine mixer. Thorough mixing of the chemicals into the influent water is accomplished to start flocculation of suspended solids.

f. Flocculation

The action of alum and polymer to form settleable flocs requires longer, less turbulent reaction times. The stream from the rapid mix enters (two or three) larger chambers equipped with slow speed, low energy mixers, where the final floc is formed.

g. Sedimentation

The floc/water stream then enters sedimentation chambers (two in each plant) where the floc slowly settles to the bottom of the basin. Settled flow is swept, countercurrent to the liquid flow back to the inlet and over a submerged dam into sludge well. The clarified liquid overflows at the outlet end over surface weirs.

h. Filtration

Final solids removal following sedimentation is effected by rapid sand gravity filters. These filters in both present (1990) plant units are manufactured by Environmental Elements, Inc., and are known in the industry as “traveling bridge” filters for their backwash equipment design and operations. The total are of each filter is approximately 700 square feet. Filter media depths are nine inches (9”) (Plant 1) and twenty-four inches (24”) (Plant 2). The total area in each unit is divided into eighty-one (81) cells, each approximately 8” in width and in length equal to the bed width, approximately 12’6”. Normal filtration takes place through every cell over the entire filter area.

Backwash to remove the solids retained on the surface and in the depth of the filter media bed is performed one cell at a time, allowing normal filtration to continue over the rest of the total filter area. Backwash equipment consists of a “traveling bridge” spanning the width of the filter bed that can be positioned over each cell of the total filter length. When so positioned, the cell under drain port to the filtered water outlet header is sealed to the discharge of a bridge-mounted pump that forces filtered water back up through the filter media, dislodging the accumulated solids.

A second bridge-mounted pump takes suction from a hood suspended from the bridge that seals off the upper edges of the cell dividers and end

walls. The backwash water, containing the solids washed out of the filter bed is charged by this second pump into a trough that conducts the dirty backwash water into sludge well.

The frequency of the above-described backwash operation, the time over each cell, etc., is operator-controlled. Pressure drop through the filter, i.e., the head of liquid above the filter, is the most significant parameter settling backwash cycle occurrences.

i. Chlorination

Final treatment of the clear filtered water is reaction with chlorine to reduce the bacteria count to potable levels. A solution of gaseous chlorine in water is injected into the exit clear well of the filter, ahead of a long-path chlorine contract chamber.

Dosage of chlorine is set to produce residual levels in the storage tanks high enough so that by the time the water has passed through the distribution system, residual levels meet standards of less than 0.3 ppm established by the State Department of Health Services.

j. Sludge Disposal

Sludge from the flocculation chambers, sedimentation basins, and the filter backwash is accumulated and further settled in a sludge well. This heavy sludge is periodically pumped to open beds for further de-watering and natural drying. Dried sludge is disposed of in licensed sanitary landfills.

k. Standards and Qualifications

Plant operators must be trained and certified by the State Department of Health Services. At least one Grade III operator is required. Lower grade operators (Grade II) or operators in training may also be employed in plant operations under the supervision of the Grade III Operator or under general supervision of the Water Superintendant, who must be certified at Grade III or higher.

The State Department of Health Services sets the standards for potable, domestic water that must be produced in plant operations, as measured in samples taken at customer's use points. Results of analyses of samples from use locations and plant samples are periodically reported to the Department of Health Services. Parameters and levels are:

Parameter	Units	Levels
Residual Cl_2	ppm	0.3 min. to 1.0 max.
Bacteria	MPN	less than 2.2 max.
Solids	NTU	0.5 max. Plant 1
		0.1 max. Plant 2

1. Corrosive Protection

Zinc Orthophosphate is metered into the plant finished water to reduce corrosion of metal fittings, valves, tanks, etc., and to

minimize solution of cement from the asbestos-cement mains used in most of the original construction throughout Rancho Murieta.

2. Detailed Plant Operating Practices
Detailed operating procedures have been written for both water treatment plant units by a professional consulting engineer specialist. These include detailed equipment descriptions, startup and shutdown procedures, normal operations, and alarm responses. These detailed procedures are primarily for use by Plant Operators. A copy is appended as Appendix C.

5. Distribution

A. Storage

Treated water is pumped from the treatment plant to three storage tanks which supply water by gravity to most of Rancho Murieta. Tanks are sized to meet maximum daily demands, primarily summer irrigation usage and reserves for fire protection. One 1.2 million gallon tank (Reservoir No. 1_ located off Rio Oso Street, serves most of Rancho Murieta north of State Highway 16 and areas south of Highway 16 north of the river, including Murieta Village and the commercial -industrial areas. A 0.2 million gallon tank (Lookout Reservoir) located above Murieta Plaza, provides a fire reserve for these areas south of Highway 16.

A hydro-pneumatic system with two 125 hp pumps, taking suction from Reservoir No. 1, provides adequate pressure to the residential areas above Reservoir No. 1 levels. A standby engine-generator enables operation of these pumps for this system in event of SMUD power outages.

A third tank, to be constructed in 1991, will be located on a hill east of eastern District boundary, and will also provide gravity pressures to the entire District system. This tank is sized (3 MG) to assist in supplying peak daily usage demands and reserves for fire protection.

B. Distribution

Water mains are sized primarily to meet fire flow requirements. Loops are provided in residential and commercial areas to insure supply from more than one direction. Hydrants are installed in all areas, as located by the American River Fire Protection District.

C. Metering

Every customer's usage is metered with totalizing, positive displacement meters, mostly on an individual use point's basis. Some users, e.g. Murieta Plaza, Country Club Lodge, Murieta Equestrian Center, use "master" meters feeding multiple use points.

Hydrant flows for fire flows mains flushing etc., are not metered. Customers needing bulk water, e.g. in tank trucks, are loaned a hydrant-attachable meter to produce billing information.

SECTION 5

WASTEWATER COLLECTION, TREATMENT & DISPOSAL

WASTEWATER COLLECTION, TREATMENT & DISPOSAL

1. General

Collection and treatment of wastewater and re-use of the treated product, with a zero discharge to the Cosumnes River watershed, was an integral part of the planning of Ranch Murieta. The first Planned Development document, Ordinance A-69-62, dated 23 July 1969, required (Section 11-B) that "no effluent be discharged into the river".

The major appropriative water right, Permit 16762, that permits diversion from the River for domestic water uses, also requires treatment and re-use of the wastewater under zero discharge conditions. Conditions 24, 25 and 26 of this permit are the pertinent paragraphs, the last (26) requiring that treated wastewater be used for irrigation in lieu of water from other sources.

The current version of the discharge permit, designated Order No. 90-124, was transmitted to the District 4 May 1990, and rescinded and superseded the most current previous Order 86-161. A complete copy of the current order, 90-124, is attached as Appendix B.

Order No 90-124 contains an information sheet describing Rancho Murieta; a list of 18 general findings, the compliance order listing 19 provisions, specification and prohibitions; plus a required monitoring and reporting program. Those of the above of special significance to Rancho Murieta CSD operations include (listed by Order 90-124 designations):

A. <u>Findings</u>

9. The order is consistent with the Water Quality Control Plan for the Sacramento-San Joaquin Delta Basin.

10. Sacramento County has approved a Negative Declaration in accordance with CEQA and State Guidelines, and

11. The RWQCB concurs that there are no significant impacts.

13. The SWRCB water rights permit (16762) requires use of wastewater for irrigation purposes in lieu of water from other sources when the flow of influent wastewater reaches 424 AFA.

16c. The water does not need to be managed as a hazardous waste.

A. Discharge Prohibitions

1. The direct discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. The by-pass or overflow of untreated or partially treated waste is prohibited.
3. The use of reclaimed wastewater for purposes other than irrigation is prohibited.

B. Discharge Specifications

2. The discharge shall not cause degradation of any water supply.

3. Reclaimed wastewater treated in accordance with Section 60313 (b) Article 4, Division 4, Title 22, CCR may be discharged into the following designated areas: a) the north golf course; b) the south golf course; c) the treatment plant equalization reservoirs; d) the proposed Rancho Murieta Homeowner's Association Corporation yard; and e) the proposed community park.

9. Reclaimed wastewater conveyance lines shall be clearly marked as such.

10. Reclaimed wastewater operations shall be well managed to minimize erosion and runoff.

C. Provisions

2. The Discharger shall comply with the attached Monitoring and Reporting Program No. 90-124. (Monitoring and reporting requirements are outlined later in this Chapter.)

2. Collection

A. Systems and Equipment

All wastewater generated from every home, business, etc., in the District is collected, the large majority through a separate sanitary sewerage system; with the very minor exception of three restrooms on the golf courses and the Rancho Murieta Association shops. At these sites, wastewater is accumulated in underground holding tanks and is periodically pumped and hauled to the wastewater treatment plant.

No surface water drainage is admitted into the sanitary sewerage system. A completely separate system of storm drains and channels conveys all surface waters to the Cosumnes River watershed, with no mixing with the sanitary sewerage at any time, including surface "flooding" conditions.

B. Transport

The topography of Rancho Murieta and the planned land uses do not permit simple gravity flow of wastewater from the sources; i.e. homes, businesses, to the wastewater treatment plant. Wastewater pumping (lift) stations are required for present (1990) development and more will be required as other, additional areas are developed. Current lift station systems are:

1. "Main Lift", located just north of the Fire Station on Murieta Drive, handles wastewater from all sources north and west of the river, including all current residential development north of Highway 16, Murieta Plaza, Rancho Murieta Training Center, Murieta Village, Murieta Airport, and Murieta Equestrian Center. Four satellite lift stations; located: a) at the west end of Cantova Way; b) at the intersection of Cantova Way and Murieta Drive; c) at Alameda Drive near the tennis courts; and d) on Camino del Lago near the "Street of Dream' homes, are also part of this "Main Lift" system.

This "Main Lift" has an emergency engine/generator to provide electrical power for continued operation in case of Sacramento Municipal Utility District power outages. The four smaller satellite lift stations have emergency power connections

capable of being supplied by a portable engine/generator set, part of Rancho Murieta Community Services District's standby equipment.

This "Main Lift" was designed and built with provisions for installation of additional equipment; e.g. communitors and pumps; to handle all planned future development north and west of the river, including the commercial acreage north of the airport, east of Murieta Drive.

Wastewater from this "Main Lift" is pumped through a force main easterly along Highway 16, crossing the river on the "Yellow Bridge" to the wastewater treatment plant south of State Highway 16.

2. Rancho Murieta South

A single pumping station with separate equipment for sanitary sewerage and for storm water has been constructed near the third tee of the South Golf Course as part of the initial development of residential areas south of the river, north of Highway 16. Surface water is pumped over the levee directly into the Cosumnes River channel. Wastewater is pumped, via a force main, to the wastewater treatment plant across State Highway 16.

This station also has an engine/generator to enable operation during SMUD power outages.

Complete residential development of Rancho Murieta South may require additional satellite lift stations as part of the wastewater collection and transport system.

3. Treatment

A. Process Overview

The total wastewater treatment sequence takes place in two distinctly separate phases:

1. Winter collection phase. Wastewater is given primary and secondary treatment only, at the rate it is generated and stored in two ponds located south of State Highway 16, east of the plant buildings. The equipment, ponds, etc. involved are sized to handle the total wastewater flows from all of Rancho Murieta on a completely built-out basis. Maximum flow rates in the order of 1.5 Mgd are expected, and approximately 825 acre-feet 9236 Mg) of storage is available in the two ponds.

2. Summer disposal phase. Stored wastewater is given tertiary treatment and supplied to (currently) the golf courses for irrigation. The plant equipment for these operations was installed in two identical arrays, each capable of processing up to 1.5 Mgd in a 24 hours/day operation.

B. Collection (Phase 1) Treatment Operations

1. Primary treatment, which is essentially only solids size reduction, is done by communitors in the "Main Lift" and Murieta South pumping stations. Odor generation and grease agglomeration at "Main Lift" are controlled by metered additions of selectively engineered bacteria.

2. Secondary treatment is done in four facultative digestion ponds at the west end of the wastewater treatment plant site. Aerobic digestion conditions maintained by use of floating powered agitator/aerators operated on time cycles, produces further breakup of solids to a size/condition where most solids tend to remain in suspension. Piping arrangements in these ponds permit bypassing, draining, and removal of settled solids while maintaining secondary treatment operations.

3. Digested effluent from these facultative ponds is piped to the two storage ponds and held through the non-irrigation season. Some additional digestion and solids settling takes place in these ponds during the storage season.

C. Disposal (Phase 2) Treatment

1. Plant equipment. Parts of the tertiary treatment equipment are sized to handle the entire plant, including:

   a. Chemical storage for H_2SO_4 liquid NaOH, liquid alum and polymer and liquid chlorine.

   b. Transfer/feed pumps (tertiary lift station).

   c. Chlorine contact chamber.

   d. Sludge dewatering and disposal beds.

   e. Auxiliaries such as compressed air, pressurized process (reclaimed) water.

   f. Process control laboratory.

   Other plant equipment built in two halves each array handling only half the maximum flow includes:

   g. Dissolved air flotation units.

   h. Gravity sand filters.

   i. Chemical feed pumps and metering devices.

   j. Motor and other electrical controls.

2. Plant Operations

   a. Influent: wastewater that has received primary and secondary treatment is pumped from the non-irrigation season storage ponds. A variable submersion depth suction device (the “Eagle”) permits drawing off influent at levels selected to minimize variations in e.g., solids content.

      Chemicals, NaOH or H_2SO_4 and $C1_2$ are metered into the influent stream at the tertiary lift pumps and alum and polymer are fed at the inlet to each dissolved air flotation unit. Quantities are based on influent analyses and previous operating experience in producing the desired plant effluent.

Parameters measured include Ph, total alkalinity, solids (turbidity), biological oxygen demand, bacteria and residual $C1_2$.

b. Dissolved air flotation. This state processes the influent stream into three streams: a) heavy rapid settling solids; b) light floatable solids; and c0 fine still suspended solids. The unit is an upright cylindrical vessel approximately 20 feet diameter by 12 feet high. Influent is fed at mid-height on one side; effluent (stream) is discharged over a weir on the opposite side.

A recirculating stream of approximately 350 gpm is taken off the effluent, pressurized to 60-70 psig, and injected with high pressure air. This air-saturated stream is then injected back into the body of the unit through an orifice. The resultant pressure drop causes the dissolved air to come out of solution as a very high umber of extremely fine bubbles. The lighter "floatable" solids (stream 2) unite with the bubbles and rise to the liquid surface. Rotating skimmers move these solids over a radial weir into the sludge disposal system.

The heavy solids (stream 1) settle to the slightly conical bottom of the unit and are swept to a center discharge pipe by rotating rakes. This sludge is also periodically automatically discharged to the sludge disposal system.

The clarified liquid (stream 3) rises through exit ports at about mid-height upward into a circumferential header at the top and over a weir into the discharge line to the next processing unit the sand filter. Additional chemicals, usually alum, polymer, and chlorine, can be added between the dissolved air flotation unit and the sane filter.

c. Filtration. This stage affects the final solids removal from the clarified stream from the DAF units. The equipment units are "gravity rapid sand" filters with an approximately 12" deep bed of graded Monterey Sand as the filter media. Each unit has three 100 square foot chambers operated independently by automatic controls designed to produce the desired effluent with minimum down time. Four operating modes are used:

1. Normal filtration mode. Liquid (DAF effluent) passes through the filter media, through the under drain piping and valves and exits via a header to the next processing stage, chlorination.

2. Air sludge agitation ("Air Mix"*). The rising pressure drop across the sand filter media is sensed and turns on air-sparging headers located immediately above the upper sand surface. This air sparging disrupts the blanket of solids that accumulates at the sand upper surface, reduces the pressure drop, and extends the sand bed filter life. This air agitation then continues with normal filtration and discharge of filtered liquid to the next stage.

*Trademark of filter manufacturer.

3. Filter media agitation (Pulse Mix*). The rising level of liquid above the sand bed eventually contacts a sensor that triggers an air-agitation cycle of the filter media. The filtrate discharge valve is closed and backwash filtrate is pumped back into the under drain, forcing trapping air upward through the sand media. This pulse of air dislodges much of the solids accumulated in the depth of the sand media to above the media upper surface and lowers the influent level above the media. This "Pulse Mix" is repeated automatically for a selected number of cycles or until the pressure drop increases to start the final backwash cycle.

*Trademark of filter manufacturer.

4. Backwash (Hydro-Scour*). The filter media is backwashed when the pressure drop across the media reaches the maximum permitted by the design. The influent with solids suspended by the "Air Mix" sparging is first drained off into a mud well while normal filtration continues. Then, normal filtrate discharge is stopped and filtrate is pumped back upward through the filter bed, thoroughly backwashing the accumulated solids out into the mud well. This backwashed liquid is returned to the facultative digestion ponds. At the conclusion of this backwash cycle, the normal filtrate cycle (1) above is resumed.

*Trademark of filter manufacturer.

The filtered effluent "reclaimed waste water" at this stage now has a solids content, (turbidity) low enough to meet State standards for irrigation use. (See IV, Standards and Qualifications, following.)

d. Chlorination. The effluent from the filters essentially free of solids must have bacteria also reduced to essentially zero levels to meet State standards. This is done by injection into the filter effluent of a $C1_2$-in-water stream at the head of a long-path chlorine contact chamber. This reaction rates is rather slow, the chlorine contact chamber is designed for a retention time of four hours at full plant throughput. Feed rates of the $C1_2$-water solution are designed to procedure chlorine residual at the chlorine contact chamber exit of 2.0 to 5.0 ppm, and essentially a zero level after being stored in the equalization pond (3 below).

e. Sludge System

1. Equipment and Operations. Sludge from the DAF unit is transported via a gravity pipeline (sewer) to an array of sludge dewatering and drying beds located along the south boundary of the waste water treatment plant. These four beds are each 5,600 square feet are, and each bed has individual manually operated inlet and outlet valves.

Liquid remaining in the sludge fee drains out through the under-drains and is pumped back into the non-irrigation storage ponds. The remaining solids are allowed to naturally dry and are periodically removed for disposal.

Disposal can be made in sanitary landfills as approved by the State Department of Health Services or can be used in agriculture as fertilizer again as approved by the State DOHS.

3. Operating Procedures

Detailed operating procedures have been written for both the secondary and tertiary operations by a professional consulting engineer specialist. These include detailed equipment descriptions, start up and shutdown procedures, normal operations, and alarm responses. These detailed procedures are primarily for use by plant operators. A copy I s attached as Appendix D.

4. Storage and Delivery

The final treatment effluent is accumulated in a 6.0 mg equalization pond. Some final reduction in residual chlorine levels takes place but no other processing.

Control of plant operating cycles is controlled from equalization pond levels.

Delivery from the equalization ponds can currently (1990) be made only to the two existing golf course irrigation systems. Delivery is made to the south courses irrigation system through a 12" gravity line to ponds between south course sixteenth green and seventeenth tee.

Delivery to the north course irrigation system is by three vertical turbine pumps taking suction directly from the equalization pond. The treated water is piped through a 12" line to the north course westward along State Highway 16 across the "Yellow Bridge" and connects to the course irrigation system on No. 10 fairway. A surge control valve off the pump discharge line has been installed to minimize pipeline damage from rapid shutoff of irrigation flows.

Operations of these pumps and the valve controlling the gravity line to the south course ponds are controlled by RMCSD at the request of golf course personnel. Typical gold course operating sequences, present and probably future, are discussed the next Section (5).

5. Standards and Qualifications

A. Operator Qualifications

Plant operators must be certified as Wastewater Treatment Plant Operators by the State DOHS. At least one Grade III Operator is required. Lower grade operators in training may also employed in plant operations

under the Grade III Operator; or under the general supervision of the Wastewater Superintendent who must be certified at Grade III or higher.

B. Effluent Standards

Standards for reclaimed wastewater are set by the State Regional Water Quality Control Board and are part of the permit assigned to Rancho Murieta. Critical constituents and characteristics specified are:

Constituent or Characteristic	Unit	Monthly Mean	Monthly Median	Maximum
Total Coliform Organisms	MPN 100 ml	- - -	2.2	23
Turbidity	NTU	2	- - -	5

These standards now apply to irrigation uses on both the North and South golf courses. Also, the golf courses greens keeper prefers that residual chlorine levels be held close to zero to minimize damage to certain turf grasses.

C. Effluent Monitoring and Reporting

The Regional Water Quality Control Board requires (Monitoring and Reporting Programs 90-214) monitoring of plant operations, sampling and analyses of the effluent product and periodic reporting to that board. The currently-prescribed program is:

MONITORING

Constituent	Units	Type Sample	Sample Frequency
Flow	Mgd	Continuous	
pH	pH Units	Grab	Weekly
Settleable Matter	ml/1	Grab	2x week
Coliform Organisms	MPN/100 ml	Grab	Daily
Residual Chlorine	mg/1	Grab	Daily
Turbidity	NTU	Continuous	

REPORTING

Reports must be submitted quarterly to the Regional Board. The board also may request an annual summary report that summarizes data for the entire previous year, discusses a deviation from standards and outlines corrective actions planned.

SECTION 6

RECLAIMED WASTEWATER USAGE

RECLAIMED WASTEWATER USAGE

I. Mandated Requirements

A. Permits

The original Planned Development Ordinance approved for the Rancho Murieta (Z-69-62) contained a requirement that no wastewater be discharged back into the Cosumnes River watershed.

The major appropriative water right, Permit 16762, under which water is diverted from the river for domestic use, requires treatment and re-use of wastewater, with zero discharge.

The wastewater permit issued to the District, Order No. 90-124, also requires treatment and re-use of wastewater, in lieu of diversion of water from the river. It also specifies places of use, including golf courses and public parks; and prohibits any discharge to surface water drainage courses.

B. Design Criteria

Early plans and designs for Rancho Murieta included concepts enabling compliance with the above permit conditions:

1. Collection and storage of all wastewater at as-generated rates, the year around.
2. Primary and secondary treatment at as-generated rates.
3. Tertiary treatment and re-use during the irrigation-summer-season, at rates adequate to dispose of each year's total generation.
4. Primary disposal; i.e., irrigated; areas would be golf courses, public parks, and property owners corporation (maintenance) yards.

C. Plant Designs and Operations

1. The 5,189 residences, businesses, etc., authorized by the Planned Development Ordinance for Rancho Murieta converts using industry-standard criteria into 5,900 Equivalent Dwelling Units (EDU). The accepted industry criterion for wastewater generation is 200 gallons per day per EDU. Based on these accepted data, plant designs and operations must at full build-out of Rancho Murieta, be based on:

Daily wastewater generation	=	1.18 million gallons per day (Mgd)
Annual total generation	=	430 Mg
	=	1322 AF

Plant designs and operations to comply with design criteria B-1 and B-2 above; have been installed and set up for a 1.5 Mgd maximum.

2. Treatment (tertiary) and Disposal

Disposal of treated wastewater is, per permits, by irrigation only with no return to the river, which essentially limits the treatment/disposal operations to summer months only.

Plants have been designed, partially constructed and are in operation to meet criteria 3 and 4 above, as follows:

Wastewater accumulation ponds capacity	=	825 Acre feet (AF)
Tertiary treatment capacity (2 units, 1.5 Mgd each) max.	=	3.0 Mgd
Treated wastewater storage (equalization pond)	=	6.0 = 18.4 AF

These capacities dictate a maximum collection phase of approximately 7 months, as limited by the capacity of the storage ponds. The tertiary treatment and disposal season is similarly limited to approximately 5 months minimum, as dictated by the treatment plant maximum capacity.

2. Current Plant and Operations

A. Golf Courses

1. North Course

a. Pumps and Controls

The North Course can now be supplied with treated wastewater directly from the wastewater treatment plant equalization (final product storage) pond. Three vertical, multistage pumps take suction directly from the pond. Two of these are 100 HP units, each rated at 1,000 gpm at 175 psi; the third is a 25 HP unit, rated at 250 gpm at 100 psi. A hydro-pneumatic tank and controls permit automatic, staged operation, depending upon demand so the North Course irrigation system. The total capacity is adequate to supply the entire course.

Operation of the pumps, controls, etc., is done entirely by RMCSD personnel through requests of golf course personnel.

b. Delivery System

The pumped water is carried through on 12" diameter line west and north from the wastewater treatment plant, crossing the river on the Yellow Bridge. A pressure reducing valve, located in an underground box just north of the Yellow Bridge, controls the pressure of the pumped stream entering the course irrigation piping system.

Connection to the North Course piping is made in the 10th fairway, near the 10th hole pond.

c. Storage

Currently, no appreciable capacity for storage of treated wastewater exists in the North Course irrigation system. The wastewater treatment plant equalization pond (6.0 Mg) is now the only storage capable of being fed to the North Course.

Proposals have been made to convert Bass Lake into a multi-source reservoir for irrigation of the North Course, plus a possible future "third course". Sources would be: 1. Directly from the river, by a pump set up similar to the existing "Bass Lake Pump"; 2. A pipeline and probably pumps

from Clementia Reservoir; 3. A (new) pipeline from No. 10 fairway to Bass Lake.

d. Course Equipment and Operations
Currently (1990), the North Course is not using an reclaimed wastewater. Bass Lake has been supplied primarily by pumping from the river. A pump station, rebuilt in 1987, taking suction from Bass Lake, supplies the entire course system. Equipment is operated solely by course personnel.

2. South Course

a. Wastewater Treatment Plant to Course System.
A 12" gravity line from the plant equalization pond crossing under SR 16 fills the course ponds at 16th green and 17th tee. A motorized valve in this line is controlled by level controls in pond #17.

b. Storage
In addition to the wastewater treatment plant equalization pond, reclaimed wastewater can be transferred to and stored in the South Course lakes along the 10th and 11th fairways. Pump and pipeline capacity enables transfer to lakes 10-11 at about 450 gpm, (.648 Mgd).

c. Course System and Operation
Currently, virtually all the wastewater reclaimed has been used for irrigation on the South Course.

Pumps located at the 17th tee, taking suction from the 16-17 ponds, supply water for irrigation of the course and for transfer to Lake 10-11. Pumps located on Lake 10-11 can also supply water for course irrigation. Operation of the pumps, etc. and sprinkler system is solely by golf course personnel.

Usage of reclaimed water during the 1990 irrigation season averaged 1.1 million gallons per day. Course sprinkling is generally done during early morning hours.

3. Future Disposal

A. <u>Design Criteria Verification</u>
Actual operating data, taken during recent years (19889-1990) from the 1300 -1400 EDU now in place, show:
1. Average wastewater generation of 200 gallons per day per dwelling.
2. Golf course irrigation requirement of 1.1 Mgd. These actual operating data provide verification of the original criteria upon which the wastewater treatment plant facilities were designed and built.

B. <u>Annual Operations</u>
Because it is imperative to the life of the entire Rancho Murieta community that each year's generation of wastewater be disposed of, changed in annual operations will have to take place as the community builds out. These include:

1. Areas irrigated with reclaimed wastewater will have to increase beyond the South Golf Course, as used to date. The North Course would easily follow, since all facilities are already in place. Other areas, designated by not yet developed, would include the community park below Clementia Dam, and/or the “third golf course” and the recreational area along Stonehouse Road.

2. Use of reclaimed wastewater will have to have an increasing priority over use of river water. This priority is required by both the appropriative water permits and wastewater permits. Close coordination with reclaimed wastewater users, e.g. golf course greens keeper, will be required, including accurate daily records of amounts of water used. Drought occurrences may also force priority use of reclaimed water.

3. Plans also may have to be made for additional or alternate disposal (irrigation) areas. Uses considered to date have included pasture acreage and non-food crops acreage, e.g. sod farms.

SECTION 7

COSUMNES IRRIGATION ASSOCIATION

DITCH CONSTRUCTION - OPERATIONS

CIA DITCH

I. Rights, Permits, Operating Agreements

A. History

The Cosumnes Irrigation Association facilities, including the Granlees Dam(s) and the ditch westward were constructed in 1920-1921. Original participants were the Schneider, Bozich and Granlees families. The Fruitridge Investment Co. also was involved, holding some of the early permits.

Currently, the Cosumnes Irrigation Association is owned one third by Rancho Murieta Community Services District, one third by Fred Anderson and one third by his wife.

B. Riparian Rights CIA Ditch Usage

Use of the CIA Ditch is not required for any riparian rights being exercised within the District. Uses outside the District, e.g. for stock watering and irrigation, involve diversion at Granlees Dam and transfer of water westward through the District to the eventual place of use.

C. Appropriative Rights of CIA Usage

The Granlees Dam and ditch facilities are involved in exercise of appropriative rights within the District, through two permits.

License 2629 (applic 2296) is for irrigation of 471 acres of agricultural lands lying inside the District. This permit allows a maximum diversion of 12. 5 cfs, which is very close to maximum ditch flow capacity. No storage is allowed under this permit, nor is there an annual diversion total. Since these 471 acres lie in the southwestern portion of the District, almost the total length of the CIA Ditch is used.

License 537 (Applic. 1838) is for irrigation of 22.5 total acres around the Rancho Murieta (North) gate house, at the Rancho Murieta Training Center and in Murieta Village. Water for this permit is carried through the CIA Ditch into Laguna Joaquin for irrigation on lands north of SR 16 and on through the ditch to a diversion just west of Lone Pine Road to supply the RMTC pressurized irrigation system. Murieta Village is not currently using water under this permit for common area irrigations.

D. Ditch Operating and Maintenance Agreements

All pertains and normal maintenance of the ditch, and Granlees Dam, are performed by Rancho Murieta Community Services District. Costs for these operations and maintenance are shared in proportion to the current ownership per an agreement negotiate din 1988.

Costs of major repairs and rebuilding e.g. repair of Granlees Dam spillways have been distributed through special, one-time agreements.

2. Operating Equipment and Practices

A. Dam and Ditch Construction

1. Dams

The Granlees Dam(s) that impound the Cosumnes River and divert water into the Cosumnes Irrigation Association ditch were built in 1920-1921. The dams are

located in the southeast corner of the District. A large rock island separates the river at that point, necessitating two dams.

The south dam has only a fish ladder and a stream bed level dump gate. The upstream side of the dam is filled with rock, sand, etc., burying the dump gate and rendering it unusable. The crest of the south dam is 2.4 inches higher than the north dam, so that no overflow takes place during much of the (current) year's flows.

The north dam also has a fish ladder and dump gate, the latter also unusable because of the sediment buildup behind the dam, almost to the crest elevation. A forebay, constructed in 1983, connects to the north end of the north dam. This forebay houses the 13 suction screens of the wet well for the five pumps that divert the major portion of the annual water usage by Rancho Murieta.

A slide gate leading out of this forebay feeds the CIA Ditch. A similar gate enables return of diverted water back to the river. The fish ladder inlets are at elevations such that during periods of minimum river flow, these ladders are still capable of being operated.

2. Ditch System Construction

   a. Ditch

      A major portion of the ditch was also constructed in the 1920-1921 period. It is understood that the "design capacity" of the ditch was originally intended to be in excess of 15 cfs (6,732 gpm). Most of the ditch is unlined, except for some concrete lining in broken rock areas in the vicinity of the Bass Lake pump location. Short culvert sections were recently installed in the Granlees Ranch area, and under the north pier of the yellow bridge. Piped sections are:

      1. Gate box east of the Country Store to Laguna Joaquin.
      2. Gate box east of the Country Store through an inverted siphon to a gate box west of the Fire Station.
      3. Laguna Joaquin to the above (2) gate box.
      4. Under the Murieta Equestrian Center, and to the north side of SR 16.

   b. Gates

      Gates are currently in place and operable at the following locations:

      1. Out of the north dam forebay into the ditch.
      2. Out of the ditch back to the river about 100 feet below the dam.
      3. Out of the ditch back to the river at the Bass Lake pump.
      4. Out of the ditch back to the river at the Yellow Bridge.
      5. Out of the box east of the County Store to feed Laguna Joaquin.
      6. From Laguna Joaquin into the box west of the Fire Station.

      All other gates, valves and pump suction pipes that take water of t he ditch are located beyond the last ditch flow recorder near the Murieta Equestrian Center, and are operated by the users according to their permits.

c. Metering

Flow metering equipment is installed according to permit requirements as follows:

1. A stage (ditch level) recorder just downstream from the forebay headworks.
2. A stage recorder near the Murieta Equine Center, downstream of Laguna Joaquin.
3. Totalizing meters on the discharge of irrigation pumps taking suction out of Laguna Joaquin.
4. If water is returned to the river from the ditch, other meters also come into play:
    a. Bass Lake river pump totalizer.
    b. Yellow Bridge river pump totalizer.
    c. Rock Plant river pump totalizers.

    All of the above meters are read monthly by RMCSD personnel and included in reports to the proper agencies.

d. Ditch Performance

Currently, approximately 40% of the water metered at the ditch headworks cannot be accounted for by metering at the Equine Center stage recorder and the irrigation pumps meters out of Laguna Joaquin. Most of this loss is from leakage along the ditch between the headworks and the Yellow Bridge. Agreements are in place with current developers that the open ditch will be replaced by closed conduits whenever development of property along the ditch takes place.

SECTION 8

LAKE-TO-LAKE TRANSFERS

EQUIPMENT - OPERATIONS

LAKE-TO-LAKE TRANSFERS

Operation of the water resources at Rancho Murieta requires transfer between lakes and ponds within the District boundaries, and involves raw water for both domestic and irrigation uses, and reclaimed waste water. The facilities in place to carry out these transfer, brief descriptions of operations required and agencies responsible for necessary operations follow.

I. Domestic Water End Use

Raw water pumped from the Cosumnes River during permitted diversion periods is, for domestic end use, stored in Lakes Calero, Chesbro and Clementia. Transfers involved are:

A. Calero to Chesbro

Calero is the highest elevation lake in the storage chain and is normally the first to be drawn down by transfer into Chesbro, the next highest lake and the feed lake to the Water Treatment Plant.

A pump/siphon system with a 30" diameter inter-lake pipe was installed as part of the construction of Lake Calero in 1982. This system enables rapid transfer to Lake Chesbro, manually as seen fit by operators based on Chesbro level. With this system, approximately 2, 322.5 acre feet maximum can be withdrawn from Calero.

Operations of the pump/siphon system are completely by Rancho Murieta Community Services District personnel. Total amounts transferred are recorded by a totalizing meter and reservoir levels are periodically recorded.

B. Chesbro to Clementia

While currently not seen as a "normal" in domestic water operations, raw water can be transferred from Chesbro to Clementia.

Water is normally fed from Chesbro to the water treatment plant via a 36" gravity line. A 36" stub from this line enable filling of Clementia and for periodic flushing of this line to the water treatment plants.

All operations would be carried out by RMCSD personnel. No metering equipment, other than surface level gages, is installed.

2. Irrigation End Use - Raw Water

Raw water diverted from the river and surface water runoff and stored in Lakes Calero, Chesbro and Clementia and on the South Lakes 10/11 may, in part, be used for irrigation within the District. Transfers involved are:

A. Clementia to Laguna Joaquin

Water can be drained, by gravity, through a 24" pipe leading to a 10" pipe out of the lower, dame end of Clementia and fed via a valved stud into the CIA ditch. The ditch carries the water, by gravity, into Laguna Joaquin, which serves as a suction reservoir for pumps supplying irrigation to common areas, parkways, etc., of the Ranch Murieta (North) Association areas.

Operations of the diversion from Clementia, through the CIA Ditch into Laguna Joaquin are by RMCSD personnel. Operation of the irrigation pumps are by Rancho Murieta Association personnel. Totalizing meters are installed on the irrigation pump discharge lines and are read and recorded by RMCSD personnel.

B. Clementia to South Lake 10/11

Water can be drained by gravity from Lake Clementia via the 24" line, into the 10" line and through a 12" undercrossing of the river, into the upper end of the lakes along the 10 and 11 fairways of the South Golf Course. The lower, larger portion of his lake serves as the major suction reservoir for the South course irrigation pumps stations located at the west end of the lake.

Operations out of Clementia into South Lake 10/11 are entirely by RMCSD. Totalizing meters on the discharge of the irrigation pumping station are read and recorded by RMCSD.

C. South Course Lake 10/11 to Golf Courses Ponds

Raw water is delivered from the Lake 10/11 pump station to the South Course Irrigation system through header mains along the course and also to a pond located at No. 5 tee and two bonds between No. 16 green and No. 17 tee. The latter two also serve as a suction reservoir for reclaimed waste water, discussed below.

Operation is entirely by golf course personnel, but metering, recording and reporting are done as described in (B) above.

D. Bass Lake to North Golf Course Ponds

Raw water is supplied from Bass Lake to the entire North Golf Course by a pump station on the west side of the lake.

Operation is entirely by golf course personnel. A totalizing flow meter at the pump station is read and recorded by RMCSD personnel.

3. Reclaimed Waste Water

A. Waste Water Treatment Plant to South Course Lakes 10/11

Reclaimed waste water can be delivered by gravity flow from the plant effluent pond (Equalization Pond) into the ponds at South Course No. 16 green and No. 17 tee. For reclaimed water, these ponds are a suction reservoir for pumps located at No. 17 tee, which can deliver water through the course header mains to the South Course Lakes 10/11, as well as directly to the course irrigation system and the pond at No. 5 tee.

Operations involved are handled exclusively by golf course personnel. Flow is metered and totalized in the gravity line from the Equalization Pond. Readings are made and recorded by RMCSD personnel.

B. Waste Water Treatment Plant to Bass Lake

Reclaimed waste water can be delivered by three pumps at the waste water treatment plant equalization pond to the North Course header main for course irrigation. The existing header main is not capable of delivering reclaimed waste water to Bass Lake. Full utilization of Bass Lake as a suction reservoir for both reclaimed and raw water will require a new pipeline from No. 10 fairway to Bass Lake.

Operation of the present arrangement is entirely by golf course personnel. The totalizing meter on the discharge line from the Equalization Pond pumps is read and recorded by RMCSD personnel.

SECTION 9

METERING - RECORDING - REPORTING

METERING - RECORDING - REPORTING

Several of the permits and licenses held and operated by RMCSD, for both water and wastewater; contain requirements for installation, operation and maintenance of metering equipment. Most of these are for totalizing meters that operate whenever the pipeline has liquid flowing and simply record the total quantity passing that meter. Rate-of-flow meters that record only the instantaneous flow, are required in a few locations. Careful reading of the permits will clearly identify the type of meter required for each flow requiring measurement.

Several of the permits and licenses also require that regular reports be made to the licensing or permitting agencies, e.g. the State Water Resources Control Board (SWRCB). The frequency of report is specified in the permit or license, the content and form of the report is usually agreed to between the permitting agency (state) and the reporting entity (RMCSD).

Both normal operations of water and wastewater facilities and preparation of required reports involve frequent recording of meter readings and for some meters, calculations from raw data. Usually, the frequency of such recordings is based upon needs for controlling plant operations and periodic totalizing of such frequent recording is used for reports to agencies.

A tabulation of the quantities to be metered, type of meter, recording and reporting frequency, agency requiring the report is attached as part of this section, referenced to permit/license numbers. Samples of typical records and reports are included in Appendix E.

All meters are read at the end of each month; data is accumulated and forwarded annually to the Division of Water Rights as part of the annual report.

Application 23419 - Permit 16765	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 1838 - License 537	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 16142 - License 6238	Amount: N/A	
Meter Make: Water Spec	Meter Type: Propeller	
Meter Size: 8”	Units: cu. ft.	Diversion
Application 19477 - License 7744	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 20057 - License 8013	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 23418 - Permit 16764	Amount: 130.0 Ac FT	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	No built as yet

Application 23416 - Permit 16762	Amount: 6.0 cfs/4,050.0 Ac Ft	
Meter Make: Water Spec	Meter Type: Propeller	
Meter Size: 10”	Units: cu ft	Diversion
Application 23416 - Permit 16762	Amount: 6.0 cfs/4,050.0 Ac Ft	
Meter Make: Sparling	Meter Type: Electric	
Meter Size: 33”	Units: gallons	Diversion
Application 23416 - Permit 16762	Amount: 6.0 cfs/4,050.0 Ac Ft	
Meter Make: Sparling	Meter Type: Electric	
Meter Size: 21”	Units: gallons	Diversion
Application 32417 - Permit 16763	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 22603 - License 9925	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 16143 - License 6239	Amount: N/A	
Meter Make: N/A	Meter Type: N/A	
Meter Size: N/A	Units: N/A	Storage only
Application 2296 - License 2629	Amount: 12.5 cfs	
Meter Make: Stevens	Meter Type: Float	
Meter Size: N/A	Units: Ft	CIA Ditch Recorder
Application 2296 - License 2629	Amount: 12.5 cfs	
Meter Make: Stevens	Meter Type: Float	
Meter Size: N/A	Units: Ft	CIA Ditch Recorder

APPENDIX A

WATER RIGHTS LICENSES AND PERMITS

STATE OF CALIFORNIA—STATE WATER RIGHTS BOARD

COPY

License for Diversion and Use of Water

APPLICATION 16142 PERMIT 10144 LICENSE 6238

Arthur J. Granlees and Josephine D. Granlees
Sloughhouse, California

Notice of Assignment (Over)

THIS IS TO CERTIFY, *That*

have made proof as of April 7, 1960, *(the date of inspection) to the satisfaction of the State Water Rights Board of a right to the use of the water of* (1) Cosumnes River and (2) an unnamed gully in Sacramento County

tributary to (1) Mokelumne River (2) Cosumnes River

for the purpose of irrigation and stockwatering uses *under Permit* 10144 *of the State Water Rights Board and that said right to the use of said water has been perfected in accordance with the laws of California, the Rules and Regulations of the State Water Rights Board and the terms of the said permit; that the priority of the right herein confirmed dates from* November 18, 1954 *and that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed* one and twenty-four hundredths (1.24) cubic feet per second by direct diversion from Cosumnes River to be diverted from about May 1 to about October 31 of each year and forty-five (45) acre-feet per annum by storage to be collected from about October 1 of each year to about May 1 of the succeeding year from either or both sources.

Maximum rate of diversion to off stream storage has been one and six tenths (1.6) cubic feet per second.

The equivalent of such continuous flow allowance for any thirty-day period may be diverted in a shorter time if there be no interference with other vested rights.

The point s of diversion of such water are *located* :

(1) North thirty-five (35) feet and east one thousand seven hundred eighty (1780) feet from SW corner of Section 35, T8N, R8E, MDB&M, being within $SE\frac{1}{4}$ of $SW\frac{1}{4}$ of said Section 35.

(2) North one thousand seven hundred fifty (1750) feet and east one thousand two hundred sixty (1260) feet from SW corner of Section 35, T8N, R8E, MDB&M, being within $NW\frac{1}{4}$ of $SW\frac{1}{4}$ of said Section 35.

A description of the lands or the place where such water is put to beneficial use is as follows:

Stockwatering within $NW\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M., and irrigation of:

33 acres within $NE\frac{1}{4}$ of $NW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
26 acres within $SE\frac{1}{4}$ of $NW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
31 acres within $NE\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
3 acres within $NW\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
16 acres within $SE\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M

109 acres total

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the State Water Rights Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

FORM 64

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: APR 11 1961.

CALIFORNIA STATE WATER RIGHTS BOARD

L. K. Hill
L. K. Hill
Executive Officer

12-26-62 Name chge. from Arthur Granlees to Estate of Arthur Granlees

~~11-4-66~~ RECEIVED NOTICE OF ASSIGNMENT TO ~~George~~ Artz, Jean Littig Artz, Hal L. and Louise Ellis.

~~11/26/65~~ RECEIVED NOTICE OF ASSIGNMENT TO Bank of America N. T. & S. A. and Corporate ~~Extension of the~~ Pension Trust Fund for [illegible]

9-12-86 Asgd to Rancho Murieta Properties, Inc

1-14-88 Asgd to: Rancho Murieta Community Services Dist

LICENSE 6238

STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

LICENSE
TO APPROPRIATE WATER

ISSUED TO A. J. and J. D. Granlees

DATED APR 11 1961

FORM 64

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

COPY

License for Diversion and Use of Water

LICENSE 2629 PERMIT 1320 APPLICATION 2296

THIS IS TO CERTIFY, *That* Cosumnes Irrigation Association, Sloughhouse, California

as of May 9, 1941 (the date of inspection)

has made proof to the satisfaction of the Division of Water Resources of California of a right to the use of the waters of Cosumnes River in Sacramento County

tributary of San Joaquin River

for the purpose of irrigation use *under Permit* 1320 *of the Division of Water Resources and that said right to the use of said waters has been perfected in accordance with the laws of California, the rules and regulations of the Division of Water Resources and the terms of the said permit; that the priority of the right herein confirmed dates from* April 12, 1921;

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed twelve and five tenths (12.5) cubic feet per second from about March 1 to about July 10 of each season.

In case of rotation the equivalent of such continuous flow allowance for any thirty day period may be diverted in a shorter time if there be no interference with other vested rights.

This license is based on the use of water made during the year 1941 which was the year of maximum use within the three year period preceding the date of inspection; namely, May 9, 1941.

The point of diversion of such water is *located* North eighty eight degrees, fifty seven minutes East (N. 88° 57' E.) eighty five hundred seventy eight and two tenths (8578.2) feet from the SW corner of Section 34, T 8 N, R 8 E, M.D.B. & M., being within the SW¼ of SE¼ of Section 35, T 8 N, R 8 E, M.D.B. & M.

A description of the lands or the place where such water is put to beneficial use is as follows: irrigation of 893.9 acres as follows:

NE¼				NW¼				SW¼				SE¼				Total	M.D.B. & M.		
NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Acres	Sec	Twp	Rge
	6			3		16	6	8	39	40	15					133	3	7 N	8 E
				20	35	41.5	41.5	41.5	41.5	41.5		40	30	41.5	21.5	396.5	4	"	"
18	1	30	41.5				17	36	10	20		17	41.5	41.5	23.4	332.1	5	"	"
					4.3										35.2	4.3	9	"	"
				28												28	10	"	"

The Water Commission Act was superseded by the Water Code on August 4, 1943. By force of the provisions of the latter, all references in this form to the Division of Water Resources will be understood to mean the Department of Public Works acting by and through the State Engineer.

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the Division of Water Resources in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Division of Water Resources.

The right to the diversion and use of the water aforesaid hereby confirmed is restricted to the point of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the department.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivison of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property can not agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

FORM 64-A

29013 12 43 50M SPO

Witness my hand and the seal of the Department of Public Works of the State of California, this 21st *day of* February, *19* 44

[SEAL]

EDWARD HYATT
State Engineer

By Harold Conkling
Deputy State Engineer *Deputy*

LICENSE 2629

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES

LICENSE
TO APPROPRIATE WATER

ISSUED TO Cosumnes Irrigation Assn.

DATED February 21, 1944

10869 3-42 1800 STATE PRINTING OFFICE

License 6238

Also See Order WR 79-13

dated 6/7/79

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Permits 2631, 12258, 10473, and 10474 Issued on Applications 2270, 5645A, 13707, and 13708

U. S. BUREAU OF RECLAMATION

Petitioner

and

Permit 16762 Issued on Application 23416, Licenses 537 and 6238 Issued on Permits 1030 (Application 1838) and 10144 (Application 16142)

BANK OF AMERICA AS CORPORATE CUSTODIAN OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS (RANCHO MURIETA)

Petitioner

OMOCHUMNE-HARTNELL WATER DISTRICT

Protestant

ENVIRONMENTAL COUNCIL OF SACRAMENTO

Complainant

License 2629 Issued on Permit 1320 (Application 2296) of

Cosumnes Irrigation Association

Licensee

JAY SCHNEIDER

Protestant and Complainant

Order : WR 79-23

Source: Cosumnes River

County: Sacramento

ORDER MODIFYING ORDER WR 79-13 ON RECONSIDERATION

BY THE BOARD:

Rancho Murieta, Omochumne-Hartnell Water District and Jay Schneider, having petitioned the State Water Resources Control Board (hereinafter the Board) for reconsideration of Order WR 79-13, adopted June 7, 1979, which approved change

petitions of the U. S. Bureau of Reclamation and Rancho Murieta, and allowed complaints of Jay Schneider in part; the Board having received written statements in opposition to the petition of Jay Schneider from Rancho Murieta and El Dorado Irrigation District; the Board having made its order on July 19, 1979 granting reconsideration; the petitions and the record in this matter having been duly considered the Board finds as follows:

Petition of Omochumne-Hartnell Water District

1. The District contends that the lands within its jurisdiction should be included within the place of use under the U. S. Bureau of Reclamation's permits. Petitioner Schneider concurs with this contention.

2. The Board finds that this proposal was not a part of the Bureau's change petitions and, therefore, was not within the scope of the proceedings on said petitions. Accordingly, the proposal cannot by orderly process be properly considered on reconsideration of Order WR 79-13. This finding is without prejudice to consideration of any subsequent petition embodying the proposal.

Petition of Rancho Murieta

3. Rancho Muieta's petition raises two issues:

a. Petitioner objects to order Paragraph 8 on Permit 16762. This order paragraph requires that all local runoff be collected to storage and that the right under Permit 16762 be correspondingly reduced. Petitioner correctly points out that local runoff cannot be accurately forecast since runoff in the area comes from rainfall rather than from any measurable snowpack. Petitioner further contends that the term provides no benefit or necessary protection to Schneider. The existing diversion season constraints (November 1 to May 1)

in Permit 16762, and the minimum flow requirements of Condition 18 (no diversion when the flow is less than 70 cfs), together with Condition 21 (there must at all times be a live stream from the permitted diversion down to McConnell gage), provides the necessary protection to the protestant. Furthermore, spill from Chesbro and Clementia reservoirs will flow into the Cosumnes River upstream from the protestant. Calero reservoir's entire watershed is 210 acres, with the reservoir itself occupying 118 acres. Therefore, only a small additional amount could be diverted from the Cosumnes River in place of collecting local runoff, but only outside the protestant's irrigation season.

Petitioner further points out that order Paragraph 8 may conflict with Condition 18 which requires that in subnormal years the reservoirs be filled early to aid downstream fish migration flows. The Board finds that order Paragraph 8 is excessively burdensome and does not provide optimum operation of the permittee's project considering all of the permit requirements together. The project as permitted also contains a built-in incentive to collect local runoff since the collection of such runoff avoids needless pumping and energy expended. Accordingly, order Paragraph 8 should be modified to require petitioner to collect local runoff where practicable.

b. Petitioner requests the Board to amend subparagraph (d) of finding 7.d.(2), which reads:

> *"Protestant's concerns with access to the meters was resolved at the hearing at which time OHWD and Rancho Murieta agreed that Schneider Ranch would be granted access as a representative of OHWD."*

Petitioner contends that this finding incorrectly implies that Rancho Muieta agrees to designation of multiple representatives by OHWD. We find that the record substantiates petitioner's contention. The order will be amended accordingly.

Petition of Jay Schneider

4. Petitioner raises four issues:

a. Petitioner insists that the requested change in place of use under License 6238 (Rancho Murieta) should be disapproved. Petitioner offers no new matter in support of his request. We have reviewed the record and find no error in our interpretation of the facts. Petitioner's request should, therefore, not be granted.

b. Petitioner requests that License 2629 (Cosumnes Irrigation Association) be reduced on a pro rata basis rather than by considering actual use data as found in finding 24 b of Order 79-13. The original basis for determining the amount of water to be licensed was an estimate and was not based on use data which is a preferable basis. There is no doubt from the record that the full amount of the license was beneficially used prior to issuance of the license. With the present change in the project, current use data will be available. There is no reason not to use a measured amount rather than a hypothetical amount when such data becomes available. There is precedent for this approach. (See Board Order 74-35.)

c. Petitioner, in reference to the U. S. Bureau of Reclamation's permits, requests that the Schneider Ranch be included in the place of use. We find that inclusion of the Schneider Ranch in the place of use is outside the scope of this preceeding and that the discussion under finding 2, above, is applicable to this request. Petitioner further requests that domestic use as well as municipal and industrial uses be limited to net amounts to control growth. The Board finds further that the U. S. Bureau of Reclamation properly petitioned for a change in character of use and the records indicate that the water under the permits has been fully utilized and the Bureau expects the

project to be licensed in 1979. Further, the El Dorado Irrigation District has previously pointed out that future growth will be supplied with water from other sources.

d. Petitioner requests that the Board amend its order concerning public access to the Cosumnes River adjacent tc Rancho Murieta to require equal access to all portions of the river. The Board finds that petitioner has offered no new matter to support his request, that the order was made after due consideration of all the record and that the County of Sacramento is the proper authority to implement and control access to the river.

5. The Board further finds that reference to License 537, order Paragraph 3 of Order 79-13 on Page 42 is a clerical error and should be amended to refer to License 6238.

From the foregoing findings, the Board concludes that Order 79-13 should be amended as set forth in the order following:

ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

1. The permit term contained in order Paragraph 8 on Permit 16762, Page 40, of Order 79-13 is modified to read as follows:

> *"Permittee shall make all reasonable efforts to collect local runoff to storage to the extent local runoff is available in lieu of diverting water from the Cosumnes River."*

2. Subparagraph (d) of finding 7.d(2) (Page 11) of Order 79-13 is modified as follows:

> *"Protestant's concerns with access to the meters was resolved at the hearing, at which time OHWD and Rancho Murieta agreed that Schneider Ranch could be granted access as the representative of Omochumne-Hartnell Water District."*

3. Paragraph 3 of Order 79-13 on Page 42 is deleted and a new Term 10 on Page 41 shall be added to License 6238 as follows:

> *"This license is subject to the agreement dated March 26, 1979 between licensee and Omochumne-Hartnell Water District to the extent such agreement covers matters within the Board's jurisdiction."*

4. Except as hereinabove ordered, the petitions for reconsideration are dismissed.

Dated: AUG 16 1979

W. Don Maughan, Chairman

L. L. Mitchell, Member

ABSENT

William J. Miller, Vice Chairman

Carla M. Bard, Member

COPY

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RIGHTS

see Board Orders 79-13 74-23

License for Diversion and Use of Water

LICENSE No. 537 PERMIT No. 1030 APPLICATION No. 1838

This is to Certify, *That* J. D. Cranlees, Slough House, California (Notice of Assignment (Over)

has made proof to the satisfaction of the Division of Water Rights of California of a right to the use of the waters of Cosumnes River in Sacramento County

tributary of Mokelumne River

for the purpose of Irrigation
under Permit No. 1030 *of the Division of Water Rights and that said right to the use of said waters has been perfected in accordance with the laws of California, the rules and regulations of the Division of Water Rights and the terms of the said permit; that the priority of the right herein confirmed dates from* May 25, 1920;

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed two (2) cubic feet per second from about March 15th to about September 1st of each season. Diversions under this license, together with those under existing rights of licensee herein which are to be directly applied to irrigation use without storage, shall not exceed the rate of one cubic foot per second continuous flow to each eighty acres of irrigated land; provided however, that in case of rotation the equivalent of such continuous flow allowance for any thirty day period may be diverted in a shorter time if there be no interference with other vested rights.

The point of diversion of such water is located North eighty-eight degrees fifty-seven minutes East (N 88° 57' E) eight thousand five hundred seventy-eight and two tenths (8578.2) feet from the southwest corner Section 34, T 8 N, R 8 E, M.D.B. & M., being within the SW¼ SE¼ of Section 35, said township and range.

A description of the lands or the place where such water is put to beneficial use is as follows:

20 acres within the SE¼ SE¼ Section 33, T 8 N, R 8 E;
26 acres within the NE¼ NE¼,
27 acres within the NW¼ NE¼,
80 acres within the S½ NE¼ Section 4;
2 acres within the NW¼ NW¼ and
5 acres within the SW¼ NW¼ Section 3, T 7 N, R 8 E, M.D.B. & M.
160 acres total

As there is a possibility that there will not be sufficient water in Cosumnes River during the latter part of the irrigation season to satisfy all requirements, this license is issued subject to the express condition that the use hereunder may be regulated by the Division of Water Rights during such periods of water scarcity to the end that such use will not interfere with rights under prior applications.

The right to the diversion and use of the water aforesaid hereby confirmed is restricted to the point of diversion herein specified and to the lands or place of use herein described.

This license is granted and said appropriator takes all rights herein mentioned subject to the terms and condit.ons ~~set forth~~ in Section 20 of Chapter 586, Statutes 1913, which is as follows:

SEC. 20. All permits and licences for the appropriation of water shall be under the terms and conditions of this act, and shall be effective for such time as the water actually appropriated under such permits and licenses shall actually be used for the useful and beneficial purpose for which said water was appropriated, but no longer; and every such permit or license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this section and likewise the statement that any appropriator of water, to whom said permit or license may be issued, shall take the same subject to such conditions as therein expressed; *provided*, that if, at any time after the expiration of twenty years after the granting of a license, the state, or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the state shall desire to purchase the works and property occupied and used under said license and the works built or constructed for the enjoyment of the rights granted under said license; and in the event that the said state, city, city and county, municipal water district, irrigation district, lighting district or political subdivision of the state so desiring to purchase and the said owner of said works and property can not agree upon said purchase price, said price shall be determined in such manner as is now or may hereafter be determined in eminent domain proceedings. If it shall appear to the state water commission at any time after a permit or license is issued as in this act provided that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee, has not put the water granted under said permit or license to the useful or beneficial purpose for which the permit or license was granted, or that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee, has ceased to put said water to such useful or beneficial purpose, or that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee has failed to observe any of the terms and conditions in the permit or license as issued, then and in that case the said commission, after due notice to the permittee, licensee, or the heirs successors or assigns of such permittee or licensee, and a hearing thereon, may revoke said permit or license, and declare the water to be unappropriated and open to further appropriation in accordance with the terms of this act. And the findings and declaration of said commission shall be deemed to be prima facie correct until modified or set aside by a court of competent jurisdiction; *provided*, that any action brought so to modify or set aside such finding or declaration must be commenced within thirty days after the service of notice of said revocation on said permittee or licensee, his heirs, successors or assigns. And every licensee or permittee under the provisions of this act if he accept such permit or license shall accept the same under the conditions precedent that no value whatsoever in excess of the actual amount paid to the state therefor shall at any time be assigned to or claimed for any permit or license granted or issued under the provisions of this act, or for any rights granted or acquired under the provisions of this act, in respect to the regulations by any competent public authority of the services or the price of the services to be rendered by any permittee or licensee, his heirs, successors or assigns or by the holder of any rights granted or acquired under the provisions of this act, or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the state or any city, city and county, municipal water district, irrigation district, lighting district or any political subdivision of the state, of the rights and property of any permittee or licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this act. The application for a permit by municipalities for the use of water for said municipalities or the inhabitants thereof for domestic purposes shall be considered first in right, irrespective of whether they are first in time; *provided, however*, that such application for a permit or the granting thereafter of permission to any municipality to appropriate waters, shall not authorize the appropriation of any water for other than municipal purposes; *and providing, further*, that where permission to appropriate is granted by the state water commission to any municipality for any quantity of water in excess of the existing municipal needs therefor, that pending the application of the entire appropriation permitted, the state water commission shall have the power to issue permits for the temporary appropriation of the excess of such permitted appropriation over and above the quantity being applied from time to time by such municipality; *and providing, further*, that in lieu of the granting of such temporary permits for appropriation, the state water commission may authorize such municipality to become as to such surplus a public utility, subject to the jurisdiction and control of the railroad commission of the State of California for such period or periods from and after the date of the issuance of such permission to appropriate, as may be allowed for the application to municipal ures of the entire appropriation permitted; *and provided, further*, that when such municipality shall desire to use the additional water granted in its said application it may do so upon making just compensation for the facilities for taking, conveying and storing such additional water rendered valueless for said purposes, to the person, firm or corporation which constructed said facilities for the temporary use of said excess waters, and which compensation, if not agreed upon between the municipality and said person, firm or corporation, may be determined in the manner provided by law for determining the value of property taken by and through eminent domain proceedings.

Witness the signature of the Chief of the DIVISION OF WATER RIGHTS, *Department of Public Works of the State of California, and the seal of said department this* 10th *day of* May, 1926.

Chief of Division of Water Rights, Department of Public Works of the State of California

1/12/58 RECEIVED NOTICE OF ASSIGNMENT TO Estate of Catherine P. Frankes

4/22/60 RECEIVED NOTICE OF ASSIGNMENT TO George W. Artz & Hal L. Ellis

11/20/68 RECEIVED NOTICE OF ASSIGNMENT TO Bank of America N.T.&S.A., as Corporate Executors of the Bernstein Trust Fund (Operating Engineers)

9-12-86 Assgn to Rancho Murieta Properties, Inc

1-14-88 Assgn to: Rancho Murieta Community Services Dist.

LICENSE NO._____

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RIGHTS

LICENSE
TO APPROPRIATE WATER

ISSUED TO_____

DATED_____

40529 8-25 2M

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RIGHTS

see Board Orders 79-13 79-23

License for Diversion and Use of Water

LICENSE No. 537 PERMIT No. 1030 APPLICATION No. 1838

This is to Certify, *That* J. D. Cranlees, Slough House, California (Notice of Assignment (Over)

has made proof to the satisfaction of the Division of Water Rights of California of a right to the use of the waters of Cosumnes River in Sacramento County

tributary of Mokelumne River

for the purpose of irrigation
under Permit No. 1030 *of the Division of Water Rights and that said right to the use of said waters has been perfected in accordance with the laws of California, the rules and regulations of the Division of Water Rights and the terms of the said permit; that the priority of the right herein confirmed dates from* May 25, 1920;

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed two (2) cubic feet per second from about March 15th to about September 1st of each season. Diversions under this license, together with those under existing rights of licensee herein which are to be directly applied to irrigation use without storage, shall not exceed the rate of one cubic foot per second continuous flow to each eighty acres of irrigated land; provided however, that in case of rotation the equivalent of such continuous flow allowance for any thirty day period may be diverted in a shorter time if there be no interference with other vested rights.

The point of diversion of such water is located North eighty-eight degrees fifty-seven minutes East (N 88° 57' E) eight thousand five hundred seventy-eight and two tenths (8578.2) feet from the southwest corner Section 34, T 8 N, R 8 E, M.D.B. & M., being within the SE¼ SE¼ of Section 35, said township and range.

A description of the lands or the place where such water is put to beneficial use is as follows:

20 acres within the SE¼ SE¼ Section 35, T 8 N, R 8 E;
26 acres within the NE¼ NE¼,
27 acres within the NW¼ NE¼,
80 acres within the S½ NE¼ Section 4;
2 acres within the N½ NW¼ and
5 acres within the SW¼ NW¼ Section 3, T 7 N, R 8 E, M.D.B. & M.
160 acres total

As there is a possibility that there will not be sufficient water in Cosumnes River during the latter part of the irrigation season to satisfy all requirements, this license is issued subject to the express condition that the use hereunder may be regulated by the Division of Water Rights during such periods of water scarcity to the end that such use will not interfere with rights under prior applications.

The right to the diversion and use of the water aforesaid hereby confirmed is restricted to the point of diversion herein specified and to the lands or place of use herein described.

This license is granted and said appropriator takes all rights herein mentioned subject to the terms and conditions set forth in Section 20 of Chapter 586, Statutes 1913, which is as follows:

SEC. 20. All permits and licenses for the appropriation of water shall be under the terms and conditions of this act, and shall be effective for such time as the water actually appropriated under such permits and licenses shall actually be used for the useful and beneficial purpose for which said water was appropriated, but no longer; and every such permit or license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this section and likewise the statement that any appropriator of water, to whom said permi[illegible]r license may be issued, shall take the same subject to such conditions as therein expressed; *provided*, that if, at any time after the expiration of twenty [illegible] after [illegible]he granting of a license, the state, or any city, city and county, municipal water district, irrigation district, lighting district, or any political sul[illegible]sion o[illegible] the state shall have the right to purchase the works and property occupied and used under said license and the works built or constructed f[illegible] enjoyment of the rights granted under said license; and in the event that the said state, city, city and county, municipal water district, irrigation di[illegible] lighting district or political subdivision of the state so desiring to purchase and the said owner of said works and property can not agree upon said [illegible]se price, said price shall be determined in such manner as is now or may hereafter be determined in eminent domain proceedings. If it shall appear [illegible] the state water commission at any time after a permit or license is issued as in this act provided that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee, has not put the water granted under said permit or license to the useful or beneficial purpose for which the permit or license was granted, or that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee, has ceased to put said water to such useful or beneficial purpose, or that the permittee or licensee, or the heirs, successors or assigns of said permittee or licensee has failed to observe any of the terms and conditions in the permit or license as issued, then and in that case the said commission, after due notice to the permittee, licensee, or the heirs, successors or assigns of such permittee or licensee, and a hearing thereon, may revoke said permit or license, and declare the water to be unappropriated and open to further appropriation in accordance with the terms of this act. And the findings and declaration of said commission shall be deemed to be prima facie correct until modified or set aside by a court of competent jurisdiction; *provided*, that any action brought so to modify or set aside such finding or declaration must be commenced within thirty days after the service of notice of said revocation on said permittee or licensee, his heirs, successors or assigns. And every licensee or permittee under the provisions of this act if he accept such permit or license shall accept the same under the conditions precedent that no value whatsoever in excess of the actual amount paid to the state therefor shall at any time be assigned to or claimed for any permit or license granted or issued under the provisions of this act, or for any rights granted or acquired under the provisions of this act, in respect to the regulations by any competent public authority of the services or the price of the services to be rendered by any permittee or licensee, his heirs, successors or assigns or by the holder of any rights granted or acquired under the provisions of this act, or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the state or any city, city and county, municipal water district, irrigation district, lighting district or any political subdivision of the state, of the rights and property of any permittee or licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this act. The application for a permit by municipalities for the use of water for said municipalities or the inhabitants thereof for domestic purposes shall be considered first in right, irrespective of whether they are first in time; *provided, however*, that such application for a permit or the granting thereafter of permission to any municipality to appropriate waters, shall not authorize the appropriation of any water for other than municipal purposes; *and providing, further*, that where permission to appropriate is granted by the state water commission to any municipality for any quantity of water in excess of the existing municipal needs therefor, that pending the application of the entire appropriation permitted, the state water commission shall have the power to issue permits for the temporary appropriation of the excess of such permitted appropriation over and above the quantity being applied from time to time by such municipality; *and providing, further*, that in lieu of the granting of such temporary permits for appropriation, the state water commission may authorize such municipality to become as to such surplus a public utility, subject to the jurisdiction and control of the railroad commission of the State of California for such period or periods from and after the date of the issuance of such permission to appropriate, as may be allowed for the application to municipal uses of the entire appropriation permitted; *and provided, further*, that when such municipality shall desire to use the additional water granted in its said application it may do so upon making just compensation for the facilities for taking, conveying and storing such additional water rendered valueless for said purposes, to the person, firm or corporation which constructed said facilities for the temporary use of said excess waters, and which compensation, if not agreed upon between the municipality and said person, firm or corporation, may be determined in the manner provided by law for determining the value of property taken by and through eminent domain proceedings.

Witness the signature of the Chief of the DIVISION OF WATER RIGHTS, *Department of Public Works of the State of California, and the seal of said department this* 10th *day of* May, 1926.

Edward Hyatt

Chief of Division of Water Rights, Department of Public Works of the State of California

1/12/58 RECEIVED NOTICE OF partial ASSIGNMENT TO Est. of Catherine P. Granlees

4/20/60 RECEIVED NOTICE OF ASSIGNMENT TO George W. Artz & Hal L. Ellis

11/28/68 RECEIVED NOTICE OF ASSIGNMENT TO Bank of America N.T.&S.A., as Corporate Trustee of the Pension Trust Fund for Operating Engineers

9-12-86 Asgd to Rancho Murieta Properties, Inc

1-14-88 Asgd to: Rancho Murieta Community Services Dist.

LICENSE NO.______

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RIGHTS

LICENSE
TO APPROPRIATE WATER

ISSUED TO______

DATED______

40528 9-25 2M

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

License for Diversion and Use of Water

APPLICATION 24085 PERMIT 16582 LICENSE 11117

THIS IS TO CERTIFY, *That* HARRY CARLSON; MARJORIE J CARLSON; PHILIP MAUGHN AND RUTH MAUGHN c/o HARRY CARLSON, 2720 CAPITOL AVENUE, SACRAMENTO, CALIFORNIA 95816 own

HAVE *made proof as of* JUNE 6, 1977 *(the date of inspection) to the satisfaction of the State Water Resources Control Board of a right to the use of the water of* (1) COSUMNES RIVER AND (2)(3) TWO UNNAMED STREAMS IN SACRAMENTO COUNTY

tributary to (1) MOKELUMNE RIVER AND (2)(3) COSUMNES RIVER THENCE MOKELUMNE RIVER

for the purpose of IRRIGATION, STOCKWATERING AND RECREATIONAL USES *under Permit* 16582 *of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from* JUNE 5, 1972 *and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed* A TOTAL OF NINETY-SEVEN (97) ACRE-FEET PER ANNUM TO BE COLLECTED FROM NOVEMBER 1 OF EACH YEAR TO APRIL 30 OF THE SUCCEEDING YEAR AS FOLLOWS:

RESERVOIR #1 - 48 ACRE-FEET PER ANNUM
RESERVOIR #2 - 49 ACRE-FEET PER ANNUM

THE MAXIMUM WITHDRAWAL IN ANY ONE YEAR SHALL NOT EXCEED 97 ACRE-FEET FROM BOTH RESERVOIRS. THE MAXIMUM RATE OF DIVERSION TO OFFSTREAM STORAGE SHALL NOT EXCEED 10 CUBIC FEET PER SECOND.

THIS LICENSE DOES NOT AUTHORIZE COLLECTION OF WATER TO STORAGE OUTSIDE OF THE SPECIFIED SEASON TO OFFSET EVAPORATION AND SEEPAGE LOSSES OR FOR ANY OTHER PURPOSE.

THE POINT OF DIVERSION TO OFFSTREAM STORAGE OF SUCH WATER IS LOCATED:

(1) GRANLEES DAM - NORTH 88°57' EAST 8,578.2 FEET FROM SW CORNER OF SECTION 34, T8N, R8E, MDB&M, BEING WITHIN SW1/4 OF SE1/4 OF SECTION 35, T8N, R8E, MDB&M.

THE POINTS OF DIVERSION AND STORAGE OF SUCH WATER ARE LOCATED:

(2) RESERVOIR #1 - SOUTH 800 FEET AND WEST 650 FEET FROM NE CORNER OF SECTION 5, T7N, R8E, MDB&M, BEING WITHIN NE1/4 OF NE1/4 OF SAID SECTION 5,
(3) RESERVOIR #2 - SOUTH 2,300 FEET AND EAST 1,700 FEET FROM NW CORNER OF SECTION 5, T7N, R8E, MDB&M, BEING WITHIN SE1/4 OF NW1/4 OF SAID SECTION 5.

Licensee shall allow representatives of the Board and other parties, as may be authorized from time to time by the Board, reasonable access to project works to determine compliance with the terms of this license.

Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this license, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

This continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this license with a view to minimizing waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Licensee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this license and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the Board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: MAY 11 1961

STATE WATER RESOURCES CONTROL BOARD

Chief, Division of Water Rights

11117

A DESCRIPTION OF LANDS OR THE PLACE WHERE
SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

STOCKWATERING AND RECREATIONAL USE AT RESERVOIR #1 WITHIN N1/2 OF NE1/4 AND RESERVOIR #2 WITHIN NW1/4, AND IRRIGATION OF 300 ACRES WITHIN A GROSS AREA OF 445 ACRES, ALL IN SECTION 5, T7N, R8E, MDB&M, AS SHOWN ON MAP FILED WITH STATE WATER RESOURCES CONTROL BOARD.

NO WATER SHALL BE DIVERTED UNDER THIS LICENSE FROM THE COSUMNES RIVER WHEN THE FLOW MEASURED AT MICHIGAN BAR GAGE IS LESS THAN 70 CUBIC FEET PER SECOND. THE PROVISIONS OF THIS PARAGRAPH ARE BASED UPON A BILATERAL AGREEMENT BETWEEN LICENSEE AND THE DEPARTMENT OF FISH AND GAME AND SHALL NOT BE CONSTRUED AS A FINDING BY THE STATE WATER RESOURCES CONTROL BOARD THAT THE AMOUNT OF WATER NAMED HEREIN IS EITHER ADEQUATE OR REQUIRED FOR THE MAINTENANCE OF FISH.

THE QUANTITY OF WATER DIVERTED UNDER THIS LICENSE IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD, IF, AFTER NOTICE TO THE LICENSEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES.

LICENSEE SHALL MAINTAIN AN OUTLET PIPE OF ADEQUATE CAPACITY IN HIS DAMS AS NEAR AS PRACTICABLE TO THE BOTTOM OF THE NATURAL STREAM CHANNEL, OR PROVIDE OTHER MEANS SATISFACTORY TO THE STATE WATER RESOURCES CONTROL BOARD, IN ORDER THAT WATER ENTERING THE RESERVOIRS WHICH IS NOT AUTHORIZED FOR APPROPRIATION UNDER THIS LICENSE MAY BE RELEASED.

4-12-82 Asgd to Frederic E. Jr. & Patricia D. Anderson

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

License for Diversion and Use of Water

APPLICATION 22603 PERMIT 15348 LICENSE 9925

THIS IS TO CERTIFY, *That* BANK OF AMERICA, NT&SA, AS CORPORATE CO-TRUSTEE OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS c/o DAN F. GALLERY, 926 J STREET, SUITE 505, SACRAMENTO, CALIFORNIA 95814

HAS *made proof as of* MAY 7, 1971 *(the date of inspection) to the satisfaction of the State Water Resources Control Board of a right to the use of the water of* AN UNNAMED STREAM IN SACRAMENTO COUNTY

tributary to COSUMNES RIVER THENCE MOKELUMNE RIVER

for the purpose of RECREATIONAL AND STOCKWATERING USES *under Permit* 15348 *of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from* OCTOBER 7, 1966 *and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed* FIVE (5) ACRE-FEET PER ANNUM TO BE COLLECTED FROM NOVEMBER 15 OF EACH YEAR TO APRIL 15 OF THE SUCCEEDING YEAR.

AFTER THE INITIAL FILLING OF THE RESERVOIR, LICENSEE'S RIGHT UNDER THIS LICENSE EXTENDS ONLY TO WATER NECESSARY TO KEEP THE STORAGE RESERVOIR FULL BY REPLACING WATER BENEFICIALLY USED AND WATER LOST BY EVAPORATION AND SEEPAGE, AND TO REFILL, IF EMPTIED FOR NECESSARY MAINTENANCE OR REPAIR.

THE POINT OF DIVERSION OF SUCH WATER IS LOCATED:

SOUTH 750 FEET AND EAST 2,000 FEET FROM NW CORNER OF SECTION 34, T8N, R8E, MDB&M, BEING WITHIN NE1/4 OF NW1/4 OF SAID SECTION 34.

A DESCRIPTION OF LANDS OR THE PLACE WHERE SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

STOCKWATERING AND RECREATIONAL USES AT GRANLEES NO. 4 RESERVOIR WITHIN NE1/4 OF NW1/4 OF SECTION 34, T8N, R8E, MDB&M.

THIS LICENSE DOES NOT AUTHORIZE COLLECTION OF WATER TO STORAGE OUTSIDE OF THE SPECIFIED SEASON TO OFFSET EVAPORATION AND SEEPAGE LOSSES OR FOR ANY OTHER PURPOSE.

31087-983 4-69 3M ⓓ OSP

4-7-82 Asgd to Pension Trust Fund For Operating Engineers (Rancho Murietta)
9-12-86 Asgd to Rancho Murieta Properties Inc.
1-14-88 Asgd to Rancho Murieta Community Services Dist.

Licensee shall allow representatives of the Board and other parties, as may be authorized from time to time by the Board, reasonable access to project works to determine compliance with the terms of this license.

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the Board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: MAY 15 1972

STATE WATER RESOURCES CONTROL BOARD

K. L. Woodward

Chief, Division of Water Rights

STATE OF CALIFORNIA—STATE WATER RIGHTS BOARD

License for Diversion and Use of Water

APPLICATION 19477 PERMIT 12680 LICENSE 7744

THIS IS TO CERTIFY, *That* George W. Artz and Hal L. Ellis
P. O. Box 2550
Sacramento, California
have made proof as of December 16, 1965,

Notice of Change (Over)

(the date of inspection) to the satisfaction of the State Water Rights Board of a right to the use of the water of an unnamed stream in Sacramento County

tributary to Crevis Creek thence Deer Creek thence Cosumnes River

for the purpose of stockwatering and recreational uses
under Permit 12680 *of the State Water Rights Board and that said right to the use of said water has been perfected in accordance with the laws of California, the Rules and Regulations of the State Water Rights Board and the terms of the said permit; that the priority of the right herein confirmed dates from* June 6, 1960,
and that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed forty-nine and twenty-six hundredths (49.26) acre-feet per annum to be collected from about November 15 of each year to about May 15 of the succeeding year.

The point of diversion of such water is *located* :

South one thousand two hundred (1200) feet and west two thousand five hundred (2500) feet from NE corner of Section 27, T8N, R8E, MDB&M, being within NW¼ of NE¼ of said Section 27.

A description of the lands or the place where such water is put to beneficial use is as follows:

At reservoir within NW¼ of NE¼ and SW¼ of NE¼ of Section 27, T8N, R8E, MDB&M.

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the State Water Rights Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

FORM 64

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: APR 6 1966

STATE WATER RIGHTS BOARD

L. K. Hill
L. K. Hill
Executive Officer

11/26/68 — NOTICE OF ASSIGNMENT TO ~~a Corporation~~ Bank of America N.T.&S.A. for Pension Trust Transfer Operating Engineers

4-7-82 Asgd to Pension Trust Fund for operating Engineers (Rancho Murietta)

9-12-86 Asgd to Rancho Murieta Properties, Inc.

1-14-88 Rancho Murieta Community Services District

LICENSE 7744

STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

LICENSE
TO APPROPRIATE WATER

ISSUED TO George W. Artz and Hal L. Ellis

DATED APR 6 1966

FEB 8'66 M.J.B.

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RIGHTS BOARD

License for Diversion and Use of Water

APPLICATION 20057 PERMIT 13162 LICENSE 8013

THIS IS TO CERTIFY, *That* GEORGE W. ARTZ AND HAL L. ELLIS Notice of Change (Over)
P. O. BOX 15770, SACRAMENTO, CALIFORNIA 95813

HAVE *made proof as of* AUGUST 25, 1966,
(the date of inspection) to the satisfaction of the State Water Rights Board of a right to the use of the water of AN UNNAMED STREAM IN SACRAMENTO COUNTY

tributary to COSUMNES RIVER THENCE MOKELUMNE RIVER

for the purpose of STOCKWATERING AND RECREATIONAL USES
under Permit 13162 *of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from* MARCH 29, 1961, *and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed* EIGHT (8) ACRE-FEET PER ANNUM TO BE COLLECTED FROM ABOUT NOVEMBER 15 OF EACH YEAR TO ABOUT APRIL 15 OF THE SUCCEEDING YEAR.

LICENSEE'S RIGHT HEREUNDER EXTENDS ONLY TO WATER NECESSARY TO KEEP THE RESERVOIR FULL BY REPLACING WATER BENEFICIALLY USED OR LOST BY EVAPORATION AND SEEPAGE, AND TO REFILL IF EMPTIED FOR NECESSARY MAINTENANCE OR REPAIR.

THE POINT OF DIVERSION OF SUCH WATER IS LOCATED:

SOUTH 750 FEET AND EAST 2000 FEET FROM NW CORNER OF SECTION 34, T8N, R8E, MDB&M, BEING WITHIN NE1/4 OF NW1/4 OF SAID SECTION 34.

A DESCRIPTION OF LANDS OR THE PLACE WHERE
SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

AT RESERVOIR WITHIN NE1/4 OF NW1/4 OF SECTION 34, T8N, R8E, MDB&M.

Licensee shall allow representatives of the Board and other parties, as may be authorized from time to time by the Board, reasonable access to project works to determine compliance with the terms of this license.

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the Board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: APR 10 1967

L. K. Hill
Executive Officer

11/26/68 RECEIVED NOTICE OF ASSIGNMENT TO the Pension Fund Trust for Operating Engineers [illegible] Bank of America N.T.&S.A. a Corporate Co-trustee of

9-12-86 asgd to Rancho Murrieta Properties Inc.

1-14-88 Asgd to, Rancho Murrieta Community Services Dist

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

ORDER

APPLICATION 16143 PERMIT 10145 LICENSE 6239

ORDER ALLOWING CHANGE IN PURPOSE OF USE

WHEREAS:

1. License 6239 was issued to Arthur J. Granlees and Josephine D. Granlees and was filed with the County Recorder of Sacramento County on April 12, 1961.

2. License 6239 was subsequently assigned to Rancho Murieta Properties, Inc..

3. A petition for change in purpose of use has been filed with the State Water Resources Control Board and said Board has determined that good cause for such change has been shown.

4. The Board has determined that the petitioned change does not constitute the initiation of a new right nor operate to the injury of any other lawful user of water.

NOW, THEREFORE, IT IS ORDERED THAT:

1. The purpose of use under this license shall be as follows:

   Recreation, Fish and Wildlife Protection and Enhancement

2. The License paragraph pertaining to the continuing authority of the Board is amended to read:

   Pursuant to California Water Code Sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this license, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

   The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this license with a view to eliminating waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Licensee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of

this license and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the Board also may be exercised by imposing further limitations on the diversion and use of water by the licensee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust.

Dated: APRIL 13 1988

Walter G. Pettit, Chief
Division of Water Rights

STATE OF CALIFORNIA—STATE WATER RIGHTS BOARD

License for Diversion and Use of Water

APPLICATION 16143 PERMIT 10145 LICENSE 6239

Arthur J. Granlees and Josephine D. Granlees
Sloughhouse, California

THIS IS TO CERTIFY, *That* Notice of Assignment (Over)

ha ve *made proof as of* April 7, 1960,
(the date of inspection) to the satisfaction of the State Water Rights Board of a right to the use of the water of
an unnamed gully in Sacramento County
tributary to Cosumnes River

for the purpose of stockwatering use
under Permit 10145 *of the State Water Rights Board and that said right to the use of said water has been perfected in accordance with the laws of California, the Rules and Regulations of the State Water Rights Board and the terms of the said permit; that the priority of the right herein confirmed dates from* November 18, 1954
and that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed twenty (20) acre-feet per annum
to be collected from about October 1 of each year to about May 1 of the succeeding year.

The point of diversion of such water is *located* :

North three thousand nine hundred (3900) feet and east three thousand one hundred seventy (3170) feet from SW corner of Section 35, T8N, R8E, MDB&M, being within $SW\frac{1}{4}$ of $NE\frac{1}{4}$ of said Section 35.

A description of the lands or the place where such water is put to beneficial use is as follows:

Within $SW\frac{1}{4}$ of $NE\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M.

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the State Water Rights Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

FORM 64

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: APR. 11 1961

STATE WATER RIGHTS BOARD · CALIFORNIA

L. K. Hill
L. K. Hill
Executive Officer

12-26-62- Name chgd. from Arthur Granlees to Estate of Arthur Granlees

11-4-66 RECEIVED NOTICE OF ASSIGNMENT TO ~~George W.~~ Artz, Jean Fitting Artz, Hal L. & Louise Ellis

Bank of America N.T. & S.A. as Corporate Executor of the Estate

11/26/68 RECEIVED NOTICE OF ASSIGNMENT TO ~~Joint Board for Interstate~~

9-12-86 Assgd to Rancho Murieta Properties Inc
1-14-88 Assgd to: Rancho Murieta Community Services Dist.

LICENSE 6239

STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

LICENSE
TO APPROPRIATE WATER

ISSUED TO Arthur J. & J.D. Granlees

DATED APR 11 1961

FORM 64

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

License for Diversion and Use of Water

LICENSE 2629 PERMIT 1320 APPLICATION 2296

THIS IS TO CERTIFY, *That* Cosumnes Irrigation Association, Sloughhouse, California

as of May 9, 1941 (the date of inspection)

has 8 *made proof to the satisfaction of the Division of Water Resources of California of a right to the use of the waters of* Cosumnes River in Sacramento County

tributary of San Joaquin River

for the purpose of irrigation use *under Permit* 1320 *of the Division of Water Resources and that said right to the use of said waters has been perfected in accordance with the laws of California, the rules and regulations of the Division of Water Resources and the terms of the said permit; that the priority of the right herein confirmed dates from* April 12, 1921;

that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed twelve and five tenths (12.5) cubic feet per second from about March 1 to about July 10 of each season.

In case of rotation the equivalent of such continuous flow allowance for any thirty day period may be diverted in a shorter time if there be no interference with other vested rights.

This license is based on the use of water made during the year 1941 which was the year of maximum use within the three year period preceding the date of inspection; namely, May 9, 1941.

The point of diversion of such water is *located* North eighty eight degrees, fifty seven minutes East (N. 88° 57' E.) eighty five hundred seventy eight and two tenths (8578.2) feet from the SW corner of Section 34, T 8 N, R 8 E, M.D.B. & M., being within the SW¼ of SE¼ of Section 35, T 8 N, R 8 E, M.D.B. & M.

A description of the lands or the place where such water is put to beneficial use is as follows: irrigation of 893.9 acres as follows:

NE¼				NW¼				SW¼				SE¼				Total	M.D.B. & M.		
NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Acres	Sec	Twp	Rge
	6			3		16	6	8	39	40	15					133	3	7 N	8 E
				20	35	41.5	41.5	41.5	41.5	41.5	40	30	41.5	21.5	1	396.5	4	"	"
18	1	30	41.5				17	36	10	20	17	41.5	41.5	23.4	35.2	332.1	5	"	"
				4.3												4.3	9	"	"
				28												28	10	"	"

The Water Commission Act was superseded by the Water Code on August 4, 1943. By force of the provisions of the latter, all references in this form to the Division of Water Resources will be understood to mean the Department of Public Works acting by and through the State Engineer.

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the Division of Water Resources in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Division of Water Resources.

The right to the diversion and use of the water aforesaid hereby confirmed is restricted to the point of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the department.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property can not agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

FORM 64-A

Witness my hand and the seal of the Department of Public Works of the State of California, this 21st *day of* February, 19 44

[SEAL]

EDWARD HYATT
State Engineer

By Harold Conkling
Deputy State Engineer *Deputy*

LICENSE 2629

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF WATER RESOURCES

LICENSE TO APPROPRIATE WATER

ISSUED TO Cosumnes Irrigation Assn.

DATED February 21, 1944

10M8 3-42 1500 STATE PRINTING OFFICE

6-2-97
TEVIS ARMSTRONG DWR
DAM SAFETY HAS
CLEARANCE LISTED AT
1,047 AF NOT 1,250 AF.
THAT'S WHY IT WAS
LICENSE AT 1,047 AF
RYZ

THIS IS YOUR COPY OF THE LICENSE.
A COPY IS BEING RECORDED WITH THE COUNTY RECORDER.

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

License for Diversion and Use of Water

APPLICATION 23419 PERMIT 16765 LICENSE **13285**

THIS IS TO CERTIFY, That

Rancho Murieta Community Services District
P.O. Box 1050
Rancho Murieta, CA 95683

has made proof as of June 21, 1994 (the date of inspection) to the satisfaction of the State Water Resources Control Board of a right to the use of the water of an Unnamed Stream in Sacramento County

tributary to Cosumnes River thence Mokelumne River

for the purpose of Recreational use

under Permit 16765 of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from December 19, 1969 and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed one thousand forty-seven (1,047) acre-feet per annum to be collected from November 1 of each year to May 31 of the succeeding year.

This license does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose. (0000005)

After the initial filling of the reservoir, licensee's right under this license extends only to water necessary to keep the storage reservoir full by replacing water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. (0000040)

THE POINT OF DIVERSION OF SUCH WATER IS LOCATED:

By California Coordinates, Zone 2, North 305,440 and East 2,267,230, being within NE¼ of SW¼ of Section 35, T8N, R8E, MDB&M.

A DESCRIPTION OF THE LANDS OR THE PLACE WHERE SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

At Clementia Reservoir within Section 35 T8N, R8E, MDB&M, as shown on map filed with State Water Resources Control Board.

Licensee shall install and maintain an outlet pipe of adequate capacity in his dam as near as practicable to the bottom of the natural stream channel, or provide other means satisfactory to the State Water Resources Control Board, in order that water entering the reservoir which is not authorized for appropriation under this license may be released. (0050043)

Licensee shall allow representatives of the State Water Resources Control Board, employees of the Omochumne-Hartnell Water District, and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this license. (9990800)

Licensee shall allow representatives of the State Water Resources Control Board and other parties, as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this license.

The quantity of water diverted under this license is subject to modification by the Board if, after notice to the licensee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

Pursuant to California Water Code Sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this license, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

This continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this license with a view to eliminating waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Licensee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this license and to determine accurately water use as against reasonable water requirement for the authorized project. No action will be taken pursuant to this reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the Board also may be exercised by imposing further limitations on the diversion and use of water by the licensee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Sec. 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the Board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: MAY 20 1997

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED
BY ROGER JOHNSON

Chief, Division of Water Rights

State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
901 P Street, Sacramento, CA 95814
P.O. Box 2000, Sacramento, CA 95812

REQUEST FOR LICENSE

APPLICATION 23419 PERMIT 16765

SUBJECT TO THE APPROVAL BY THE STATE WATER RESOURCES CONTROL BOARD

Rancho Murieta Community Services District
P.O. Box 1050
Rancho Murieta, CA 95683

HAVING MADE PROOF OF June 21, 1994 (Date of Inspection)

HEREBY REQUEST LICENSE ACTION AS LISTED BELOW:

ACCORDING TO THE BEST KNOWLEDGE AND BELIEF OF THE UNDERSIGNED, A RIGHT HAS BEEN ESTABLISHED TO THE USE OF THE WATERS OF
an Unnamed Stream in Sacramento County
tributary to Cosumnes River thence Mokelumne River

FOR THE PURPOSE OF: Recreational use

UNDER PERMIT 16765 THE PRIORITY OF WHICH DATES FROM December 19, 1969

BY BENEFICIAL USE IN THE AMOUNT OF:

one thousand-forty seven (1,047) acre-feet per annum to be collected from November 1 of each year to May 31 of the succeeding year. (0000005)

This license does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose. (0000005)

After the initial filling of the reservoir, licensee`s right under this license extends only to water necessary to keep the storage reservoir full by replacing water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. (0000040)

THE POINT OF DIVERSION OF SUCH WATER IS LOCATED:

By California Coordinates, Zone 2, North 305,440 and East 2,267,230, being within NE¼ of SW¼ of Section 35, T8N, R8E, MDB&M.

A DESCRIPTION OF THE LANDS OR THE PLACE WHERE SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

At Clementia Reservoir within Section 35, T8N, R8E, MDB&M, as shown on map filed with State Water Resources Control Board.

Licensee shall maintain an outlet pipe of adequate capacity in his dam as near as practicable to the bottom of the natural stream channel, or provide other means satisfactory to the State Water Resources Control Board, in order that water entering the reservoir which is not authorized for appropriation under this license may be released. (0050043)

Licensee shall allow representatives of the State Water Resources Control Board, employees of the Omochumne-Hartnell Water District, and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this license.

THIS REQUEST FOR LICENSE IS MADE SUBJECT TO BOARD APPROVAL OF ANY PETITION NOTED ABOVE AND, IF ANY REDUCTION IN AMOUNT,SEASON, OR LAND DESCRIPTION BECOMES NECESSARY WHEN THESE ROUGH CALCULATIONS ARE CHECKED, THE OWNER WILL BE NOTIFIED AND ALLOWED 30 DAYS WITHIN WHICH TO PROTEST SUCH CHANGES.

PLEASE NOTE BEFORE SIGNING:

A LICENSE IS THE FINAL CONFIRMATION OF THE WATER RIGHT AND AMOUNT AND SEASON AS LIMITED BY THE LICENSE CANNOT BE INCREASED. EXCEPT AS AUTHORIZED BY THE LICENSE, ALL OTHER RIGHTS UNDER THE PERMIT ARE EXTINGUISHED.

SIGNATURE Marion C Cravens DATE April 20, 1995
PERMITTEE OR HIS REPRESENTATIVE

INSPECTED BY: J. Tevis Armstrong

CHECKED BY: _____
Senior Engineer

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

PERMIT 16726

Application 23419 of BANK OF AMERICA, N.T.& S.A. AS CORPORATE CO-TRUSTEE OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS

c/o DANIEL F. GALLERY, ATTORNEY, 926 J BUILDING, SACRAMENTO, CALIFORNIA 95814

filed on DECEMBER 19, 1969, has been approved by the State Water Resources Control Board SUBJECT TO VESTED RIGHTS and to the limitations and conditions of this Permit.

Permittee is hereby authorized to divert and use water as follows:

1. Source: UNNAMED STREAM — Tributary to: COSUMNES RIVER THENCE MOKELUMNE RIVER

2. Location of point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridan
BY CALIFORNIA COORDINATES, ZONE 2, X = 2,267,230 AND Y = 305,440	NE1/4 OF SW1/4	35	8N	8E	MD

County of SACRAMENTO

3. Purpose of use:	4. Place of use:	Section	Township	Range	Base and Meridan	Acres
RECREATIONAL						
STOCKWATERING	CLEMENTIA RESERVOIR IN W1/2 OF NE1/4	35	8N	8E	MD	
	E1/2 OF NW1/4	35	8N	8E	MD	
	NE1/4 OF SW1/4	35	8N	8E	MD	
	NW1/4 OF SE1/4	35	8N	8E	MD	

The place of use is shown on map filed with the State Water Resources Control Board.

5. THE WATER APPROPRIATED SHALL BE LIMITED TO THE QUANTITY WHICH CAN BE BENEFICIALLY USED AND SHALL NOT EXCEED 1,240 ACRE-FEET PER ANNUM TO BE COLLECTED FROM NOVEMBER 1 OF EACH YEAR TO MAY 31 OF THE SUCCEEDING YEAR.

THIS PERMIT DOES NOT AUTHORIZE COLLECTION OF WATER TO STORAGE OUTSIDE OF THE SPECIFIED SEASON TO OFFSET EVAPORATION AND SEEPAGE LOSSES OR FOR ANY OTHER PURPOSE. (0000005)

6. THE AMOUNT AUTHORIZED FOR APPROPRIATION MAY BE REDUCED IN THE LICENSE IF INVESTIGATION WARRANTS. (0000006)

7. CONSTRUCTION WORK SHALL BE COMPLETED ON OR BEFORE DECEMBER 1, 1980. (0000008)

8. COMPLETE APPLICATION OF THE WATER TO THE PROPOSED USE SHALL BE MADE ON OR BEFORE DECEMBER 1, 1990. (0000009)

9. PROGRESS REPORTS SHALL BE SUBMITTED PROMPTLY BY PERMITTEE WHEN REQUESTED BY THE STATE WATER RESOURCES CONTROL BOARD UNTIL LICENSE IS ISSUED. (0000010)

10. PURSUANT TO CALIFORNIA WATER CODE SECTION 100, ALL RIGHTS AND PRIVILEGES UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO, INCLUDING METHOD OF DIVERSION, METHOD OF USE, AND QUANTITY OF WATER DIVERTED, ARE SUBJECT TO THE CONTINUING AUTHORITY OF THE STATE WATER RESOURCES CONTROL BOARD IN ACCORDANCE WITH LAW AND IN THE INTEREST OF THE PUBLIC WELFARE TO PREVENT WASTE, UNREASONABLE USE, UNREASONABLE METHOD OF USE, OR UNREASONABLE METHOD OF DIVERSION OF SAID WATER.

THIS CONTINUING AUTHORITY OF THE BOARD MAY BE EXERCISED BY IMPOSING SPECIFIC REQUIREMENTS OVER AND ABOVE THOSE CONTAINED IN THIS PERMIT WITH A VIEW TO MINIMIZING WASTE OF WATER AND TO MEETING THE REASONABLE WATER REQUIREMENTS OF PERMITTEE WITHOUT UNREASONABLE DRAFT ON THE SOURCE. PERMITTEE MAY BE REQUIRED TO IMPLEMENT SUCH PROGRAMS AS (1) REUSING OR RECLAIMING THE WATER ALLOCATED; (2) RESTRICTING DIVERSIONS SO AS TO ELIMINATE AGRICULTURAL TAILWATER OR TO REDUCE RETURN FLOW; (3) SUPPRESSING EVAPORATION LOSSES FROM WATER SURFACES; (4) CONTROLLING PHREATOPHYTIC GROWTH; AND (5) INSTALLING, MAINTAINING, AND OPERATING EFFICIENT WATER MEASURING DEVICES TO ASSURE COMPLIANCE WITH THE QUANTITY LIMITATIONS OF THIS PERMIT AND TO DETERMINE ACCURATELY WATER USE AS AGAINST REASONABLE WATER REQUIREMENTS FOR THE AUTHORIZED PROJECT. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD DETERMINES, AFTER NOTICE TO AFFECTED PARTIES AND OPPORTUNITY FOR HEARING, THAT SUCH SPECIFIC REQUIREMENTS ARE PHYSICALLY AND FINANCIALLY FEASIBLE AND ARE APPROPRIATE TO THE PARTICULAR SITUATION. (0000012)

11. PERMITTEE SHALL ALLOW REPRESENTATIVES OF THE STATE WATER RESOURCES CONTROL BOARD, EMPLOYEES OF THE OMOCHUMNE-HARTNELL WATER DISTRICT, AND OTHER PARTIES AS MAY BE AUTHORIZED FROM TIME TO TIME BY SAID BOARD, REASONABLE ACCESS TO PROJECT WORKS TO DETERMINE COMPLIANCE WITH THE TERMS OF THIS PERMIT. (0000011)

12. THE QUANTITY OF WATER DIVERTED UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD IF, AFTER NOTICE TO THE PERMITTEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES. (0000013)

13. PERMITTEE SHALL INSTALL AND MAINTAIN AN OUTLET PIPE OF ADEQUATE CAPACITY IN HIS DAM AS NEAR AS PRACTICABLE TO THE BOTTOM OF THE NATURAL STREAM CHANNEL, OR PROVIDE OTHER MEANS SATISFACTORY TO THE STATE WATER RESOURCES CONTROL BOARD, IN ORDER THAT WATER ENTERING THE RESERVOIR WHICH IS NOT AUTHORIZED FOR APPROPRIATION UNDER THIS PERMIT MAY BE RELEASED. (0050043)

14. AFTER THE INITIAL FILLING OF THE STORAGE RESERVOIR, PERMITTEE'S RIGHT UNDER THIS PERMIT EXTENDS ONLY TO WATER NECESSARY TO KEEP THE RESERVOIR FULL BY RE-PLACING WATER LOST BY EVAPORATION AND SEEPAGE, AND TO REFILL IF EMPTIED FOR NECESSARY MAINTENANCE OR REPAIR. SUCH RIGHT SHALL BE EXERCISED ONLY DURING THE DIVERSION SEASON. (0000041)

15. IN ORDER TO PREVENT DEGRADATION OF THE QUALITY OF WATER DURING AND AFTER CONSTRUCTION OF THE PROJECT, PRIOR TO COMMENCEMENT OF CONSTRUCTION PERMITTEE SHALL FILE A REPORT PURSUANT TO WATER CODE SECTION 13260 AND SHALL COMPLY WITH ANY WASTE DISCHARGE REQUIREMENTS IMPOSED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, OR BY THE STATE WATER RESOURCES CONTROL BOARD. (0000100)

16. NO WATER SHALL BE APPROPRIATED UNTIL THE PERMITTEE HAS ESTABLISHED A PERMANENT ORGANIZATION WHICH WILL, TO THE BOARD'S SATISFACTION, PROPERLY OPERATE AND MAINTAIN THE PERMITTEE'S RESERVOIR. (0000028)

17. IN ACCORDANCE WITH THE REQUIREMENTS OF WATER CODE SECTION 1393, PERMITTEE SHALL CLEAR THE SITE OF THE PROPOSED RESERVOIR OF ALL STRUCTURES, TREES AND OTHER VEGETATION WHICH WOULD INTERFERE WITH THE USE OF THE RESERVOIR FOR WATER STORAGE AND RECREATIONAL PURPOSES. (0120050)

18. CONSTRUCTION OF THE STORAGE DAM SHALL NOT BE COMMENCED UNTIL THE DEPARTMENT OF WATER RESOURCES HAS APPROVED PLANS AND SPECIFICATIONS. (0130049)

19. NO WATER SHALL BE USED UNDER THIS PERMIT UNTIL THE PERMITTEE HAS FILED A REPORT OF WASTE DISCHARGE WITH THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, PURSUANT TO WATER CODE SECTION 13260, AND THE REGIONAL BOARD OR STATE WATER RESOURCES CONTROL BOARD HAS PRESCRIBED WASTE DISCHARGE REQUIREMENTS OR HAS INDICATED THAT WASTE DISCHARGE REQUIREMENTS ARE NOT REQUIRED. THEREAFTER, WATER MAY BE DIVERTED ONLY DURING SUCH TIMES AS ALL REQUIREMENTS PRESCRIBED BY THE REGIONAL BOARD OR STATE BOARD ARE BEING MET. NO DISCHARGES OF WASTE TO SURFACE WATER SHALL BE MADE UNLESS WASTE DISCHARGE REQUIREMENTS ARE ISSUED BY A REGIONAL BOARD OR THE STATE BOARD. A DISCHARGE TO GROUND WATER WITHOUT ISSUANCE OF A WASTE DISCHARGE REQUIREMENT MAY BE ALLOWED IF AFTER FILING THE REPORT PURSUANT TO SECTION 13260:

(1) THE REGIONAL BOARD ISSUES A WAIVER PURSUANT TO SECTION 13269, OR
(2) THE REGIONAL BOARD FAILS TO ACT WITHIN 120 DAYS OF THE FILING OF THE REPORT.

NO REPORT OF WASTE DISCHARGE PURSUANT TO SECTION 13260 OF THE WATER CODE SHALL BE REQUIRED FOR PERCOLATION TO THE GROUND WATER OF WATER RESULTING FROM THE IRRIGATION OF CROPS. (0290101)

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: SEP 16 1975

STATE WATER RESOURCES CONTROL BOARD

R. L. Rosenberger
Chief, Division of Water Rights

P16765
9-12-86 Asgd to Rancho Murieta Properties, Inc
1-14-88 Asgd to Rancho Murieta Community Services Dist.

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

PERMIT 16764

Application 23418 of BANK OF AMERICA, N.T.& S.A. AS CORPORATE CO-TRUSTEE OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS

c/o DANIEL F. GALLERY, ATTORNEY, 926 J BUILDING, SACRAMENTO, CALIFORNIA 95814

filed on DECEMBER 19, 1969, has been approved by the State Water Resources Control Board SUBJECT TO VESTED RIGHTS and to the limitations and conditions of this Permit.

Permittee is hereby authorized to divert and use water as follows:

1. Source: UNNAMED STREAM

Tributary to: COSUMNES RIVER THENCE MOKELUMNE RIVER

2. Location of point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridan
BY CALIFORNIA COORDINATES, ZONE 2, X = 2,258,400 AND Y = 307,200	SE1/4 OF NE1/4	33	8N	8E	MD

County of SACRAMENTO

3. Purpose of use:	4. Place of use:	Section	Township	Range	Base and Meridan	Acres
RECREATIONAL						
STOCKWATERING	PERALTA RESERVOIR IN NE1/4	33	8N	8E	MD	

The place of use is shown on map filed with the State Water Resources Control Board.

5. THE WATER APPROPRIATED SHALL BE LIMITED TO THE QUANTITY WHICH CAN BE BENEFICIALLY USED AND SHALL NOT EXCEED 130 ACRE-FEET PER ANNUM TO BE COLLECTED FROM NOVEMBER 1 OF EACH YEAR TO MAY 31 OF THE SUCCEEDING YEAR.

THIS PERMIT DOES NOT AUTHORIZE COLLECTION OF WATER TO STORAGE OUTSIDE OF THE SPECIFIED SEASON TO OFFSET EVAPORATION AND SEEPAGE LOSSES OR FOR ANY OTHER PURPOSE. (0000005)

6. THE AMOUNT AUTHORIZED FOR APPROPRIATION MAY BE REDUCED IN THE LICENSE IF INVESTIGATION WARRANTS. (0000006)

7. CONSTRUCTION WORK SHALL BE COMPLETED ON OR BEFORE DECEMBER 1, 1980. (0000008)

8. COMPLETE APPLICATION OF THE WATER TO THE PROPOSED USE SHALL BE MADE ON OR BEFORE DECEMBER 1, 1990. (0000009)

9. PROGRESS REPORTS SHALL BE SUBMITTED PROMPTLY BY PERMITTEE WHEN REQUESTED BY THE STATE WATER RESOURCES CONTROL BOARD UNTIL LICENSE IS ISSUED. (0000010)

10. PURSUANT TO CALIFORNIA WATER CODE SECTION 100, ALL RIGHTS AND PRIVILEGES UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO, INCLUDING METHOD OF DIVERSION, METHOD OF USE, AND QUANTITY OF WATER DIVERTED, ARE SUBJECT TO THE CONTINUING AUTHORITY OF THE STATE WATER RESOURCES CONTROL BOARD IN ACCORDANCE WITH LAW AND IN THE INTEREST OF THE PUBLIC WELFARE TO PREVENT WASTE, UNREASONABLE USE, UNREASONABLE METHOD OF USE, OR UNREASONABLE METHOD OF DIVERSION OF SAID WATER.

THIS CONTINUING AUTHORITY OF THE BOARD MAY BE EXERCISED BY IMPOSING SPECIFIC REQUIREMENTS OVER AND ABOVE THOSE CONTAINED IN THIS PERMIT WITH A VIEW TO MINIMIZING WASTE OF WATER AND TO MEETING THE REASONABLE WATER REQUIREMENTS OF PERMITTEE WITHOUT UNREASONABLE DRAFT ON THE SOURCE. PERMITTEE MAY BE REQUIRED TO IMPLEMENT SUCH PROGRAMS AS (1) REUSING OR RECLAIMING THE WATER ALLOCATED; (2) RESTRICTING DIVERSIONS SO AS TO ELIMINATE AGRICULTURAL TAILWATER OR TO REDUCE RETURN FLOW; (3) SUPPRESSING EVAPORATION LOSSES FROM WATER SURFACES; (4) CONTROLLING PHREATOPHYTIC GROWTH; AND (5) INSTALLING, MAINTAINING, AND OPERATING EFFICIENT WATER MEASURING DEVICES TO ASSURE COMPLIANCE WITH THE QUANTITY LIMITATIONS OF THIS PERMIT AND TO DETERMINE ACCURATELY WATER USE AS AGAINST REASONABLE WATER REQUIREMENTS FOR THE AUTHORIZED PROJECT. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD DETERMINES, AFTER NOTICE TO AFFECTED PARTIES AND OPPORTUNITY FOR HEARING, THAT SUCH SPECIFIC REQUIREMENTS ARE PHYSICALLY AND FINANCIALLY FEASIBLE AND ARE APPROPRIATE TO THE PARTICULAR SITUATION. (0000012)

11. PERMITTEE SHALL ALLOW REPRESENTATIVES OF THE STATE WATER RESOURCES CONTROL BOARD, EMPLOYEES OF OMOCHUMNE-HARTNELL WATER DISTRICT, AND OTHER PARTIES AS MAY BE AUTHORIZED FROM TIME TO TIME BY SAID BOARD REASONABLE ACCESS TO PROJECT WORKS TO DETERMINE COMPLIANCE WITH THE TERMS OF THIS PERMIT. (0000011)

12. THE QUANTITY OF WATER DIVERTED UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD IF, AFTER NOTICE TO THE PERMITTEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES. (0000013)

13. PERMITTEE SHALL INSTALL AND MAINTAIN AN OUTLET PIPE OF ADEQUATE CAPACITY IN HIS DAM AS NEAR AS PRACTICABLE TO THE BOTTOM OF THE NATURAL STREAM CHANNEL, OR PROVIDE OTHER MEANS SATISFACTORY TO THE STATE WATER RESOURCES CONTROL BOARD, IN ORDER THAT WATER ENTERING THE RESERVOIR WHICH IS NOT AUTHORIZED FOR APPROPRIATION UNDER THIS PERMIT MAY BE RELEASED. (0050043)

14. AFTER THE INITIAL FILLING OF THE STORAGE RESERVOIR, PERMITTEE'S RIGHT UNDER THIS PERMIT EXTENDS ONLY TO WATER NECESSARY TO KEEP THE RESERVOIR FULL BY REPLACING WATER LOST BY EVAPORATION AND SEEPAGE, AND TO REFILL IF EMPTIED FOR NECESSARY MAINTENANCE OR REPAIR. SUCH RIGHT SHALL BE EXERCISED ONLY DURING THE DIVERSION SEASON. (0000041)

15. IN ORDER TO PREVENT DEGRADATION OF THE QUALITY OF WATER DURING AND AFTER CONSTRUCTION OF THE PROJECT, PRIOR TO COMMENCEMENT OF CONSTRUCTION PERMITTEE SHALL FILE A REPORT PURSUANT TO WATER CODE SECTION 13260 AND SHALL COMPLY WITH ANY WASTE DISCHARGE REQUIREMENTS IMPOSED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, OR BY THE STATE WATER RESOURCES CONTROL BOARD. (0000100)

16. NO WATER SHALL BE APPROPRIATED UNTIL THE PERMITTEE HAS ESTABLISHED A PERMANENT ORGANIZATION WHICH WILL, TO THE BOARD'S SATISFACTION, PROPERLY OPERATE AND MAINTAIN THE PERMITTEE'S RESERVOIR. (0060062)

17. IN ACCORDANCE WITH THE REQUIREMENTS OF WATER CODE SECTION 1393, PERMITTEE SHALL CLEAR THE SITE OF THE PROPOSED RESERVOIR OF ALL STRUCTURES, TREES AND OTHER VEGETATION WHICH WOULD INTERFERE WITH THE USE OF THE RESERVOIR FOR WATER STORAGE AND RECREATIONAL PURPOSES. (0120050)

18. IF THE STORAGE DAM WILL BE OF SUCH SIZE AS TO BE WITHIN THE JURISDICTION OF THE DEPARTMENT OF WATER RESOURCES AS TO SAFETY, CONSTRUCTION SHALL NOT BE COMMENCED UNTIL THE DEPARTMENT HAS APPROVED PLANS AND SPECIFICATIONS. (0360048)

19. NO WATER SHALL BE USED UNDER THIS PERMIT UNTIL THE PERMITTEE HAS FILED A REPORT OF WASTE DISCHARGE WITH THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, PURSUANT TO WATER CODE SECTION 13260, AND THE REGIONAL BOARD OR STATE WATER RESOURCES CONTROL BOARD HAS PRESCRIBED WASTE DISCHARGE REQUIREMENTS OR HAS INDICATED THAT WASTE DISCHARGE REQUIREMENTS ARE NOT REQUIRED. THEREAFTER, WATER MAY BE DIVERTED ONLY DURING SUCH TIMES AS ALL REQUIREMENTS PRESCRIBED BY THE REGIONAL BOARD OR STATE BOARD ARE BEING MET. NO DISCHARGES OF WASTE TO SURFACE WATER SHALL BE MADE UNLESS WASTE DISCHARGE REQUIREMENTS ARE ISSUED BY A REGIONAL BOARD OR THE STATE BOARD. A DISCHARGE TO GROUND WATER WITHOUT ISSUANCE OF A WASTE DISCHARGE REQUIREMENT MAY BE ALLOWED IF AFTER FILING THE REPORT PURSUANT TO SECTION 13260:

(1) THE REGIONAL BOARD ISSUES A WAIVER PURSUANT TO SECTION 13269, OR
(2) THE REGIONAL BOARD FAILS TO ACT WITHIN 120 DAYS OF THE FILING OF THE REPORT.

NO REPORT OF WASTE DISCHARGE PURSUANT TO SECTION 13260 OF THE WATER CODE SHALL BE REQUIRED FOR PERCOLATION TO THE GROUND WATER OF WATER RESULTING FROM THE IRRIGATION OF CROPS. (0290101)

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: SEP 16 1975

STATE WATER RESOURCES CONTROL BOARD

R. L. Rosenberger
Chief, Division of Water Rights

P16764.
9-12-86 Asgd to Rancho Murieta Properties, Inc
1-14-88 Asgd to Rancho Murieta Community Services Dist.

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

ORDER

APPLICATION 23418 PERMIT 16764 LICENSE

ORDER APPROVING A NEW DEVELOPMENT SCHEDULE,
AND AMENDING THE PERMIT

WHEREAS:

1. Permit 16764 was issued to Bank of America, N. T. & S. A. as Corporate Co-Trustee of the Pension Trust Fund for Operating Engineers.

2. Permit 16764 was subsequeantly assigned to Rancho Murieta Properties, Inc.

3. A petition for extension of time within which to develop the project and apply the water to the proposed use has been filed with the State Water Resources Control Board.

4. The permittee has proceeded with diligence and good cause has been shown for extension of time.

5. Permit Condition 10 pertaining to the continuing authority of the Board needs to be updated to conform to standard permit Term 12 as contained in Title 23, California Code of Regulations, Section 780(a).

NOW, THEREFORE, IT IS ORDERED THAT:

1. Condition 7 of the permit be amended to read:

   CONSTRUCTION WORK SHALL BE
   COMPLETED ON OR BEFORE December 31, 1992

2. Condition 8 of the permit be amended to read:

   COMPLETE APPLICATION OF THE
   WATER TO THE PROPOSED USE
   SHALL BE MADE ON OR BEFORE December 31, 1995

3. Condition 10 of the permit be amended to read:

   Pursuant to California Water Code Sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

   The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to: (1) reusing or reclaiming the

water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the Board also may be exercised by imposing further limitations on the diversion and use of water by the permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust.

Dated: FEBRUARY 17 1988

Lloy Johnson

for Walter G. Pettit, Chief
Division of Water Rights

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

ORDER

APPLICATION 23418 PERMIT 16764 LICENSE

ORDER APPROVING A NEW DEVELOPMENT SCHEDULE
AND AMENDING THE PERMIT

WHEREAS:

1. A petition for extension of time within which to develop the project and apply the water to the proposed use has been filed with the State Water Resources Control Board.

2. The permittee has proceeded with diligence and good cause has been shown for extension of time.

NOW, THEREFORE, IT IS ORDERED THAT:

1. Paragraph 7 of the permit is amended to read as follows:

   CONSTRUCTION WORK SHALL BE
   COMPLETED ON OR BEFORE December 1, 1986

2. Paragraph 10 of this permit is deleted. A new Paragraph 10 is added as follows:

   Pursuant to California Water Code Sections 100 and 275, all rights and privilege under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

   The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

3. Paragraph 20 is added to this permit as follows:

The State Water Resources Control Board, under its authority to conserve the public interest, retains continuing authority over this permit to require permittee to develop and implement a water conservation program, after notice and opportunity for hearing. The requirements for this term may be satisfied by permittee's compliance with any comprehensive water conservation program, approved by the State Water Resources Control Board, which may be imposed by a public agency.

Dated: SEPTEMBER 14 1982

Raymond Walsh

Raymond Walsh, Chief
Division of Water Rights

cc: Marion Cravens
Lee Lawrence

THIS IS YOUR COPY OF THE LICENSE.
A COPY IS BEING RECORDED WITH THE COUNTY RECORDER.

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

License for Diversion and Use of Water

APPLICATION 23417 PERMIT 16763 LICENSE 13150

THIS IS TO CERTIFY, That

Rancho Murieta Community Services District
P.O. Box 1050
Rancho Murieta, CA 95683

has made proof as of **June 20, 1994** (the date of inspection) to the satisfaction of the State Water Resources Control Board of a right to the use of the water of **an Unnamed Stream in Sacramento County**

tributary to **Cosumnes River thence Mokelumne River**

for the purpose of **Recreational use**

under Permit **16763** of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from **December 19, 1969** and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed **one hundred thirty (130) acre-feet per annum to be collected from November 1 of each year to May 31 of the succeeding year.**

This license does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose. (0000005)

After the initial filling of the reservoir, licensee's right under this license extends only to water necessary to keep the storage reservoir full by replacing water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. (0000040)

THE POINT OF DIVERSION OF SUCH WATER IS LOCATED:

By California Coordinates, Zone 2, North 304,130 and East 2,258,230, being within SE¼ of SE¼ of Section 33, T8N, R8E, MDB&M.

A DESCRIPTION OF THE LANDS OR THE PLACE WHERE SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

At Laguna Joaquin Reservoir within E½ of SE¼ of Section 33 and W½ of SW¼ of Section 34, all within T8N, R8E, MDB&M, as shown on map filed with State Water Resources Control Board.

Licensee shall install and maintain an outlet pipe of adequate capacity in his dam as near as practicable to the bottom of the natural stream channel, or provide other means satisfactory to the State Water Resources Control Board, in order that water entering the reservoir which is not authorized for appropriation under this license may be released. (0050043)

Licensee shall allow representatives of the State Water Resources Control Board, employees of Omochumne-Hartnell Water District, and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this license. (0000011)

Licensee's water supply system shall be properly operated and maintained to the Board's satisfaction by a permanent organization. (0000028)

Licensee shall allow representatives of the State Water Resources Control Board and other parties, as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this license.

The quantity of water diverted under this license is subject to modification by the Board if, after notice to the licensee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

Pursuant to California Water Code Sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this license, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

This continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this license with a view to eliminating waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Licensee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this license and to determine accurately water use as against reasonable water requirement for the authorized project. No action will be taken pursuant to this reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the Board also may be exercised by imposing further limitations on the diversion and use of water by the licensee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Sec. 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the Board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: MAY 22 1995

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED
BY ROGER JOHNSON

Chief, Division of Water Rights

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

PERMIT 16763

Application 23417 of BANK OF AMERICA, N.T.& S.A. AS CORPORATE CO-TRUSTEE OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS over

c/o DANIEL F. GALLERY, ATTORNEY, 926 J BUILDING, SACRAMENTO, CALIFORNIA 95814

filed on DECEMBER 19, 1969, has been approved by the State Water Resources Control Board SUBJECT TO VESTED RIGHTS and to the limitations and conditions of this Permit.

Permittee is hereby authorized to divert and use water as follows:

1. Source: UNNAMED STREAM

Tributary to: COSUMNES RIVER THENCE MOKELUMNE RIVER

2. Location of point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridan
BY CALIFORNIA COORDINATES, ZONE 2, X = 2,258,230 AND Y = 304,130	SE1/4 OF SE1/4	33	8N	8E	MD

County of SACRAMENTO

3. Purpose of use:	4. Place of use:	Section	Township	Range	Base and Meridan	Acres
RECREATIONAL						
STOCKWATERING	LAGUNA JOAQUIN RESERVOIR IN E1/2 OF SE1/4	33	8N	8E	MD	
	AND W1/2 OF SW1/4	34	8N	8E	MD	

The place of use is shown on map filed with the State Water Resources Control Board.

5. THE WATER APPROPRIATED SHALL BE LIMITED TO THE QUANTITY WHICH CAN BE BENEFICIALLY USED AND SHALL NOT EXCEED 130 ACRE-FEET PER ANNUM TO BE COLLECTED FROM NOVEMBER 1 OF EACH YEAR TO MAY 31 OF THE SUCCEEDING YEAR.

THIS PERMIT DOES NOT AUTHORIZE COLLECTION OF WATER TO STORAGE OUTSIDE OF THE SPECIFIED SEASON TO OFFSET EVAPORATION AND SEEPAGE LOSSES OR FOR ANY OTHER PURPOSE. (0000005)

6. THE AMOUNT AUTHORIZED FOR APPROPRIATION MAY BE REDUCED IN THE LICENSE IF INVESTIGATION WARRANTS. (0000006)

7. CONSTRUCTION WORK SHALL BE COMPLETED ON OR BEFORE DECEMBER 1, 1980. (0000008)

8. COMPLETE APPLICATION OF THE WATER TO THE PROPOSED USE SHALL BE MADE ON OR BEFORE DECEMBER 1, 1990. (0000009)

9. PROGRESS REPORTS SHALL BE SUBMITTED PROMPTLY BY PERMITTEE WHEN REQUESTED BY THE STATE WATER RESOURCES CONTROL BOARD UNTIL LICENSE IS ISSUED. (0000010)

10. PURSUANT TO CALIFORNIA WATER CODE SECTION 100, ALL RIGHTS AND PRIVILEGES UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO, INCLUDING METHOD OF DIVERSION, METHOD OF USE, AND QUANTITY OF WATER DIVERTED, ARE SUBJECT TO THE CONTINUING AUTHORITY OF THE STATE WATER RESOURCES CONTROL BOARD IN ACCORDANCE WITH LAW AND IN THE INTEREST OF THE PUBLIC WELFARE TO PREVENT WASTE, UNREASONABLE USE, UNREASONABLE METHOD OF USE, OR UNREASONABLE METHOD OF DIVERSION OF SAID WATER.

THIS CONTINUING AUTHORITY OF THE BOARD MAY BE EXERCISED BY IMPOSING SPECIFIC REQUIREMENTS OVER AND ABOVE THOSE CONTAINED IN THIS PERMIT WITH A VIEW TO MINIMIZING WASTE OF WATER AND TO MEETING THE REASONABLE WATER REQUIREMENTS OF PERMITTEE WITHOUT UNREASONABLE DRAFT ON THE SOURCE. PERMITTEE MAY BE REQUIRED TO IMPLEMENT SUCH PROGRAMS AS (1) REUSING OR RECLAIMING THE WATER ALLOCATED; (2) RESTRICTING DIVERSIONS SO AS TO ELIMINATE AGRICULTURAL TAILWATER OR TO REDUCE RETURN FLOW; (3) SUPPRESSING EVAPORATION LOSSES FROM WATER SURFACES; (4) CONTROLLING PHREATOPHYTIC GROWTH; AND (5) INSTALLING, MAINTAINING, AND OPERATING EFFICIENT WATER MEASURING DEVICES TO ASSURE COMPLIANCE WITH THE QUANTITY LIMITATIONS OF THIS PERMIT AND TO DETERMINE ACCURATELY WATER USE AS AGAINST REASONABLE WATER REQUIREMENTS FOR THE AUTHORIZED PROJECT. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD DETERMINES, AFTER NOTICE TO AFFECTED PARTIES AND OPPORTUNITY FOR HEARING, THAT SUCH SPECIFIC REQUIREMENTS ARE PHYSICALLY AND FINANCIALLY FEASIBLE AND ARE APPROPRIATE TO THE PARTICULAR SITUATION. (0000012)

11. PERMITTEE SHALL ALLOW REPRESENTATIVES OF THE STATE WATER RESOURCES CONTROL BOARD, EMPLOYEES OF OMOCHUMNE-HARTNELL WATER DISTRICT, AND OTHER PARTIES AS MAY BE AUTHORIZED FROM TIME TO TIME BY SAID BOARD, REASONABLE ACCESS TO PROJECT WORKS TO DETERMINE COMPLIANCE WITH THE TERMS OF THIS PERMIT. (0000011)

12. THE QUANTITY OF WATER DIVERTED UNDER THIS PERMIT AND UNDER ANY LICENSE ISSUED PURSUANT THERETO IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD IF, AFTER NOTICE TO THE PERMITTEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES. (0000013)

13. PERMITTEE SHALL INSTALL AND MAINTAIN AN OUTLET PIPE OF ADEQUATE CAPACITY IN HIS DAM AS NEAR AS PRACTICABLE TO THE BOTTOM OF THE NATURAL STREAM CHANNEL, OR PROVIDE OTHER MEANS SATISFACTORY TO THE STATE WATER RESOURCES CONTROL BOARD, IN ORDER THAT WATER ENTERING THE RESERVOIR WHICH IS NOT AUTHORIZED FOR APPROPRIATION UNDER THIS PERMIT MAY BE RELEASED. (0050043)

14. AFTER THE INITIAL FILLING OF THE STORAGE RESERVOIR, PERMITTEE'S RIGHT UNDER THIS PERMIT EXTENDS ONLY TO WATER NECESSARY TO KEEP THE RESERVOIR FULL BY REPLACING WATER LOST BY EVAPORATION AND SEEPAGE, AND TO REFILL IF EMPTIED FOR NECESSARY MAINTENANCE OR REPAIR. SUCH RIGHT SHALL BE EXERCISED ONLY DURING THE DIVERSION SEASON. (0000041)

15. IN ORDER TO PREVENT DEGRADATION OF THE QUALITY OF WATER DURING AND AFTER CONSTRUCTION OF THE PROJECT, PRIOR TO COMMENCEMENT OF CONSTRUCTION PERMITTEE SHALL FILE A REPORT PURSUANT TO WATER CODE SECTION 13260 AND SHALL COMPLY WITH ANY WASTE DISCHARGE REQUIREMENTS IMPOSED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, OR BY THE STATE WATER RESOURCES CONTROL BOARD. (0000100)

16. NO WATER SHALL BE APPROPRIATED UNTIL THE PERMITTEE HAS ESTABLISHED A PERMANENT ORGANIZATION WHICH WILL, TO THE BOARD'S SATISFACTION, PROPERLY OPERATE AND MAINTAIN THE PERMITTEE'S RESERVOIR. (0060062)

17. IN ACCORDANCE WITH THE REQUIREMENTS OF WATER CODE SECTION 1393, PERMITTEE SHALL CLEAR THE SITE OF THE PROPOSED RESERVOIR OF ALL STRUCTURES, TREES AND OTHER VEGETATION WHICH WOULD INTERFERE WITH THE USE OF THE RESERVOIR FOR WATER STORAGE AND RECREATIONAL PURPOSES. (0120050)

18. IF THE STORAGE DAM WILL BE OF SUCH SIZE AS TO BE WITHIN THE JURISDICTION OF THE DEPARTMENT OF WATER RESOURCES AS TO SAFETY, CONSTRUCTION SHALL NOT BE COMMENCED UNTIL THE DEPARTMENT HAS APPROVED PLANS AND SPECIFICATIONS. (0360048)

19. NO WATER SHALL BE USED UNDER THIS PERMIT UNTIL THE PERMITTEE HAS FILED A REPORT OF WASTE DISCHARGE WITH THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, PURSUANT TO WATER CODE SECTION 13260, AND THE REGIONAL BOARD OR STATE WATER RESOURCES CONTROL BOARD HAS PRESCRIBED WASTE DISCHARGE REQUIREMENTS OR HAS INDICATED THAT WASTE DISCHARGE REQUIREMENTS ARE NOT REQUIRED. THEREAFTER, WATER MAY BE DIVERTED ONLY DURING SUCH TIMES AS ALL REQUIREMENTS PRESCRIBED BY THE REGIONAL BOARD OR STATE BOARD ARE BEING MET. NO DISCHARGES OF WASTE TO SURFACE WATER SHALL BE MADE UNLESS WASTE DISCHARGE REQUIREMENTS ARE ISSUED BY A REGIONAL BOARD OR THE STATE BOARD. A DISCHARGE TO GROUND WATER WITHOUT ISSUANCE OF A WASTE DISCHARGE REQUIREMENT MAY BE ALLOWED IF AFTER FILING THE REPORT PURSUANT TO SECTION 13260:

(1) THE REGIONAL BOARD ISSUES A WAIVER PURSUANT TO SECTION 13269, OR
(2) THE REGIONAL BOARD FAILS TO ACT WITHIN 120 DAYS OF THE FILING OF THE REPORT.

NO REPORT OF WASTE DISCHARGE PURSUANT TO SECTION 13260 OF THE WATER CODE SHALL BE REQUIRED FOR PERCOLATION TO THE GROUND WATER OF WATER RESULTING FROM THE IRRIGATION OF CROPS. (0290101)

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: SEP 16 1975

STATE WATER RESOURCES CONTROL BOARD

R. L. Rosenberger
Chief, Division of Water Rights

P16763
9-12-86 Asgd to Rancho murieta Properties, Inc.
1-14-88 Asgd to Rancho Murieta Community Services Dist.

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

AMENDED **PERMIT** 16762

Application 23416 of Bank of America, N.T.&S.A. as Corporate Custodian of the Pension Trust Fund for Operating Engineers

c/o Daniel F. Gallery, Attorney, 926 J Building, Sacramento, California 95814

filed on December 19, 1969, has been approved by the State Water Resources Control Board SUBJECT TO VESTED RIGHTS and to the limitations and conditions of this Permit.

Permittee is hereby authorized to divert and use water as follows:

1. Source:	Tributary to:
(1) Cosumnes River	Mokelumne River
(2-8) Unnamed Streams	Cosumnes River
(9) Unnamed Stream	Crevis Creek thence
	Deer Creek thence
	Cosumnes River

2. Location of point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridan
See Supplement Page 2					

County of Sacramento

3. Purpose of use:	4. Place of use:	Section	Township	Range	Base and Meridan	Acres
Municipal						
Recreational						
Industrial	3,600 acres in Sections 2, 3					
	and 4, T7N, R8E, MDB&M; and					
	Sections 26, 27, 28, 33, 34					
	and 35, T8N, R8E, MDB&M					
Irrigation	500 acres net within gross					
	area of the 3,600 acres					

The place of use is shown on map filed with the State Water Resources Control Board.

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

ORDER

APPLICATION 23416 PERMIT 16762 LICENSE

ORDER APPROVING A NEW DEVELOPMENT SCHEDULE
AND AMENDING THE PERMIT

WHEREAS:

1. A petition for extension of time within which to develop the project and apply the water to the proposed use has been filed with the State Water Resources Control Board.

2. The permittee has proceeded with diligence and good cause has been shown for extension of time.

NOW, THEREFORE, IT IS ORDERED THAT:

1. Paragraph 7 of the permit is amended to read as follows:

   CONSTRUCTION WORK SHALL BE
   COMPLETED ON OR BEFORE December 1, 1990

2. Paragraph 8 of the permit is amended to read as follows:

   COMPLETE APPLICATION OF THE
   WATER TO THE PROPOSED USE
   SHALL BE MADE ON OR BEFORE December 1, 2000

3. Paragraph 31 is added to this permit as follows:

   The State Water Resources Control Board, under its authority to conserve the public interest, retains continuing authority over this permit to require permittee to develop and implement a water conservation program, after notice and opportunity for hearing. The requirements for this term may be satisfied by permittee's compliance with any comprehensive water conservation program, approved by the State Water Resources Control Board, which may be imposed by a public agency.

Dated: SEPTEMBER 14 1982

Raymond Walsh

Raymond Walsh, Chief
Division of Water Rights

WRCB
133 (12-67)

APPLICATION 3416 PERMIT 62

(SUPPLEMENT)

2. Location and Point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridian
(1) Cosumnes River - by California Coordinates, zone 2, X = 2,267,670 and Y=303,970	SW¼ of SE¼	35	8N	8E	MD
Diversion and Rediversion					
(2) Chesbro Reservoir - by California Coordinates zone 2, X=2,265,570 and Y=308,460	NW¼ of NW¼	35	8N	8E	MD
Rediversion:					
(3) Laguna Joaquin Reservoir - By California Coordinates, zone 2, X=2,258,230 and Y=304,130	SE¼ of SE¼	33	8N	8E	MD
(4) Peralta Reservoir - by California coordinates, zone 2, X=2,258,400 and Y=307,200	SE¼ of NE¼	33	8N	8E	MD
(5) Clementia Reservoir - by California Coordinates, Zone 2, X=2,267,230 and Y=305,440	NE¼ of SW¼	35	8N	8E	MD
(6) Bass Reservoir - North 1,750 feet and East 1,260 feet from SW corner of Section 35	NW¼ of SW¼	35	8N	8E	MD
(7) Black Bass Reservoir - North 3,900 feet and East 3,170 feet from SW corner of Section 35	SW¼ of NE¼	35	8N	8E	MD
(8) Calero Reservoir - South 1,200 feet and West 2,500 feet from NE Corner of Section 27	NW¼ of NE¼	27	8N	8E	MD

APPLICATION 2 6 PERMIT 16762

(SUPPLEMENT)

2. Location and point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridian
(1) Cosumnes River - by California coordinates, zone 2, X= 2,267,670 and Y=303,970 Diversion and Rediversion:	SW¼ of SE¼	35	8N	8E	MD
(2) Chesbro Reservoir - by California coordinates zone 2, X=2,265,570 and Y=308,460	NW¼ of NW¼	35	8N	8E	MD
(3) Guadalupe Reservoir - by California Cordinates, zone 2, X=2,260,920 and Y=307,300 Rediversion:	SE¼ of NW¼	34	8N	8E	MD
(4) Laguna Joaquin Reservoir - by California Coordinates, zone 2, X=2,258,230 and Y=304,130	SE¼ of SE¼	33	8N	8E	MD
(5) Peralta Reservoir - by California coordinates, zone 2, X=2,258,400 and Y=307,200	SE¼ of NE¼	33	8N	8E	MD
(6) Clementia Reservoir - by California Coordinates, zone 2, X=2,267,230 and Y=305,440	NE¼ of SW¼	35	8N	8E	MD
(7) Bass Reservoir - North 1,750 feet and East 1,260 feet from SW corner of Section 35	NW¼ of SW¼	35	8N	8E	MD
(8) Black Bass Reserovir - North 3,900 feet and East 3,170 feet from SW corner of Section 35	SW¼ of NE¼	35	8N	8E	MD
(9) Calero Reservoir - South 1,200 feet and West 2,500 feet from NE corner of Section 27	NW¼ of NE¼	27	8N	8E	MD

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed (a) 6 cubic feet per second by direct diversion from the Cosumnes River to be diverted from November 1 of each year to May 31 of the succeeding year, and (b) 4,050 acre-feet per annum by storage to be collected from November 1 of each year to May 31 of the succeeding year as follows:

A. 3,900 acre-feet per annum from the Cosumnes River to be stored as follows:

(1) 1,250 acre-feet per annum in Chesbro Reservoir,
(2) 2,610 acre-feet per annum in Calero Reservoir,
(3) 850 acre-feet per annum in Clementia Reservoir, and
(4) 40 acre-feet per annum in Fairway No. 10 Lower Lake.

The combined amount under (2), (3) and (4) shall not exceed a total of 2,650 acre-feet.

B. 50 acre-feet per annum from an unnamed stream to be stored in Chesbro Reservoir.

C. 100 acre-feet per annum from an unnamed stream to be stored in Calero Reservoir.

The maximum rate of diversion from the Cosumnes River to offstream storage shall not exceed 46 cubic feet per second. The equivalent of the continuous flow allowance by direct diversion for any 7-day period may be diverted in a shorter time if there is no interference with vested rights. The total amount of water to be taken from the source shall not exceed 6,368 acre-feet per water year of October 1 to September 30.

This permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose. (0000005)

6. The amount authorized for appropriation may be reduced in the license if investigation warrants. (0000006)

7. Said construction work shall be completed on or before December 1, 1980. (0000008)

8. Complete application of the water to the proposed use shall be made on or before December 1, 1990. (0000009)

9. Progress reports shall be submitted promptly by permittee when requested by the State Water Resources Control Board until license is issued. (0000010)

10. Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation. (0000012)

11. Permittee shall allow representatives of the State Water Resources Control Board, employees of Omochumne-Hartnell Water District, and other parties as may be authorized from time to time by said board, reasonable access to project works to detrmine compliance with the terms of this permit. (0000011)

12. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges. (0000013)

13. No water shall be appropriated under this permit until a public district or some other organization capable, to the satisfaction of the Board, of supplying the place of use on a continuous permanent basis, has been established. (0000028)

14. Permittee shall install and maintain outlet pipes of adequate capacity in his dams as near as practicable to the bottom of the natural stream channels, or provide other means satisfactory to the State Water Resources Control Board, in order that water entering the reservoirs which is not authorized for appropriation under this permit may be released. (0050043)

15. In accordance with the requirements of Water Code Section 1393, permittee shall clear the site of the proposed reservoirs of all structures, trees and other vegetation which would interfere with the use of the reservoirs for water storage and recreational purposes. (0120050)

16. If the storage dams will be of such size as to be within the jurisdiction of the Department of Water Resources as to safety, construction shall not be commenced until the Department has approved plans and specifications. (0360048)

17. After the initial filling of Laguna Joaquin, Peralta, Bass, and Black Bass Reservoirs, permittee's right under this permit, as it pertains to these reservoirs, extends only to water necessary to keep these reservoirs full by replacing water beneficially used and water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. Such right shall be exercised only during the authorized diversion season. (0000041)

18. For the protection and preservation of fish life, diversions under this permit from the Cosumnes River shall be subject to the following terms and conditions:

A. No water shall be diverted when the flow is less than 70 cubic feet per second.
B. Only up to 6 cubic feet per second shall be diverted when the flow is between 70 and 175 cubic feet per second (but such diversion shall not reduce the flow below 70 cubic feet per second.
C. Only those flows in excess of 175 cubic feet per second shall be diverted at all other times, except in dry years, as follows:

(1) If on February 1, the total amount that could have been diverted under this permit under the foregoing schedule is less than 400 acre-feet, then permittee may, during February, divert the flows in excess of 70 cubic feet per second, up to a maximum of 46 cubic feet per second.
(2) If on March 1, the total amount that could have been diverted under the foregoing schedule is less than 2,000 acre-feet, then permittee may, during March, divert the flows in excess of 70 cubic feet per second up to a maximum of 46 cubic feet per second.

(0140060)

(3) If on April 1, the total amount that could have been diverted under the foregoing schedule is less than 4,400 acre-feet, then permittee may, during the remainder of the diversion season (April 1 to May 31), divert the flows in excess of 70 cubic feet per second up to a maximum of 46 cubic feet per second.

D. For the purpose of providing maximum continuous downstream fish migration flows as early as possible in the spring months during years when one of the schedules as set forth in paragraphs C(1), C(2), or C(3) above is commenced, the permittee shall continue such diversion schedule (set forth under C(1), C(2), or C(3) respectively) in order to complete the diversion to storage under the permit as soon as possible, and shall not revert to the diversion schedule under B and C above, except for direct diversion to supply its direct diversion requirements during the remainder of the diversion season not to exceed 6 cubic feet per second. The total seasonal diversion shall not exceed 6,368 acre-feet.

E. All measurements of flows shall be determined at the U.S. Geological survey gaging station "Cosumnes River at Michigan Bar." (0140060)

19. The Board retains jurisdiction over this permit for the purpose of modifying the minimum fisheries flow requirements to conform to future Board determinations and fisheries flow requirements of permits issued pursuant to Applications 5645B, 5646, 5647A, 19266, and 21835. (0000600)

20. Permittee shall, upon authorization by the U.S. Congress of the Nashville Unit of the Cosumnes River Division of the Federal Central Valley Project, report annually to the Board on the status of negotiations for a firm water supply for the place of use under this permit, to the extent such supply is not available under prior vested rights of permittee. (0270999)

21. Permittee shall divert no water during the period November 1 to June 1 of each season except during such time as there is a continuous visible surface flow in the bed of Cosumnes River from permittee's point of diversion to the gaging station at Highway 99 known as "Cosumnes River at McConnell." (0160999)

22. Permittee shall install and maintain measuring devices acceptable to the State Water Resources Control Board to measure accurately the quantity of water diverted from Cosumnes River. (0060062)

23. No water shall be used under this permit until the permittee has, through grant of easement or dedication or other means satisfactory to the County of Sacramento, provided for access by the general public to Cosumnes River through the proposed place of use. Such access shall be minimum of 50 feet wide on each bank of the River, or such width as may be in conformity with the parkway plan of the County of Sacramento; provided, however, that reasonable public access along the river is maintained. (0000999)

24. No water shall be used under this permit until the permittee has filed a report of waste discharge with the California Regional Water Quality Control Board, Central Valley Region, pursuant to Water Code Section 13260, and the Regional Board or State Water Resources Control Board has prescribed waste discharge requirements or has indicated that waste discharge requirements are not required. Thereafter, water may be diverted only during such times as all requirements prescribed by the Regional Board or State Board are being met. No discharges of waste to surface water shall be made unless waste discharge requirements are issued by a Regional Board or the State Board. A discharge to groundwater without issuance of a waste discharge requirement may be allowed if after filing the report pursuant to Section 13260:

(1) The Regional Board issues a waiver pursuant to Section 13269, or
(2) The Regional Board fails to act within 120 days of the filing of the report.

No report of waste discharge pursuant to Section 13260 of the Water Code shall be required for percolation to the groundwater of water resulting from the irrigation of crops. (0290101)

25. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction permittee shall file a report pursuant to Water Code Section 13260 and shall comply with any waste discharge requirements imposed by the California Regional Water Quality Control Board, Central Valley Region, or by the State Water Resources Control Board. (0000100)

26. When the flow of treated wastewater reaches 424 acre-feet per annum, permittee shall implement the use of such wastewater for irrigation purposes in lieu of water from other sources as provided in Sections 15550 and 15551 of the Water Code. Such use shall be reported on the annual progress reports filed with the Board. (0000999)

27. This permit is subject to the agreement dated March 26, 1979 bewteen permittee and Omochumne-Hartnell Water District, to the extent such agreement covers matters within the Board's jurisdiction. (0000300)

28. Suitable metering and recording devices shall be installed, operated and maintained in good working order by Rancho Murieta at the following locations:

A. On the discharge line of each pumping station located within the forebay of the CIA diversion Canal headworks and which divert water to offstream storage pursuant to Permit 16762. A suitable recording device shall also be installed which will provide a continuous record on a strip or circular chart of rates and time of diversion for each pump.

B. At the headworks of the CIA canal a continuous stage recorder to record diversions into the canal. Direct measurements to be made at least bimonthly to provide an accurate stage-discharge relationship. The recorder may be removed during periods of high water.

C. On any other pumping facilities which divert water from the Cosumnes River including but not limited to those facilities commonly referred to as the:

(1) Bass Lake Pump
(2) Old Bridge Pump
(3) Rock Plant Pump

Totalizing meters will be deemed adequate for the foregoing and for (D) and (E).

D. A meter shall be installed in the Cosumnes Irrigation Association Canal downstream from the Laguna Joaquin Reservoir.

E. At all points where water is withdrawn from storage for beneficial use, except from Fairway No. 10 Upper Lake. Water withdrawn for transfer to another reservoir will also be measured except for transfers among Calero, Clementia and Chesbro or from those reservoirs to the Treatment Plant.

F. For purposes of the measurements described above, hour meters of KWH consumption shall not be considered adequate unless otherwise agreed to.

G. At Calero, Chesbro and Clementia Reservoirs changes in storage will be measured at least monthly, and this information, plus any additional measurements actually made regarding changes of storage, furnished to the Board upon request. (0060062)

29. Permittee shall devise a method or plan satisfactory to the State Water Resources Control Board to obtain current stream flow data at the U. S. Geological Survey gaging station at Michigan Bar. Such plan shall be submitted to the Chief of the Division of Water Rights within 60 days. (0000999)

30. Permittee shall make all reasonable effort to collect local runoff to storage to the extent local runoff is available in lieu of diverting water from the Cosumnes River. (0000999)

31. (0000029) added Water Conc.

This permit is issued and permittee takes it **subject to the following provisions of the Water Code:**

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: AUGUST 5 1980

STATE WATER RESOURCES CONTROL BOARD

Walter G. Pettit

Chief, Division of Water Rights

P 16762
9-12-86 Asgd to Rancho Murieta Properties, Inc.
1-14-88 Asgd to Rancho Murieta Community Services District

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

PERMIT FOR DIVERSION AND USE OF WATER

AMENDED PERMIT 16762

Application 23416 of Bank of America, N.T.&S.A. as Corporate Custodian of the Pension Trust Fund for Operating Engineers

c/o Daniel F. Gallery, Attorney, 926 J Building, Sacramento, California 95814

filed on December 19, 1969, has been approved by the State Water Resources Control Board SUBJECT TO VESTED RIGHTS and to the limitations and conditions of this Permit.

Permittee is hereby authorized to divert and use water as follows:

1. Source:	Tributary to:
(1) Cosumnes River	Mokelumne River
(2-8) Unnamed Streams	Cosumnes River
(9) Unnamed Stream	Crevis Creek thence
	Deer Creek thence
	Cosumnes River

2. Location of point of diversion:	40-acre subdivision of public land survey or projection thereof	Section	Township	Range	Base and Meridan
See Supplement Page 2					

County of Sacramento

3. Purpose of use:	4. Place of use:	Section	Township	Range	Base and Meridan	Acres
Municipal						
Recreational						
Industrial	3,600 acres in Sections 2, 3					
	and 4, T7N, R8E, MDB&M; and					
	Sections 26, 27, 28, 33, 34					
	and 35, T8N, R8E, MDB&M					
Irrigation	500 acres net within gross					
	area of the 3,600 acres					

The place of use is shown on map filed with the State Water Resources Control Board.

5. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed (a) 6 cubic feet per second by direct diversion from the Cosumnes River to be diverted from November 1 of each year to May 31 of the succeeding year, and (b) 4,050 acre-feet per annum by storage to be collected from November 1 of each year to May 31 of the succeeding year as follows:

A. 3,900 acre-feet per annum from the Cosumnes River to be stored as follows:

(1) 1,250 acre-feet per annum in Chesbro Reservoir,
(2) 2,610 acre-feet per annum in Calero Reservoir,
(3) 850 acre-feet per annum in Clementia Reservoir, and
(4) 40 acre-feet per annum in Fairway No. 10 Lower Lake.

The combined amount under (2), (3) and (4) shall not exceed a total of 2,550 acre-feet.

B. 50 acre-feet per annum from an unnamed stream to be stored in Chesbro Reservoir.

C. 100 acre-feet per annum from an unnamed stream to be stored in Calero Reservoir.

The maximum rate of diversion from the Cosumnes River to offstream storage shall not exceed 46 cubic feet per second. The equivalent of the continuous flow allowance by direct diversion for any 7-day period may be diverted in a shorter time if there is no interference with vested rights. The total amount of water to be taken from the source shall not exceed 6,368 acre-feet per water year of October 1 to September 30.

This permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose.

6. The amount authorized for appropriation may be reduced in the license if investigation warrants.

7. Said construction work shall be completed on or before December 1, 1980.

8. Complete application of the water to the proposed use shall be made on or before December 1, 1990.

9. Progress reports shall be submitted promptly by permittee when requested by the State Water Resources Control Board until license is issued.

10. Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

11. Permittee shall allow representatives of the State Water Resources Control Board, employees of Omochumne-Hartnell Water District, and other parties as may be authorized from time to time by said board, reasonable access to project works to determine compliance with the terms of this permit.

12. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

13. No water shall be appropriated under this permit until a public district or some other organization capable, to the satisfaction of the Board, of supplying the place of use on a continuous permanent basis, has been established.

14. Permittee shall install and maintain outlet pipes of adequate capacity in his dams as near as practicable to the bottom of the natural stream channels, or provide other means satisfactory to the State Water Resources Control Board, in order that water entering the reservoirs which is not authorized for appropriation under this permit may be released.

15. In accordance with the requirements of Water Code Section 1393, permittee shall clear the site of the proposed reservoirs of all structures, trees and other vegetation which would interfere with the use of the reservoirs for water storage and recreational purposes.

16. If the storage dams will be of such size as to be within the jurisdiction of the Department of Water Resources as to safety, construction shall not be commenced until the Department has approved plans and specifications.

17. After the initial filling of Laguna Joaquin, Peralta, Bass, and Black Bass Reservoirs, permittee's right under this permit, as it pertains to these reservoirs, extends only to water necessary to keep these reservoirs full by replacing water beneficially used and water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. Such right shall be exercised only during the authorized diversion season.

18. For the protection and preservation of fish life, diversions under this permit from the Cosumnes River shall be subject to the following terms and conditions:

A. No water shall be diverted when the flow is less than 70 cubic feet per second.
B. Only up to 6 cubic feet per second shall be diverted when the flow is between 70 and 175 cubic feet per second (but such diversion shall not reduce the flow below 70 cubic feet per second.
C. Only those flows in excess of 175 cubic feet per second shall be diverted at all other times, except in dry years, as follows:

(1) If on February 1, the total amount that could have been diverted under this permit under the foregoing schedule is less than 400 acre-feet, then permittee may, during February, divert the flows in excess of 70 cubic feet per second, up to a maximum of 46 cubic feet per second.
(2) If on March 1, the total amount that could have been diverted under the foregoing schedule is less than 2,000 acre-feet, then permittee may, during March, divert the flows in excess of 70 cubic feet per second up to a maximum of 46 cubic feet per second.

(3) If on April 1, the total amount that could have been diverted under the foregoing schedule is less than 4,400 acre-feet, then permittee may, during the remainder of the diversion season (April 1 to May 31), divert the flows in excess of 70 cubic feet per second up to a maximum of 46 cubic feet per second.

D. For the purpose of providing maximum continuous downstream fish migration flows as early as possible in the spring months during years when one of the schedules as set forth in paragraphs C(1), C(2), or C(3) above is commenced, the permittee shall continue such diversion schedule (set forth under C(1), C(2), or C(3) respectively) in order to complete the diversion to storage under the permit as soon as possible, and shall not revert to the diversion schedule under B and C above, except for direct diversion to supply its direct ~~diversion~~ requirements during the remainder of the diversion season not to exceed 6 cubic feet per second. The total seasonal diversion shall not exceed 6,368 acre-feet.

E. All measurements of flows shall be determined at the U.S. Geological survey gaging station "Cosumnes River at Michigan Bar."

19. The Board retains jurisdiction over this permit for the purpose of modifying the minimum fisheries flow requirements to conform to future Board determinations and fisheries flow requirements of permits issued pursuant to Applications 5645B, 5646, 5647A, 19266, and 21835.

20. Permittee shall, upon authorization by the U.S. Congress of the Nashville Unit of the Cosumnes River Division of the Federal Central Valley Project, report annually to the Board on the status of negotiations for a firm water supply for the place of use under this permit, to the extent such supply is not available under prior vested rights of permittee.

21. Permittee shall divert no water during the period November 1 to June 1 of each season except during such time as there is a continuous visible surface flow in the bed of Cosumnes River from permittee's point of diversion to the gaging station at Highway 99 known as "Cosumnes River at McConnell."

22. Permittee shall install and maintain measuring devices acceptable to the State Water Resources Control Board to measure accurately the quantity of water diverted from Cosumnes River.

23. No water shall be used under this permit until the permittee has, through grant of easement or dedication or other means satisfactory to the County of Sacramento, provided for access by the general public to Cosumnes River through the proposed place of use. Such access shall be minimum of 50 feet wide on each bank of the River, or such width as may be in conformity with the parkway plan of the County of Sacramento; provided, however, that reasonable public access along the river is maintained.

24. No water shall be used under this permit until the permittee has filed a report of waste discharge with the California Regional Water Quality Control Board, Central Valley Region, pursuant to Water Code Section 13260, and the Regional Board or State Water Resources Control Board has prescribed waste discharge requirements or has indicated that waste discharge requirements are not required. Thereafter, water may be diverted only during such times as all requirements prescribed by the Regional Board or State Board are being met. No discharges of waste to surface water shall be made unless waste discharge requirements are issued by a Regional Board or the State Board. A discharge to groundwater without issuance of a waste discharge requirement may be allowed if after filing the report pursuant to Section 13260:

(1) The Regional Board issues a waiver pursuant to Section 13269, or
(2) The Regional Board fails to act within 120 days of the filing of the report.

No report of waste discharge pursuant to Section 13260 of the Water Code shall be required for percolation to the groundwater of water resulting from the irrigation of crops.

25. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction permittee shall file a report pursuant to Water Code Section 13260 and shall comply with any waste discharge requirements imposed by the California Regional Water Quality Control Board, Central Valley Region, or by the State Water Resources Control Board.

26. When the flow of treated wastewater reaches 424 acre-feet per annum, permittee shall implement the use of such wastewater for irrigation purposes in lieu of water from other sources as provided in Sections 15550 and 15551 of the Water Code. Such use shall be reported on the annual progress reports filed with the Board.

27. This permit is subject to the agreement dated March 26, 1979 between permittee and Omochumne-Hartnell Water District, to the extent such agreement covers matters within the Board's jurisdiction.

28. Suitable metering and recording devices shall be installed, operated and maintained in good working order by Rancho Murieta at the following locations:

A. On the discharge line of each pumping station located within the forebay of the CIA diversion Canal headworks and which divert water to offstream storage pursuant to Permit 16762. A suitable recording device shall also be installed which will provide a continuous record on a strip or circular chart of rates and time of diversion for each pump.

B. At the headworks of the CIA canal a continuous stage recorder to record diversions into the canal. Direct measurements to be made at least bimonthly to provide an accurate stage-discharge relationship. The recorder may be removed during periods of high water.

C. On any other pumping facilities which divert water from the Cosumnes River including but not limited to those facilities commonly referred to as the:

(1) Bass Lake Pump
(2) Old Bridge Pump
(3) Rock Plant Pump

Totalizing meters will be deemed adequate for the foregoing and for (D) and (E).

D. A meter shall be installed in the Cosumnes Irrigation Association Canal downstream from the Laguna Joaquin Reservoir.

E. At all points where water is withdrawn from storage for beneficial use, except from Fairway No. 10 Upper Lake. Water withdrawn for transfer to another reservoir will also be measured except for transfers among Calero, Clementia and Chesbro or from those reservoirs to the Treatment Plant.

F. For purposes of the measurements described above, hour meters of KWH consumption shall not be considered adequate unless otherwise agreed to.

G. At Calero, Chesbro and Clementia Reservoirs changes in storage will be measured at least monthly, and this information, plus any additional measurements actually made regarding changes of storage, furnished to the Board upon request.

29. Permittee shall devise a method or plan satisfactory to the State Water Resources Control Board to obtain current stream flow data at the U. S. Geological Survey gaging station at Michigan Bar. Such plan shall be submitted to the Chief of the Division of Water Rights within 60 days.

Application 23416 Permit 16762

30. Permittee shall make all reasonable effort to collect local runoff to storage to the extent local runoff is available in lieu of diverting water from the Cosumnes River.

This permit is issued and permittee takes it subject to the following provisions of the Water Code:

Section 1390. A permit shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code), but no longer.

Section 1391. Every permit shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a permit is issued takes it subject to the conditions therein expressed.

Section 1392. Every permittee, if he accepts a permit, does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any permit granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any permittee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any permittee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Dated: AUGUST 5 1980

STATE WATER RESOURCES CONTROL BOARD

Walter G Pettit

Chief, Division of Water Rights

STATE OF CALIFORNIA—STATE WATER RIGHTS BOARD

License for Diversion and Use of Water

APPLICATION 16142 PERMIT 10144 LICENSE 6238

Arthur J. Granlees and Josephine D. Granlees
Sloughhouse, California

Notice of Assignment (Over)

THIS IS TO CERTIFY, *That*

ha ve *made proof as of* April 7, 1960, *(the date of inspection) to the satisfaction of the State Water Rights Board of a right to the use of the water of* (1) Cosumnes River and (2) an unnamed gully in Sacramento County

tributary to (1) Mokelumne River (2) Cosumnes River

for the purpose of irrigation and stockwatering uses *under Permit* 10144 *of the State Water Rights Board and that said right to the use of said water has been perfected in accordance with the laws of California, the Rules and Regulations of the State Water Rights Board and the terms of the said permit; that the priority of the right herein confirmed dates from* November 18, 1954 *and that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to the amount actually beneficially used for said purposes and shall not exceed* one and twenty-four hundredths (1.24) cubic feet per second by direct diversion from Cosumnes River to be diverted from about May 1 to about October 31 of each year and forty-five (45) acre-feet per annum by storage to be collected from about October 1 of each year to about May 1 of the succeeding year from either or both sources.

Maximum rate of diversion to off stream storage has been one and six tenths (1.6) cubic feet per second.

The equivalent of such continuous flow allowance for any thirty-day period may be diverted in a shorter time if there be no interference with other vested rights.

The point s *of diversion of such water* are *located* :

(1) North thirty-five (35) feet and east one thousand seven hundred eighty (1780) feet from SW corner of Section 35, T8N, R8E, MDB&M, being within $SE\frac{1}{4}$ of $SW\frac{1}{4}$ of said Section 35.

(2) North one thousand seven hundred fifty (1750) feet and east one thousand two hundred sixty (1260) feet from SW corner of Section 35, T8N, R8E, MDB&M, being within $NW\frac{1}{4}$ of $SW\frac{1}{4}$ of said Section 35.

A description of the lands or the place where such water is put to beneficial use is as follows:

Stockwatering within $NW\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M., and irrigation of:

33 acres within $NE\frac{1}{4}$ of $NW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
26 acres within $SE\frac{1}{4}$ of $NW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
31 acres within $NE\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
3 acres within $NW\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
16 acres within $SE\frac{1}{4}$ of $SW\frac{1}{4}$ of Section 35, T8N, R8E, MDB&M
109 acres total

All rights and privileges under this license including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the State Water Rights Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

FORM 64

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of PERMITS 2631, 12258, 10473 and 10474 Issued on APPLICATIONS 2270, 5645A, 13707, and 13708 of

U. S. BUREAU OF RECLAMATION

Petitioner

and

PERMIT 16762 Issued on APPLICATION 23416, LICENSES 537 and 6238 Issued on PERMITS 1030 (APPLICATION 1838) and 10144 (APPLICATION 16142) of

BANK OF AMERICA AS CORPORATE CUSTODIAN OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS (RANCHO MURIETA)

Petitioner

OMOCHUMNE-HARTNELL WATER DISTRICT

Protestant

ENVIRONMENTAL COUNCIL OF SACRAMENTO

Complainant

LICENSE 2629 Issued on PERMIT 1320 (APPLICATION 2296) of

COSUMNES IRRIGATION ASSOCIATION

Licensee

JAY SCHNEIDER

Protestant and Complainant

ORDER WR 79-13

ORDER APPROVING CHANGE PETITIONS
AND ALLOWING COMPLAINT IN PART

BY THE BOARD:

The U. S. Bureau of Reclamation, hereinafter the Bureau, having petitioned the State Water Resources Control Board,

hereinafter the Board, for a change in place of use, for change in point of rediversion, and for change in purpose of use under Permits 2631, 12258, 10473 and 10474; Bank of America NT&SA as Corporate Custodian of the Pension Trust Fund for Operating Engineers, hereinafter Rancho Murieta, having petitioned the Board for change in distribution of storage under Permit 16762 and for change in place of use under License 6238; the Board having received complaints alleging violation of terms and conditions of Licenses 537 and 2629 and Permit 16762; protests having been received concerning the petitions for change; and a consolidated public hearing having been held on February 7, 8 and 9, 1979; petitioners, protestants and complainants having appeared and presented evidence; the evidence at the hearing having been duly considered, the Board finds as follows:

PETITIONS OF THE U. S. BUREAU OF RECLAMATION

Substance of the Bureau's Change Petitions

1. Permit 2631 authorizes direct diversion of 70 cfs and 30 cfs for the period April 15 to June 15 and diversion to storage of 15,000 afa and 7,000 afa for the period November 15 to June 15 from Camp Creek and Sly Park Creek respectively, tributary to the North Fork of the Cosumnes River. The points of diversion are (1) within NE¼ of NW¼, Section 15, T10N, R13E, MDB&M and (2) within NE¼ of SW¼, Section 17, T10N, R13E, MDB&M. The purpose of use is irrigation and domestic. The place of use is within the boundaries of the El Dorado Irrigation District, hereinafter EID. The petition requests three changes: (1) change in purpose of use to municipal, industrial, agricultural, domestic, recreational, and preservation and enhancement of fish and wildlife;

(2) addition of a point of rediversion at a point on the Cosumnes River at Granlees Dam within Section 35, T8N, R8E, MDB&M: and (3) change of place of use to include the proposed service area of the El Dorado Irrigation District, which includes Rancho Murieta subdivision within an expanded service area. Irrigation is limited to 6,300 acres net within a gross area of 200,600 acres. The change does not involve an increase in the amount of the appropriation or season of use.

2. Permit 12258 is a permit authorizing the direct diversion of 50 cfs and 50 cfs and diversion to storage of 10,000 afa and 3,000 afa from Camp Creek and Sly Park Creek respectively, tributary to North Fork Cosumnes River, both types of diversion being for the period November 1 to July 1. The points of diversion are the same as for Permit 2631. The place of use is within areas in the EID and, pending full development of such areas, for temporary use within service areas of water distribution organizations which enter into valid contracts for the purposes of the Central Valley Project. The purposes of use are irrigation and domestic. The petition requests the same three changes requested for Permit 2631. It does not involve an increase in the amount of the appropriation or season of use.

3. Permit 10473 is a permit authorizing the direct diversion of 100 cfs and diversion to storage of 41,000 afa from Camp Creek and Sly Park Creek, tributary to North Fork Cosumnes River, for the period November 1 to July 1. The

purposes of use are irrigation and domestic and the points of diversion are the same as for Permit 2631. The place of use is the same as for Permit 12258. The petition requests the same three changes as Permits 2631 and 12258. It does not involve an increase in the amount of the appropriation or season of use.

4. Permit 10474 is a permit authorizing the direct diversion of 10 cfs and diversion to storage of 5,000 afa from Camp Creek and Sly Park Creek, tributary to the North Fork Cosumnes River, for the period November 1 to July 1. The purposes of use are municipal and industrial. The points of diversion are the same as for Permit 2631. The place of use is within the same areas described in Permit 12258. The petition requests the same three changes as the other three petitions. It does not involve an increase in the amount of the appropriation or season of use.

Project of the Petitioner:

5. The Bureau's objectives are to correlate the permit terms and to allow El Dorado Irrigation District to serve water to Rancho Murieta and others within the District permanently, rather than on a temporary basis as has been done in the past. El Dorado Irrigation District is the contract operator of Sly Park Dam and sells and distributes all of the water under the Bureau's permits. The changes will allow for projected growth within the boundaries of EID and allow for development of marginal agricultural land for home sites rather than taking good farm land out of production through residential development. No construction of works is required.

Effect Upon the Environment:

6. The El Dorado Irrigation District has prepared a negative declaration in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and the State Guidelines.

The El Dorado Irrigation District has filed a Notice of Determination on May 10, 1979.

The State Board has reviewed and considered the information contained in the Negative Declaration.

Protests:

7. Protests against the approval of the change petitions were filed as follows:

a. The protest of Omochumne-Hartnell Water District, hereinafter OHWD, was made on behalf of its member landowners within the District. The protest was on the grounds that the proposed changes would deplete the water supply presently available for surface diversions and groundwater recharge within OHWD. OHWD lies downstream from EID and Rancho Murieta and serves purchased supplemental water, when available, to augment the supplies of riparian users for use within the boundary of OHWD. Protestant claims a right to use water from the Cosumnes River upon its members lands under riparian, appropriative, and overlying landowner's rights.

The first use was made prior to 1920 (OHWD has not claimed pre-1914 rights) by landowners and has been continuous and increasing to date. Diversions by landowners extend from about March 15 to November 1 of each year. The entire natural flow of the Cosumnes River is diverted after about June 1 of each year. This diversion is not sufficient to meet the present water supply requirements of the landowners within OHWD. The deficiency is made up from the use of wells for irrigation when available. In addition to surface water diversions by landowners, the operation by OHWD contributes to the recharge of groundwater, both within and outside, by a series of low dams which create ponds of water during periods of low flow. OHWD's concern is that, with the addition of Rancho Murieta and the expanded area of use within EID, the flow of water in the Cosumnes River will be further depleted.

b. Immediately prior to the hearing, OHWD and the Bureau entered into a stipulation to provide means whereby the releases at Sly Park Reservior to be re-diverted by Rancho Murieta at Granlees Dam may be measured to ensure there is not an invasion of the natural flows beyond the entitlements of the permittee. The proposed stipulation was read into the record and concurred in by both parties, who requested that the Board reserve jurisdiction for the purpose of enforcement of Paragraphs 3 and 6. Paragraph 3 provides for methods of measurement of the diversions to serve Rancho Murieta and their effect upon natural flow of the river. Paragraph 6 provides for periodic reductions of quantity of

diversion to avoid undue interference with downstream users. OHWD withdrew its protests and the agreement was signed by the parties on April 6, 1979. We find that the agreement is conceptually sound, is equitable to both parties, and may properly be incorporated in the order in the public interest in best developing, conserving, and utilizing waters from the Sly Park Project. This finding shall not be construed as a finding by the Board with respect to the rights of OHWD.

c. The Department of Fish and Game, hereinafter DFG, initially filed protests against the petitions to change Permits 10473 and 10474. The protests were concerned with assuring reservoir releases from Sly Park Dam to maintain sufficient flows for fish and wildlife. DFG's primary concern was the effect of the changes upon an agreement between the Bureau and DFG, in existence since 1953, providing for a bypass at Sly Park Dam of 1 cfs and at Camp Creek Diversion Dam of 2 cfs to maintain fish life. Following a study by the Bureau, on August 2, 1976, the Bureau, DFG, and EID executed an agreement providing for increased releases from Sly Park Dam of up to 5 cfs in a forecast spill year. The agreement provides that in no event will releases be less than the 1953 agreed flows. It is understood that all inflow to the reservoir outside the permitted diversion season must be by passed. The agreement also requires EID to develop an irrigated one-acre area for wildlife near the Sly Park Reservoir. As a result of this agreement, DFG withdrew its protest. We find that the terms of the agreement should be incorporated in the order in the public interest in best developing, conserving, and utilizing waters from the Sly Park Project.

d. Protestant Schneider contended that the proposed modifications of the Bureau's permits will result in loss of water due to waste, unreasonable use, unreasonable method of use and unreasonable method of diversion. He further alleged that changing the purpose of use would deprive him of water and that loss of water would occur by excessive evaporation due to impoundments. Protestant concluded that approval of the petitions would not best conserve the public interest, would be contrary to law and would have an adverse environmental impact.

(1) The Protestant, who farms riparian land downstream from EID within OHWD boundaries, irrigates about 100 acres from one diversion point, 120 acres from a second and 200 acres by sub-irrigation and irrigation from a well. His conditions for protest withdrawal, which were not acceptable to the Bureau, were as follows:

> *"(1) Preserve protestant's rights under the present terms of the permits; (2) Require that impoundings of water are consistent with the size of the development, and, pending full development of the area, be phased in and remain proportionate with, and correspond to, actual growth as evidenced by population or building permits issued; (3) Require measuring devices to assure compliance with quantity limits of these permits (and all other permits and licenses within the area) including metering of all water diverted from the Cosumnes River; (4) Require that access to the meters be given to the Board, OHWD and Schneider Ranch; and (5) Agreement on allocation during low flows with adjacent landowners".*

The Board determined that the question of allocation during low flows between adjacent landowners was not within the scope of the hearing.

(2) Water Code Sections 1701 and 1702 allow a permittee to change the point of diversion, place of use and purpose of use if the permittee establishes, and the Board finds, that the change will not operate to the injury of any legal user of the water involved. It is not necessary for us to make a determination whether there is unappropriated water available in connection with our actions on these petitions since such finding was a condition precedent to initial issuance of the permits (Water Code Section 1375), and since the record before the Board clearly demonstrates that there will be no increase in the amount of water to be appropriated. Therefore, the only issues remaining are whether the proposed changes will injure the rights and whether the public interest would be impaired by the proposed changes. We find that they will not, and that the petitions should be granted for the reasons set forth below.

(a) The record indicates that there are seven known water users together with a number of unknown diverters who take water from the source between the Sly Park Dam and the new point of rediversion. The water to be re-diverted under this petition is not natural flow. It is water which will be released from storage at Sly Park Dam for the purpose of rediversion at Granlees Dam. We find, therefore, that these users will not be injured since the water to be diverted under the modified permits, after being controlled as described above, will continue to flow from the storage at Sly Park Dam past these users and be rediverted less evaporation and seepage losses at the new point of diversion below them. Thus, diverters between Sly Park Dam and the proposed point of rediversion cannot be affected by the change.

(b) Protestant contends that the impoundments should be consistent with the size of the development and remain proportionate with actual growth evidenced by building permits. The Raymond Vail Report shows that for 1982 Low-Rainfall year the water demand is 2,351.4 acre-feet during June through November and the water supply available, not including Calero Reservoir, is less than 1,541 acre-feet. The 850 acre-feet in Clementia is not permitted for consumptive use and therefore, the permitted amount of water is not excessive. Furthermore, Rancho Murieta is required to show it has an adequate water supply before State and local agencies will approve further building within the development. Therefore, we find that it is not possible to wait for growth to occur before conditioning the water right permits. We find that the construction of Calero Reservoir is consistent with obtaining governmental permit approvals.

(c) The Schneider Ranch is within OHWD and is a beneficiary of the agreement, together with all of the other owners of irrigated land in the district. Protestant offered no evidenc to show any diminution of flow past the Schneider Ranch by reason of the proposed changes. The agreement further negates Protestant's concerns, raised during the hearing, regarding measuring devices, since it provides for adequate metering and monitoring of the flows in the river, diversions and use and storage of the water in the project. The evidence shows that any water which Rancho Murieta obtains from EID from the Bureau's project will provide a backup supply to the Rancho Murieta development. Conversely, there was no evidence to support protestant's contention that if Rancho

Murieta does not receive water from Sly Park Reservoir through EID, OHWD would be able to provide more water for irrigation. The proposed changes will not adversely affect farming within OHWD. The changes will enhance the public interest since Rancho Murieta will be able to develop its 3,500 acres of marginal agricultural land for home sites which helps to preserve prime agricultural land from encroachment by expanding population.

(d) Protestant's concerns with access to the meters was resolved at the hearing, at which time OHWD and Rancho Murieta agreed that Schneider Ranch would be granted access as a representative of OHWD.

We find that the Bureau's change petitions should be approved.

PETITIONS OF RANCHO MURIETA

Substance of the Change Petitions

8. Permit 16762 authorizes direct diversion of 6 cfs, and diversion to offstream storage of 3,900 afa, both from the Cosumnes River; diversion to storage of 50 afa from an unnamed stream tributary to Cosumnes River; and diversion to storage of 100 afa from an unnamed stream tributary to Cosumnes River making a total of 4,050 acre-feet diverted to storage. The total amount of water to be taken from all sources to storage and direct diversion was not to exceed 6,368 acre-feet per water year of October 1 to September 30. Water was to be diverted to offstream storage from Cosumnes River at a maximum rate of 46 cfs and stored in Chesbro Reservoir which was planned to have a capacity of 1,600 acre-feet and at Guadalupe

Reservoir which was planned to have a capacity of 2,300 acre-feet. The seasons of diversion for both direct diversion and storage are October 1 to May 31. The points of diversion are (1) within the SW¼ of SE¼, Section 35, T8N, R8E, MDB&M, (2) within the NW¼ of NW¼, Section 35, T8N, R8E, MDB&M; and (3) within the SE¼ of NW¼, Section 34, T8N, R8E, MDB&M. Points (2) and (3) are also points of re-diversion for water diverted at point (1). The purpose of use is municipal, recreational, industrial, and irrigation of 500 acres. The place of use is within a gross service area of 3,500 acres in Sections 26, 27, 28, 33, 34, and 35, T8N, R8E, MDB&M and Sections 2, 3, and 4, T7N, R8E, MDB&M.

9. Petitioners seek to transfer under Permit 16762 2,300 acre-feet of storage from Guadalupe Reservoir (which will not be constructed) and 350 acre-feet from Chesbro Reservoir permitted for 1,600 acre-feet, as follows: up to 2,610 acre-feet to an enlarged Calero Reservoir, up to 850 acre-feet to Clementia Reservoir, and up to 40 acre-feet to Fairway No. 10 Lower Lake, but not to exceed a total of 2,650 acre-feet of storage in the three reservoirs. The water is to be stored and used for all permitted uses; municipal, recreational, industrial, and irrigation. Petitioner also has rights under Permit 16765 which allow storage of 1,240 afa in Clementia Reservoir from the unnamed stream on which it is located for recreational and stockwatering purposes only; and rights under License 7744 which permits storage of 49 afa in Calero Reservoir from the unnamed stream on which it is located, for stockwatering and recreational purposes only.

10. License 6238 authorizes (1) direct diversion of 1.24 cfs and diversion to storage of 45 afa in Bass Lake from Cosumnes River; and (2) diversion to storage of 45 afa from an unnamed stream tributary to Cosumnes River. Seasons of diversion are (1) May 1 to October 31 and (2) October 1 to May 1. The points of diversion are (1) within SE¼ of SW¼, Section 35, T8N, R8E, MDB&M and (2) within NW¼ of SW¼, Section 35, T8N, R8E, MDB&M. The purposes of use are irrigation and stockwatering and the place of use is 109 acres within Clementia Valley.

11. Petitioner proposes to transfer 74 acres of the 109 acres presently covered under the license to a place of use within the Rancho Murieta golf course north of the Cosumnes River and the remaining 35 acres to a place of use on the non-riparian portion of the golf course south of the Cosumnes River.

12. We find that all of the reservoirs are on land owned by the petitioner and within its boundaries. No other persons take water from any stream between the reservoirs. The proposed change does not involve an increase in the amount of the appropriation or a change in the seasons of diversion.

Petitioner's Projects

13. In 1968, Bank of America NT&SA, as Corporate Custodian of the Pension Trust Fund for Operating Engineers, purchased 3,500 acres of land for development as a planned community to be named Rancho Murieta. A portion of the place of use covered by License

2629, and held by Cosumnes Irrigation Association, and all of the places of use covered by License 6238 and Permit 16762 are included within the Rancho Murieta property. In addition to the foregoing rights, water rights evidenced by five licenses and three permits also belong to Bank of America and relate to Rancho Murieta lands. Additional diversions are made from Cosumnes River, downstream from Granlees Dam, under claim of riparian right as well as water diverted by the Cosumnes Irrigation Association ditch for use on Rancho Murieta lands. Rancho Murieta has developed 1,850 acre-feet of usable storage capacity and the capability of pumping from the Cosumnes River at a rate of 10 cfs. The pumped and stored water supplies the expanding community of Rancho Murieta which now includes about 200 homes, a lodge and clubhouse, a mobile home park and a training center for the operating engineers.

14. Four separate water systems are used on Rancho Murieta property: (1) domestic water supply system supplied by water diverted from the Cosumnes River at Granlees Dam under Permit 16762 and pumped into Clementia and Chesbro Reservoirs. From t[illegible] reservoirs, water flows through the water treatment plant and into the domestic water system; (2) raw water system supplied by water diverted by two pumps from Cosumnes River downstream from Granlees Dam, and by two pumps in Laguna Joaquin Reservoir, which receives water from Granlees Ditch to supply 150 acres of lawn and golf course. The property is in part riparian and water use is covered by riparian claim and License 6238; (3) agricultural irrigation system, supplied by water diverted into Granlees Ditch

and gravity supplied to riparian lands between Highway 16 and the Cosumnes River. Use is covered by riparian claim, License 537 and License 2629; (4) a rock crusher plant supplied by water pumped from the Cosumnes River downstream of Granlees Dam to the crusher plant located on the south side of the river, under claim of riparian right.

Protests:

15. Protests against the change petitions were filed as follows:

a. Omochumne-Hartnell Water District, OHWD, protested the petitions. Prior to the hearing OHWD and Rancho Murieta executed a stipulation which was read into the record at the hearing on February 8, 1979. The stipulation was concurred in by both parties and the Board was requested to incorporate it into the order. The stipulation requires various measuring devices to be located within Rancho Murieta's water diversion system, and OHWD, as a result of the stipulation, withdrew its protest against the petitions. We find that the stipulation is reasonable, appropriate, and in the public interest and will not operate to injure any legal user of the water involved. The agreement should be incorporated into the decision and order of this Board. This finding shall not be construed as a finding by the Board with respect to the rights of OHWD or Rancho Murieta.

b. Protestant Schneider contends that the changes proposed for Permit 16762 initiate a new right and require a new application. His contention is that the changes would add more consumptive storage capacity thus increasing the yield and appropriations, and that they also shift 850 acre-feet of storage, which is now non-consumptive to consumptive, thus expanding a right. He contends the petition should not be approved because no unappropriated water is available. He also alleged that the change proposed for license would be a totally new appropriation because allegedly no water has been used under that license for over five years which has resulted in its forfeiture, and that the change would transfer a direct diversion right from riparian land to non-riparian land which would allow Rancho Murieta to irrigate the riparian land under claim of riparian rights. This would allegedly increase the total place of use and the amount of water diverted.

(1) Protestant alleges that License 6238 was not used for a period of five years; however, there is no substantial evidence to support this contention. Rebuttal evidence adduced by Petitioner, however, establishes that water from Cosumnes River diverted under this license has been used continuously up to 1975 for irrigation and stockwatering and at varying times thereafter.

(2) Protestant contends that transfer of place of use as proposed for License 6238 from riparian lands to non-riparian lands would increase the total place of use and the quantity of water diverted; however, there is no substantial evidence in support of this contention. Conversely, provision four of the stipulation between OHWD and Rancho Murieta provides for reduction in use of water on the new place of use to the extent that water is used on the original place of use. Petitioner adduced additional

evidence that it plans to use treated effluent for golf course irrigation when sewage flows get large enough in the future. Present flows are inadequate for this purpose. The projected flow is only 250 acre-feet in 1982, however, Petitioner projects a flow in excess of 1,000 acre-feet by 1990. This quantity of treated wastewater will supply 82% of the irrigation water needs for the two golf courses. We approve of the use of reclaimed wastewater for irrigation, which would allow water unused, but claimed under License 6238, to flow downstream to be used by others. Such use is in compliance with Sections 15550 and 15551 and Water Code and Petitioner should implement this project as soon as adequate supplies of wastewater are available.

(3) Protestant's contention that License 6238 should not be changed because there is no unappropriated water available is without merit. The sole issues to be resolved are whether the proposed changes will injure or affect the rights of any legal user of the water, and whether the public interest would be impaired by the proposed changes. No change in the amount of appropriation is proposed. Further, protestant failed to adduce any evidence to demonstrate detriment to other legal users. Evidence with respect to the potential effect upon protestant's rights disclosed that he will continue to capture irrigation runoff from the Cosumnes Irrigation Association at his lower diversion point and there is no evidence of potential diminution of water available to him.

(4) Protestant further contends that the petition to change Permit 16762 would convert non-consumptive use to consumptive use constituting an increase in storage, and thus result in reduction of water available to downstream users. We do not agree. Evidence rebuts these contentions and shows that the proposed change would decrease the potential reservoir capacity rather than increase it. The permits as they now stand authorize a total reservoir capacity of 5,189 acre-feet as follows: Guadalupe 2,300 acre-feet, Chesbro 1,600 acre-feet, Clementia 1,240 acre-feet, and Calero 49 acre-feet. The petition would reduce the total reservoir capacity to 4,750 acre-feet as follows: Chesbro 1,250 acre-feet, Clementia 850 acre-feet, Calero 2,610 acre-feet and Fairway No. 10 lower lake 40 acre-feet. The proposed transfer of 2,300 acre-feet of storage from Guadalupe Reservoir and 350 acre-feet from Chesbro Reservoir (leaving 1,250 acre-feet at Chesbro) to an enlarged Calero Reservoir, and to Clementia Reservoir, does not increase the total of 2,650 acre-feet of storage allowed under permit. It is merely a redistribution of storage already allowable under the permit and therefore does not change or convert non-consumptive use to consumptive use. Protestant has failed to support his contention.

16. The proposed changes in Permit 16762 and License 6238 will not operate to injure the rights of any legal user of the water involved.

EFFECT UPON THE ENVIRONMENT

17. The County of Sacramento has prepared a final environmental impact report in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) and the State Guidelines.

18. The loss of archeological resources has been identified as the only significant impact created by the project. Development and implementation of a data recovery program is proposed to reduce this impact to a less than significant level.

19. The State Board has reviewed and considered the information contained in the EIR prior to the approval of the project.

COMPLAINTS OF ENTITLEMENT TERM VIOLATIONS

20. Complainant Schneider submitted complaints on April 27, 1978, relative to License 537 (Application 1838), License 2629 (Application 2296) and Permit 16762 (Application 23416). Complainant alleges that License 537 should be revoked for non-use, that License 2629 should be revoked in part because of limited use, that violations of the terms of Permit 16762 have occurred, and that use under the aforementioned licenses and permit has injured his prior vested rights. OHWD joined in the complaints concerning Licenses 537 and 2629. The Environmental Council of Sacramento, hereinafter ECOS, joined in the complaint regarding alleged violations of Condition 23 of Permit 16762. The staff conducted an investigation of the complaints and a report dated January 3, 1979 was introduced in evidence at the

hearing. Complainant Schneider stipulated concurrence with the conclusions of the report.

Substance of License 537

21. (a) License 537 is a license authorizing Rancho Murieta's direct diversion of 2 cfs from Cosumnes River for the period March 15 to September 1. The purpose of use is irrigation and the point of diversion is within SW¼ of SE¼ of Section 35, T8N, R8E, MDB&M. The place of use is 160 acres generally described as the first area developed by Rancho Murieta south of Highway 16. It comprises, in part, the main gate area, mobile home park, the training center, and areas around the airport.

(b) Complainant Schneider alleges that there has been no use of water on the place of use for over eight years. A staff investigation prior to the hearing disclosed that there was continuous use but that there was a substantial reduction in the area irrigated under the license because of the development of the Laguna Joaquin Reservoir, the main gate area, mobile home park, airport and the training center, all at the Rancho Murieta development. Testimony by witnesses for Rancho Murieta confirmed the staff report and testified that four and one-half acres north of the highway, five acres around the training center, and 13 acres within the mobile home park, making a total of 22½ acres have been irrigated during recent years. The complainant accepted this figure and at hearing Rancho Murieta agreed to reduction of the license on a pro-rata basis. We find therefore that the license should be reduced from 160 to 22½ acres (irrigated land), reducing the amount of water, the right to the use of which is authorized under License 537 to 0.28 cfs.

Substance of Permit 16762

22. The substance of Permit 16762 is identified in Paragraph 8 above. Complainant Schneider is an adjacent downstream user. He alleges that six separate conditions of Permit 16762 have been violated and that these violations affect not only him, but OHWD and the general public as well. OHWD has withdrawn its joinder to the complaints. However, ECOS has joined with respect to the complaint of violation of Condition 23 of the permit. We deal separately with each complaint.

a. Condition 11 provides as follows:

> *"Permittee shall allow representatives of the State Water Resources Control Board, employees of Omochumne-Hartness Water District, and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit."*

(1) Complainant alleges that he has been denied access to the property by Rancho Murieta and asks that the Board specifically include Schneider Ranch, or its representatives, as authorized persons to be granted access to Rancho Murieta. In rebuttal Rancho Murieta points to the fact that the Rancho Murieta properties is a private development patrolled by security guards and that access is restricted. Both Rancho Murieta and OHWD stipulated, however, that if Schneider Ranch was designated by OHWD as its representative, access to the project will be granted. Complainant, although not satisfied with the proposal, did not reject it.

(2) Although the Board has jurisdiction to designate in its orders specific persons or entities to be granted access for the purpose of inspection, we do not find that it is necessary to order that Schneider Ranch be granted additional

access rights. While we agree that adjacent landowners have an interest in the activities upon surrounding lands which may affect them and have made such provisions from time to time, we do not agree that it is reasonable or proper in the instant case. The purpose of such terms is to ensure that those parties who have a direct interest in the project, as well as the Board, have reasonable access to determine compliance with terms of the permit. Expansion of access terms to include additional parties is unduly onerous upon the permittee and would serve no useful purpose. OHWD has stated its agreement to consider Schneider Ranch as its representative. We, therefore, decline to amend the condition as requested.

b. Condition 17 provides as follows:

"After the initial filling of Laguna Joaquin, Peralta, Clementia, Bass, Black Bass, and Calero Reservoirs, permittee's rights under this permit, as it pertains to these reservoirs, extends only to water necessary to keep these reservoirs full by replacing water beneficially used and water lost by evaporation and seepage, and to refill if emptied for necessary maintenance or repair. Such right shall be exercised only during the authorized season."

(1) Complainant alleges that water was diverted into Laguna Joaquin Reservoir outside the diversion season and that such use is wasteful and unreasonable. Permittee contended that this water was taken under riparian rights and under License 2629 and that for a time it was merely routed through Laguna Joaquin Reservoir en route to the lands to be irrigated. Also, no evidence was introduced to support complainant's contention of waste and unreasonable use.

c. Conditions 18 and 21 provide as follows:

"18. For the protection and preservation of fish life, diversions under this permit from the Cosumnes River shall be subject to the following terms and conditions:

A. No water shall be diverted when the flow is less than 70 cubic feet per second.

B. Only up to 6 cubic feet per second shall be diverted when the flow is between 70 and 175 cubic feet per second (but such diversion shall not reduce the flow below 70 cubic feet per second).

C. Only those flows in excess of 175 cubic feet per second shall be diverted at all other times, except in dry years, as follows:

(1) If on February 1, the total amount that could have been diverted under this permit under the foregoing schedule is less than 400 acre-feet, then permittee may, during February, divert the flows in excess of 70 cubic feet per second, up to a maximum of 46 cubic feet per second.

(2) If on March 1, the total amount that could have been diverted under the foregoing schedule is less than 2,000 acre-feet, then permittee may, during March, divert the flows in excess of 70 cubic feet per second up to a maximum of 46 cubic feet per second.

(3) If on April 1, the total amount that could have been diverted under the foregoing schedule is less than 4,400 acre-feet, then permittee may, during the remainder of the diversion season (April 1 to May 31), divert the flows in excess of 70 cubic feet per second up to a maximum of 46 cubic feet per second

D. For the purpose of providing maximum continuous downstream fish migration flows as early as possible in the spring months during years when one of the schedules as set forth in paragraphs c(1), c(2), or c(3) above is commenced, the permittee shall continue such diversion schedule (set forth under c(1), c(2), or c(3) respectively) in order to completely fill Guadalupe and Chesbro storage reservoirs as soon as possible, and shall not revert to the diversion schedule under b and c above, except for direct diversion to supply its direct diversion requirements during the remainder of the diversion season not to exceed 6 cubic feet per second. The total seasonal diversion shall not exceed 6,368 acre-feet.

E. All measurements of flow shall be determined at the U. S. Geological Survey Gaging Station "Cosumnes River at Michigan Bar".

"21. Permittee shall divert no water during the period November 1 to June 1 of each season except during such time as there is a continuous visible surface flow in the bed of Cosumnes River from permittee's point of diversion to the gaging station at Highway 99 known as 'Cosumnes River at McConnell'."

(2) Complainant alleges that during water years 1975-76 and 1976-77 water was diverted from the Cosumnes River during periods when flows were not above the required 70 cfs minimum fish bypass amount at the U.S.G.S. gage at Michigan Bar (Condition #18) and surface flows were not visible at the U.S.G.S. gage at McConnell (Condition #21).

(3) Evidence, including the staff investigation report, confirmed complainant's contentions and this evidence was not refuted by permittee. Permittee's response was that the years in question were of unprecedented drought; and that various landowners downstream from the permittee, within OHWD, had erected dams or other obstructions across the river channel at various locations to artificially induce percolation to the underground. The effect of those dams according to permittee, was to eliminate a continuous stream through much of the channel which would make a live flow at McConnell impossible as well as prevent fish passage through or along the channel.

Permittee further responded by saying its diversions outside the authorized season were done under claims of riparian and prescriptive rights. Permittee was not allowed at the hearing to present its case on prescription since it was outside the scope of the hearing. It is found that the permittee has reached agreement with OHWD to install new stations and measuring devices, and permittee shall be required to submit reports to the Board. OHWD shall install further such dams or barriers only after the stream dries up at McConnell gage. Furthermore, the permit will be subject to revocation should violation of Conditions 18 and 21 occur again.

d. Condition 22 provides as follows:

"Permittee shall install and maintain measuring devices acceptable to the State Water Resources Control Board to measure accurately the quantity of water diverted from Cosumnes River."

Complainant alleges that the necessary measuring devices have not been installed. Preliminary staff investigations revealed that some gages were in operation; however, later inspections disclosed deficiencies which corroborated complainant's allegations. We believe that these deficiencies will be corrected when the agreement between OHWD and Rancho Murieta is implemented.

e. Condition 23 provides as follows:

"No water shall be used under this permit until the permittee has, through grant of easement or dedication or other means satisfactory to the County of Sacramento, provided for access by the general public to Cosumnes River through the proposed place of use. Such access shall be a minimum of 50 feet wide on each bank of the river, or such width as may be in conformity with the parkway plan of the County of Sacrmaneto; provided, however, that reasonable public access along the river is maintained."

(1) Complainant Schneider alleges that the permittee violated the condition by using water under the permit before providing public access to the river as required by this condition. Complainant further argued at the hearing that the terms of the agreement between the County of Sacramento and permittee, which will be discussed more fully below, imposes an inequitable burden upon his properties which are situated across the river by creating a potentially more attractive recreational area near his properties than is created upstream and thus attracting more persons who may be expected to trespass upon his properties.

(2) Permittee does not deny that it has used water from the river under Permit 16762 prior to providing the

necessary public access. Permittee's response is that since issuance of the Permit it has engaged in good faith efforts to comply. Evidence of compliance offered by permittee was the execution and adoption of an agreement on December 27, 1978, between the County of Sacramento and Rancho Murieta, after prolonged negotiations, wherein permittee agrees to convey by grant deed 136 acres described as "Park Property" adjacent to the river downstream from the Highway bridge on the north side of the river. The agreement also provides for a grant deed of easement in perpetuity for public access to a strip of land varying in width from 50 to 400 feet up stream of the bridge on the south bank of the river.

(3) The terms of the agreement provide for assuring general public access to both the 136 acres of park property and the easement area. Although the agreement does not have specific terms for future use, it provides for implementation of a park and recreation facilities in the 136 acres and the dedication of the easement for park purposes with a general plan designc to retain the present undeveloped condition of the easement portion. The agreement further provides that the County will deed to the permittee the old steel bridge which crosses the river. Additional terms provide for delivery and recordation of the deeds on July 2, 1979.

(4) Complainant Schneider's witness evidenced concern over the proposed grants alleging conflict between the public access rights granted and the language of Condition 23. Complainant further alleged that permittee has done nothing

further toward implementing the mandate of Condition 23 than enter into the agreement with the County. This allegation was rebutted by permittee who alleged that it allows persons into the easement area, and that upon request by interested parties, tours of the area will be conducted.

(5) We are aware of the nature and use of permittee's lands within its project and its need to afford security for the residents and avoid trespass and vandalism on the private properties located therein. We have reviewed the evidence which has been presented, not only during this hearing, but also during past hearings, as well as litigation involving this matter. We find that if access is permitted to the general public to the south bank of the river upstream of the bridge and to the north bank of the river downstream from the bridge the spirit and intent of Condition 23 will be met. The agreement does provide for implementation of recreational areas with access to be provided to the general public.

(6) The County of Sacramento adduced evidence to the effect that although a general plan for future use of the park and recreational areas has not been developed, the County contemplates providing for adequate, satisfactory, and reasonable access to the general public to the Cosumnes River within the areas concerned. The County of Sacramento's Board of Supervisors has evidenced its understanding of the nature of the proposed use by making such a finding in Paragraph VII, subparagraph 1 of the above described agreement. The agreement declares that the

resulting parkway is in conformity with the County's Consumnes River Parkway Plan.

(7) Witnesses for ECOS questioned whether the agreement does in fact provide access as contemplated by Condition 23. ECOS witnesses further questioned whether the Board would require specific recreational or developmental installations and inquired as to the responsibility for assuring that access would in fact be made available to the general public.

(8) We have heretofore found it is in the public interest that access to the general public be maintained along the Cosumnes River. We now find that the permittee has complied with Condition 23 by removing the restrictions against access on both parcels of property referred to herein and by dedicating and placing them within the County of Sacramento's Parkway System in a manner satisfactory to the County. So long as permittee takes no unreasonable action to impede or prevent future access to those areas, permittee will remain in compliance with Condition 23.

(9) We conclude that permittee has satisfactorily complied with the terms of Condition 23 in that it has provided for access to the general public to the Cosumnes River through the grants of easement and dedication to the County of Sacramento, and that it is now the responsibility of the County to implement the plan. We are in sympathy with the complainant's concerns that expanded use of the riverfront property adjacent to his ranch may create a burden by allowing trespassers upon his property; however, should these concerns be realized complainant has adequate remedies which are beyond the jurisdiction of

this Board. We believe that we have exercised the fullest extent of our jurisdiction and should not expand our order further regarding access to the river.

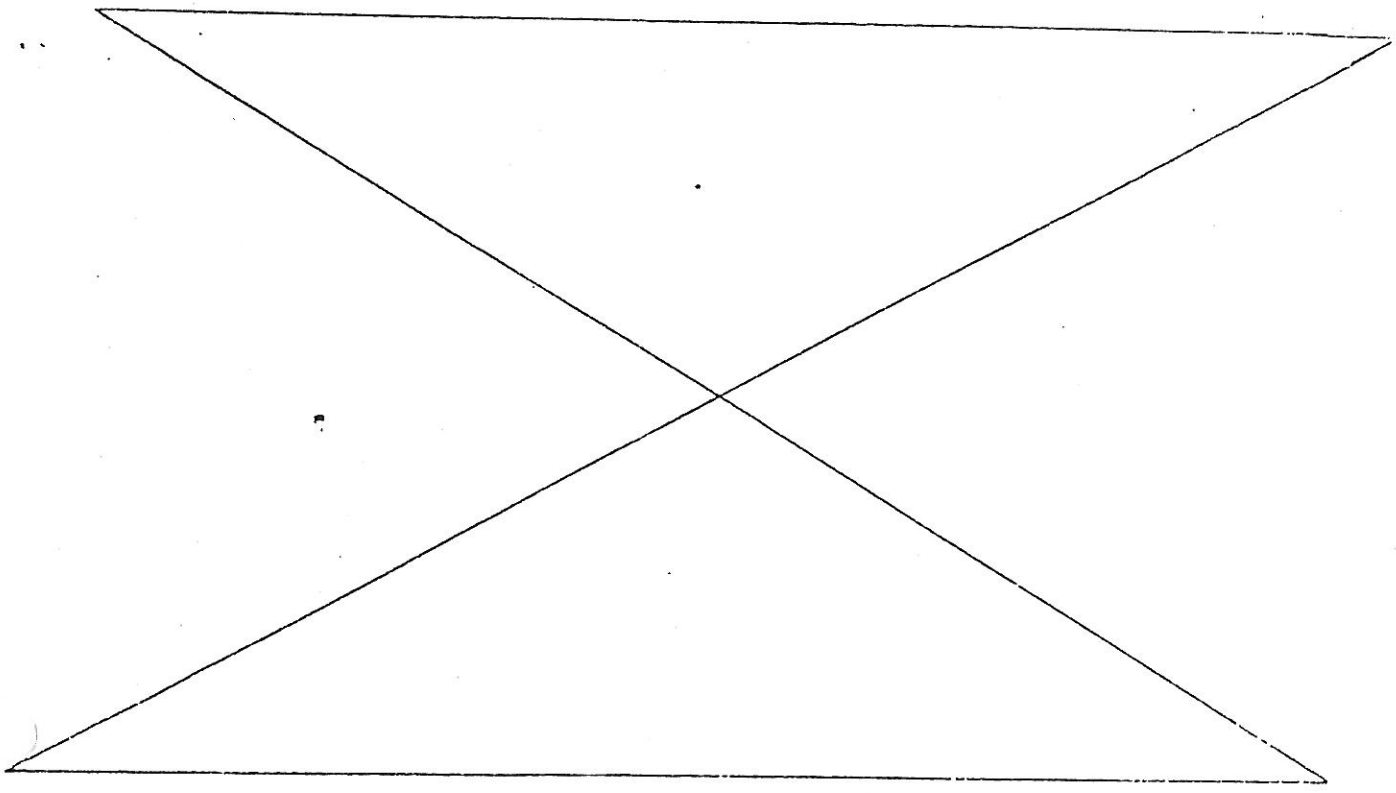
23. Complainant requested that Rancho Murieta, where possible, divert local runoff to storage rather than divert water from the Cosumnes River to offstream storage. Although this will put an extra burden on Rancho Murieta, it will reduce the demand on the Cosumnes River. We find that it is in the public interest in best developing, conserving and utilizing waters of the Cosumnes, and therefore approve complainant's request.

Substance of License 2629

24. License 2629 is a license authorizing the Cosumnes Irrigation Association's direct diversion of 12.5 cfs from the Cosumnes River for the period March 1 to July 10. The point of diversion is within SW¼ of SE¼, Section 35, T8N, R8E, MDB&M and the place of use is described generally as all of the area within the Cosumnes Irrigation Association place of use. It consists in part of the agricultural area irrigated by Rancho Murieta and Maughn and Carlson and comprises a total of 893.9 acres.

a. Complainant alleges that approximately 50 per cent of the Cosumnes Irrigation Association's place of use has not been irrigated for over eight years.

b. Evidence reveals that a total of 471 acres have been irrigated within recent years out of a specified place of use of 893.9 acres. This has been due to development and changes of ownership which reduced the effective area to a total of 569 acres. This was not refuted by the licensee and ordinarily a reduction in the amount of water should be made. Evidence was received at the hearing that because of the soil type, a greater duty of water, over the normal amount, is required to irrigate the place of use. The license was issued on February 21, 1944, on the basis of a "reasonable" duty allotment rather than on the basis of a measured quantity put to beneficial use. No records were available or kept to show



what it has actually been. The stipulated agreement between OHWD and Rancho Murieta, referred to above, requires that measuring devices be put on the Cosumnes Irrigation Association ditch. Once diversion records have been made and established for this place of use, an inspection should be made to determine if the licensed amount should be reduced and what annual acre-foot limitation should apply. Permittee asserts that although the number of acres irrigated has been reduced, the net area within the place of use should not be reduced, thus allowing the license to move its irrigation around within the place of use. Pursuant to Section 674, Title 23 California Administrative Code, this technique is allowable and the place of use should therefore be reduced only by the acreage falling outside Rancho Murieta and Carlson and Maughn's boundary lines, and further, by the amount already taken out of production because of development which leaves a net of 471 acres within a gross of 569 acres.

25. From the foregoing findings the Board concludes that the petitions of the U. S. Bureau of Reclamation to change Permits 2631, 12258, 10473 and 10474; the petitions of Rancho Murieta to change Permit 16762 and License 6238 should be approved and that change orders should be issued to the licensee and permittee subject to the limitations and conditions set forth in the order following; that the complaint of Jay Schneider be dismissed subject to the findings herein. That all of the permits need to be updated to include standard terms and conditions pursuant to Section 761, Title 23, California Administrative Code.

ORDER

U.S. BUREAU OF RECLAMATION

NOW THEREFORE, IT IS HEREBY ORDERED that the petitions to change Permits 2631, 12258, 10473 and 10474 are granted and Permits 2631, 12258, 10473 and 10474 are amended as follows:

1. The purpose of use of Permits 2631, 12258, 10473 and 10474 shall be amended to read: municipal, industrial, agricultural, domestic, recreational, and preservation and enhancement of Fish and Wildlife.

2. A point of rediversion shall be added to Permits 2631, 12258, 10473 and 10474 to include: a point of rediversion on the Cosumnes River (Granlees Dam) within Section 35, T8N, R8E, MDB&M.

3. The place where water is put to beneficial use in Permits 2631, 12258, 10473 and 10474 shall be amended to read:

The place of use shall include the "proposed service area of the El Dorado Irrigation District within Townships 9, 10, 11N, Ranges 8, 9, 10, 11, 12, and 13E, T8N, R10E, MDB&M, including Rancho Murieta within Township 7 and 8N, R8E, MDB&M. The net acreage irrigated shall not exceed 6,300 acres net within the gross area of 200,600 acres as shown on map on file with the State Water Resources Control Board."

4. A new Permit Term of Permit 2631, a new Permit Term of Permit 12258, a new Permit Term of Permit 10473 and a new Permit Term of Permit 10474 are added as follows:

"a. Bureau and District shall at all times bypass at Sly Park Dam a minimum of 1 cfs, or the natural flow of Sly Park Creek, whichever is less, and at all times bypass at Camp Creek Diversion Dam a minimum of 2 cfs or the natural flow, whichever is less, to maintain fish life;

b. Bureau, considering hydrologic conditions and water use requirements, shall estimate in April of each year the storage that will exist in Sly Park Reservoir on the following September 30 and revise such estimate as often as hydrologic conditions and water use requirements warrant such revision. If such estimate or re-estimate exceeds 23,800 acre-feet, Bureau shall so advise Department of Fish and Game.

c. If the estimated September 30 storage exceeds 23,800 acre-feet, Bureau and District shall release to Sly Park Creek up to 5 cfs, including the 1 cfs provided for in a. above, of such excess on a constant-flow pattern during the period May through October or during such portion of said period as remains after revisions of the Bureau's estimate.

d. Bureau and EID shall, if requested by DFG release said excess on a pattern other than a constant-flow pattern.

e. EID will develop an irrigated 1-acre area for wildlife only on the northerly side of Sly Park Reservoir. Details of implementation will be arranged between EID and DFG."

5. A new Permit Term shall be added to Permits 2631, 12258, 10473, and 10474 as follows:

"This permit is subject to the agreement dated April 6, 1979 between permittee and Omochumne Hartnell Water District Water District, to the extent such agreement covers matters within the Board's jurisdiction."

6. A new Permit Term of Permit 2631, a new Permit Term of Permit 12258, a new Permit Term of Permit 10473 and a new Permit Term of Permit 10474 are added as follows:

"This permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose."

7. A new Permit Term of Permit 2631, and a new Permit Term of Permit 12258 are added as follows:

"The total amount of water to be appropriated under permits issued pursuant to Applications 13707, 13708, 2270 and 5645A for the benefit of the Sly Park project shall not exceed 110 cubic feet per second diverted for direct application to beneficial use and 41,000 acre-feet per annum diverted to or accumulated in storage for later application to beneficial use."

"The total amount of water to be taken from the sources for all uses under Permits 2631, 12258, 10473 and 10474 shall not exceed a combined total of 93,708 acre-feet per water year of October 1 to September 30."

8. Permit Term 8 of Permits 10473 and 10474 is amended to add as follows:

"The total amount of water to be taken from the sources for all uses under Permits 2631, 12258, 10473 and 10474 shall not exceed a combined total of 93,708 acre feet per water year of October 1 to September 30."

9. A new Permit Term of Permit 2631, a new Permit Term of Permit 12258, a new Permit Term of Permit 10473, and a new Permit Term of Permit 10474 are added as follows:

"Permittee shall allow representatives of the State Water Resources Control Board and other parties as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit."

10. A new Permit Term of Permit 2631 shall be added; Permit Term 6 of Permit 12258, Permit Term 7 of Permit 10473, and Permit Term 7 of Permit 10474 shall be amended as follows:

"Pursuant to California Water Code Section 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without draft on the source. Permittee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines after Notice to Affected Parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The water code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which havy any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

11. A new Permit Term of Permit 2631, a new Permit Term of Permit 12258, a new Permit Term of Permit 10473 and a new Permit Term of Permit 10474 shall be added as follows:

"The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that: (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges."

12. A new permit term of Permit 12258 shall be added as follows:

"Before making any change in the project determined by the State Water Resources Control Board to be substantial, permittee shall submit such change to the Board for its approval in compliance with Water Code Section 10504.5(A).

13. A new permit term shall be added to Permits 2631, 12258, 10473 and 10474 as follows:

"a. Permittee, using existing measuring devices for that purpose, shall maintain daily records of diversions from Camp Creek to Sly Park Reservoir and of changes in storage in Sly Park Reservoir and releases into the North Fork Cosumnes River for delivery to Rancho Murieta, satisfactory to the State Water Resources Control Board, to allow a reasonably accurate determination of the amount of stored water released from Sly Park Reservoir into the North Fork Cosumnes River for delivery to Rancho Murieta, as distinguished from the natural flow of the stream.

b. Measuring devices are installed at the point of rediversion of stored water to Rancho Murieta from the Cosumnes River, and daily records shall be maintained of diversions at said point, which records shall be available to the State Water Resources Control Board and to Omochumnes-Hartnell Water District. The location of the rediversion shall be identified as the forebay of the Rancho Murieta pumping plants located between Granlees Dam and the Cosumnes Irrigation Association ditch."

RANCHO MURIETA

IT IS FURTHER HEREBY ORDERED that the petitions to change Permit 16762 and License 6238 are granted and Permit 16762 and License 6238 are amended as follows:

1. Permit Term 5 of Permit 16762 is amended as follows:

"The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed (a) 6 cubic feet per second by direct diversion from the Cosumnes River to be diverted from November 1 of each year to May 31 of the succeeding year, and (b) 4,050 acre-feet per annum by storage to be collected from November 1 of each year to May 31 of the succeeding year as follows:

1. 3,900 acre-feet per annum from the Cosumnes River to be stored as follows:

(A) 1,250 acre-feet per annum in Chesbro Reservoir,
(B) 2,610 acre-feet per annum in Calero Reservoir,
(C) 850 acre-feet per annum in Clementia Reservoir, and
(D) 40 acre-feet per annum in Fairway No. 10 Lower Lake.

The combined amount under B, C and D shall not exceed a total of 2,650 acre-feet.

2. 50 acre-feet per annum from an unnamed stream to be stored in Chesbro Reservoir.

3. 100 acre-feet per annum from an unnamed stream to be stored in Calero Reservoir.

The maximum rate of diversion from the Cosumnes River to offstream storage shall not exceed 46 cubic feet per second. The equivalent of the continuous flow allowance by direct diversion for any 7-day period may be diverted in a shorter time if there is no interference with vested rights. The total amount of water to be taken from the source shall not exceed 6,368 acre-feet per water year of October 1 to September 30.

This permit does not authorize collection of water to storage outside of the specified season to offset evaporation and seepage losses or for any other purpose."

2. Permit Term 10 of Permit 16762 is amended to read as follows:

"Pursuant to California Water Code Sections 100 and 275, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to minimizing waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation."

3. A new permit term of Permit 16762 shall be added as follows:

"When the flow of treated wastewater reaches 424 acre-feet per annum, permittee shall implement the use of such wastewater for irrigation purposes in lieu of water from other sources as provided in Sections 15550 and 15551 of the Water Code. Such use shall be reported on the annual progress reports filed with the Board."

4. Permit Term 18, subparagraph "D" of Permit 16762 is amended as follows:

"For the purpose of providing maximum continuous downstream fish migration flows as early as possible in the spring months during years when one of the schedules as set forth in paragraphs c(1), c(2), or c(3) above is commenced, the permittee shall continue such diversion schedule (set forth under c(1), c(2), or c(3) respectively) in order to complete the diversion to storage under the permit as soon as possible, and shall not revert to the diversion schedule under B and C above, except for direct diversion to supply its direct diversion requirements during the remainder of the diversion season not to exceed 6 cubic feet per second. The total seasonal diversion shall not exceed 6,368 acre-feet."

5. A new permit term of Permit 16762 shall be added as follows:

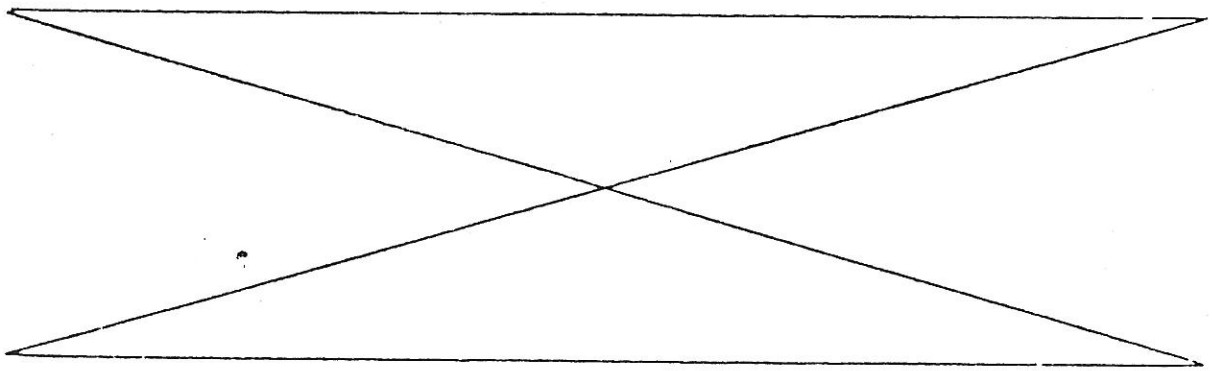
"This permit is subject to the agreement dated March 26, 1979 between permittee and Omochumne-Hartnell Water District, to the extent such agreement covers matters within the Board's jurisdiction."

6. A new permit term of Permit 16762 shall be added as follows:

"Suitable metering and recording devices shall be installed, operated and maintained in good working order by Rancho Murieta at the following locations:

a. On the discharge line of each pumping station located within the forebay of the CIA diversion Canal headworks and which divert water to off-stream storage pursuant to Permit 16762. A suitable recording device shall also be installed which will provide a continuous record on a strip or circular chart of rates and time of diversion for each pump.

b. At the headworks of the CIA canal a continuous stage recorder to record diversions into the canal. Direct measurements to be made at least bimonthly to provide an accurate stage-discharge relationship. The recorder may be removed during periods of high water.



c. On all other pumping facilities which divert water from the Cosumnes River including but not limited to those facilities commonly referred to as the:

i. Bass Lake Pump
ii. Old Bridge Pump
iii. Rock Plant Pump

Totalizing meters will be deemed adequate for the foregoing and for (d) and (e).

d. A meter shall be installed in the Cosumnes Irrigation Association Canal downstream from the Laguna Joaquin Reservoir.

e. At all points where water is withdrawn from storage for beneficial use, except from Fairway No. 10 Upper Lake. Water withdrawn for transfer to another reservoir will also be measured except for transfers among Calero, Clementia and Chesbro or from those reservoirs to the Treatment Plant.

f. For purposes of the measurements described above, hour meters of KWH consumption shall not be considered adequate unless otherwise agreed to.

g. At Calero, Chesbro and Clementia Reservoirs changes in storage will be measured at least monthly, and this information, plus any additional measurements actually made regarding changes of storage, furnished to the Board upon request."

7. A new permit term shall be added to Permit 16762 as follows:

"Permittee shall devise a method or plan satisfactory to the State Water Resources Control Board to obtain current stream flow data at the U. S. Geological Survey gaging station at Michigan Bar. Such plan shall be submitted to the Chief of the Division of Water Rights within 60 days."

8. A new permit term to Permit 16762 shall be added as follows:

"Permittee shall collect local runoff to storage in lieu of diverting water from the Cosumnes River to the extent local runoff is available, and the right under Permit 16762 be reduced by the total amount of local runoff, including the amount allowed to spill up to the amount authorized under Permit 16762 for storage."

9. License 6238 is amended as follows: The place where water is put to beneficial use in License 6238 shall be amended to read:

"The place of use of the 109 acres permitted by the license shall be as follows:

4.2	acres within SW¼ of SW¼ of Section 35
5.0	acres within SW¼ of NE¼ of Section 34
8.0	acres within SE¼ of NW¼ of Section 34
7.3	acres within SW¼ of NW¼ of Section 34
9.7	acres within NW¼ of SW¼ of Section 34
12.1	acres within SW¼ of SW¼ of Section 34
12.2	acres within SE¼ of SE¼ of Section 34
3.9	acres within NE¼ of SE¼ of Section 34
11.2	acres within NW¼ of SW¼ of Section 35
73.6	total

all being within T8N, R8E, MDB&M.

The remaining 35 acres place of use is described as follows:

1.3	acres within SW¼ of NE¼ of Section 2
7.9	acres within NW¼ of SE¼ of Section 3
6.2	acres within NW¼ of SW¼ of Section 3
6.0	acres within NW¼ of SW¼ of Section 2
8.5	acres within NW¼ of SW¼ of Section 2
0.1	acres within NW¼ of SE¼ of Section 2
5.0	acres within SE¼ of SE¼ of Section 3
35.0	total

all being within T7N, R8E, MDB&M."

IT IS FURTHER HEREBY ORDERED, that License 537 which authorizes direct diversion of 2 cfs from the Cosumnes River by Rancho Murieta for the period March 15 to September 1 be amended as follows:

1. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 0.28 cfs by direct diversion from March 15 to September 1 of each year.

2. The place where water is put to beneficial use in License 537 shall be amended to read: The place of use shall be as follows:

4½ acres within SE¼ of SE¼, Section 33 T8N, R8E, MDB&M
18 acres within NE¼ of Section 4, T7N, R8E, MDB&M

3. A new license term for License 537 is added as follows:

"This permit is subject to the agreement dated March 26, 1979 between permittee and Omochumne-Hartnell Water District, to the extent such agreement covers matters within the Board's jurisdiction."

IT IS FURTHER HEREBY ORDERED that License 2629 issued to the Cosumnes Irrigation Association be amended as follows:

1. The place where water is put to beneficial use in License 2629 shall be amended to read:

"The place of use shall be a net of 471 acres within a gross of 569 acres as follows:

40 acres within NW 1/4 of NW 1/4, Section 4,
23 acres within NE 1/4 of NW 1/4, Section 4
40 acres within SW 1/4 of NW 1/4, Section 4,
40 acres within SE 1/4 of NW 1/4, Section 4,
40 acres within NW 1/4 of SW 1/4, Section 4,
35 acres within SW 1/4 of SW 1/4, Section 4,
33 acres within NE 1/4 of SW 1/4, Section 4,
2 acres within SE 1/4 of SW 1/4, Section 4,
9 acres within NW 1/4 of NE 1/4, Section 5,
35 acres within NE 1/4 of NW 1/4, Section 5,
40 acres within SW 1/4 of NE 1/4, Section 5,
40 acres within SE 1/4 of NE 1/4, Section 5,
40 acres within NW 1/4 of SE 1/4, Section 5,
40 acres within NE 1/4 of SE 1/4, Section 5,
10 acres within SW 1/4 of SE 1/4, Section 5,
26 acres within SE 1/4 of SE 1/4, Section 5,
21 acres within SE 1/4 of NW 1/4, Section 5,
40 acres within NE 1/4 of SW 1/4, Section 5,
11 acres within NW 1/4 of SW 1/4, Section 5,
4 acres within SW 1/4 of SW 1/4, Section 5,

569 Total acres

all being within T7N, R8E, MDB&M."

IT IS FURTHER HEREBY ORDERED that amended permits shall be prepared in the current form incorporating all of the foregoing provisions, and updating standard terms and conditions.

IT IS FURTHER HEREBY ORDERED that the complaint by Jay Schneider, having been resolved by the findings and order herein, be and is hereby dismissed.

Dated: JUN 7 1979

W. Don Maughan, Chairman

William J. Miller, Member

L. L. Mitchell, Member

Carla M. Bard, Member

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Permits 2631, 12258, 10473, and 10474 Issued on Applications 2270, 5645A, 13707, and 13708

U. S. BUREAU OF RECLAMATION

Petitioner

and

Permit 16762 Issued on Application 23416, Licenses 537 and 6238 Issued on Permits 1030 (Application 1838) and 10144 (Application 16142)

BANK OF AMERICA AS CORPORATE CUSTODIAN OF THE PENSION TRUST FUND FOR OPERATING ENGINEERS (RANCHO MURIETA)

Petitioner

OMOCHUMNE-HARTNELL WATER DISTRICT

Protestant

ENVIRONMENTAL COUNCIL OF SACRAMENTO

Complainant

License 2629 Issued on Permit 1320 (Application 2296) of

Cosumnes Irrigation Association

Licensee

JAY SCHNEIDER

Protestant and Complainant

Order : WR 79-23

Source: Cosumnes River

County: Sacramento

ORDER MODIFYING ORDER WR 79-13 ON RECONSIDERATION

BY THE BOARD:

Rancho Murieta, Omochumne-Hartnell Water District and Jay Schneider, having petitioned the State Water Resources Control Board (hereinafter the Board) for reconsideration of Order WR 79-13, adopted June 7, 1979, which approved change

petitions of the U. S. Bureau of Reclamation and Rancho Murieta, and allowed complaints of Jay Schneider in part; the Board having received written statements in opposition to the petition of Jay Schneider from Rancho Murieta and El Dorado Irrigation District; the Board having made its order on July 19, 1979 granting reconsideration; the petitions and the record in this matter having been duly considered the Board finds as follows:

Petition of Omochumne-Hartnell Water District

1. The District contends that the lands within its jurisdiction should be included within the place of use under the U. S. Bureau of Reclamation's permits. Petitioner Schneider concurs with this contention.

2. The Board finds that this proposal was not a part of the Bureau's change petitions and, therefore, was not within the scope of the proceedings on said petitions. Accordingly, the proposal cannot by orderly process be properly considered on reconsideration of Order WR 79-13. This finding is without prejudice to consideration of any subsequent petition embodying the proposal.

Petition of Rancho Murieta

3. Rancho Muieta's petition raises two issues:

a. Petitioner objects to order Paragraph 8 on Permit 16762. This order paragraph requires that all local runoff be collected to storage and that the right under Permit 16762 be correspondingly reduced. Petitioner correctly points out that local runoff cannot be accurately forecast since runoff in the area comes from rainfall rather than from any measurable snowpack. Petitioner further contends that the term provides no benefit or necessary protection to Schneider. The existing diversion season constraints (November 1 to May 1)

in Permit 16762, and the minimum flow requirements of Condition 18 (no diversion when the flow is less than 70 cfs), together with Condition 21 (there must at all times be a live stream from the permitted diversion down to McConnell gage), provides the necessary protection to the protestant. Furthermore, spill from Chesbro and Clementia reservoirs will flow into the Cosumnes River upstream from the protestant. Calero reservoir's entire watershed is 210 acres, with the reservoir itself occupying 118 acres. Therefore, only a small additional amount could be diverted from the Cosumnes River in place of collecting local runoff, but only outside the protestant's irrigation season.

Petitioner further points out that order Paragraph 8 may conflict with Condition 18 which requires that in subnormal years the reservoirs be filled early to aid downstream fish migration flows. The Board finds that order Paragraph 8 is excessively burdensome and does not provide optimum operation of the permittee's project considering all of the permit requirements together. The project as permitted also contains a built-in incentive to collect local runoff since the collection of such runoff avoids needless pumping and energy expended. Accordingly, order Paragraph 8 should be modified to require petitioner to collect local runoff where practicable.

b. Petitioner requests the Board to amend subparagraph (d) of finding 7.d.(2), which reads:

> *"Protestant's concerns with access to the meters was resolved at the hearing at which time OHWD and Rancho Murieta agreed that Schneider Ranch would be granted access as a representative of OEWD."*

Petitioner contends that this finding incorrectly implies that Rancho Muieta agrees to designation of multiple representatives by OHWD. We find that the record substantiates petitioner's contention. The order will be amended accordingly.

Petition of Jay Schneider

4. Petitioner raises four issues:

a. Petitioner insists that the requested change in place of use under License 6238 (Rancho Murieta) should be disapproved. Petitioner offers no new matter in support of his request. We have reviewed the record and find no error in our interpretation of the facts. Petitioner's request should, therefore, not be granted.

b. Petitioner requests that License 2629 (Cosumnes Irrigation Association) be reduced on a pro rata basis rather than by considering actual use data as found in finding 24 b of Order 79-13. The original basis for determining the amount of water to be licensed was an estimate and was not based on use data which is a preferable basis. There is no doubt from the record that the full amount of the license was beneficially used prior to issuance of the license. With the present change in the project, current use data will be available. There is no reason not to use a measured amount rather than a hypothetical amount when such data becomes available. There is precedent for this approach. (See Board Order 74-35.)

c. Petitioner, in reference to the U. S. Bureau of Reclamation's permits, requests that the Schneider Ranch be included in the place of use. We find that inclusion of the Schneider Ranch in the place of use is outside the scope of this preceeding and that the discussion under finding 2, above, is applicable to this request. Petitioner further requests that domestic use as well as municipal and industrial uses be limited to net amounts to control growth. The Board finds further that the U. S. Bureau of Reclamation properly petitioned for a change in character of use and the records indicate that the water under the permits has been fully utilized and the Bureau expects the

project to be licensed in 1979. Further, the El Dorado Irrigation District has previously pointed out that future growth will be supplied with water from other sources.

d. Petitioner requests that the Board amend its order concerning public access to the Cosumnes River adjacent tc Rancho Murieta to require equal access to all portions of the river. The Board finds that petitioner has offered no new matter to support his request, that the order was made after due consideration of all the record and that the County of Sacramento is the proper authority to implement and control access to the river.

5. The Board further finds that reference to License 537, order Paragraph 3 of Order 79-13 on Page 42 is a clerical error and should be amended to refer to License 6238.

From the foregoing findings, the Board concludes that Order 79-13 should be amended as set forth in the order following:

ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

1. The permit term contained in order Paragraph 8 on Permit 16762, Page 40, of Order 79-13 is modified to read as follows:

> *"Permittee shall make all reasonable efforts to collect local runoff to storage to the extent local runoff is available in lieu of diverting water from the Cosumnes River."*

2. Subparagraph (d) of finding 7.d(2) (Page 11) of Order 79-13 is modified as follows:

> *"Protestant's concerns with access to the meters was resolved at the hearing, at which time OHWD and Rancho Murieta agreed that Schneider Ranch could be granted access as the representative of Omochumne-Hartnell Water District."*

3. Paragraph 3 of Order 79-13 on Page 42 is deleted and a new Term 10 on Page 41 shall be added to License 6238 as follows:

> *"This license is subject to the agreement dated March 26, 1979 between licensee and Omochumne-Hartnell Water District to the extent such agreement covers matters within the Board's jurisdiction."*

4. Except as hereinabove ordered, the petitions for reconsideration are dismissed.

Dated: AUG 16 1979

W. Don Maughan, Chairman

L. L. Mitchell, Member

ABSENT

William J. Miller, Vice Chairman

Carla M. Bard, Member

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: APR 11 1961.

STATE WATER RIGHTS BOARD CALIFORNIA

L. K. Hill
L. K. Hill
Executive Officer

12-26-62- Name chge. from Arthur Granlees to Estate of Arthur Granlees

~~11-4-66~~ RECEIVED NOTICE OF ASSIGNMENT TO ~~George -~~ Artz, Jean Litlig Artz, Hal L. and Louise Ellis.

~~11/26/65~~ RECEIVED NOTICE OF ASSIGNMENT TO Bank of America N. T. & S. A. as Corporate ~~Custodian~~ of the Pension Trust Fund for ~~[illegible]~~

9-12-86 Asgd to Rancho Murieta Properties, Inc

1-14-88 Asgd to Rancho Murieta Community Services Dist

LICENSE 6238
STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

LICENSE
TO APPROPRIATE WATER

ISSUED TO A. J. and J. D. Granlees

DATED APR 11 1961

RANCHO MURIETA COMMUNITY SERVICES DISTRICT
P.O. BOX 1050, 15160 Jackson Road, Rancho Murieta, CA 95683

Sacramento County, California

R. Lee Lawrence
(916) 354-3700

WATER RIGHTS INFORMATION

LOCATION OF USE	**APPLICATION**	**PERMIT**	**LICENSE**
Bass Lake 12.5 cfs	16142	10144	6238
Cosumnes Irrigation Ditch	2296	1320	2629
Lake Laguna Joaquin Storage	1838	1030	537
Cosumnes Irrigation Ditch Storage	24085	16582	11117
Lake Guadalupe Storage	22603	15348	9925
Original Lake Calero	19477	12680	7744
Lake Guadalupe Storage	20057	13162	8013
Lake Jean Storage	16143	10145	6239
Lake Clementia Storage	23419	16765	
Peralta Reservoir Storage	23418	16764	
Lake Laguna Joaquin Storage	23417	16763	13150
Lakes Clementia, Calero, Chesbro, Lake 10 Storage and Use	23416	16762	

APPENDIX B

OPERATIONS MANUAL FOR DIVERSION FROM COSUMNES RIVER

OPERATIONS MANUAL FOR DIVERSION FROM COSUMNES RIVER

I. CIA Ditch

A. Permitted Diversions

Certain permits/incenses held by the RMCSD allow diversion at Granlees Dam for use within the District. These, and their important limits, are: (Complete permits in Appendix A)

1. License 537
   - Places of use: 22.5 acres total, around Laguna Joaquin, Murieta Parkway gate, the RMTC and Murieta Village.
   - Diversion period: 3/15 to 9/1 each year.
   - Diversion rate: 0.28 cfs (=126 gpm = 181,000 gpd = 685 AF per season)

2. License 2629
   - Place of use: 471 acres, agricultural lands within the District.
   - Diversion period: 3/1 to 7/10 each year.
   - Diversion rate: 12.5 cfs (=24.75 AF/day = 3267 AF per season)

Diversions are also made at Granlees Dam for uses outside the District, including riparian and appropriative used on agricultural lands west and south of the District.

B. Annual Operations

Certain equipment involved with CIA ditch operations must be installed and removed and given annual preventative maintenance. These include:

1. Headworks and Equestrian Center stage records.
   - Install after spring floods.
   - Remove after river flows cease.
   - Perform maintenance while out f ditch.

2. Laguna Joaquin pump discharge meter.
   - Maintenance during non-irrigation season. Calibration, some required by Permits, must also be performed, including
     - Stage recorders (2), bimonthly for permit 15762, paragraph 28A
     - Laguna Joaquin pump discharge meters, annually.

C. Seasonal Operations

Gates, valves, etc. in the CIA Ditch system are operated by RMCSD personnel. These are detailed in Section 6, CIA Ditch, Section II-2-a, b. c. Logs and records must be kept of all Ditch equipment, including:

Daily

a. Status of all gates and valves.
b. Status of stage recorders
c. Readings of pump discharge meter totalizers.

Weekly

a. Readings of stage recorders totalizers.

2. Pumped Diversions

A. Permitted Diversions

Certain permits/licenses held by the District allow pumped diversions from the Cosumnes River. These, and their critical limits, are: (complete permits in Appendix A)

1. License 6238
   - Non-riparian golf course irrigation.
   - Date: 5/1 to 10/31 yearly.
   - Rates: 1.24 cfs (557 gpm = 107,136 cfd =443 AF per season)

2. Permit 16762
   - Municipal, industrial and recreational uses, on all lands (3600 A) of the District, and irrigation of 500 A within the 3600 A.
   - Dates 11/1 each year to 5/31 next year.
   - Permitted diversion volume: see text section 3 and permit, Appendix A.
   - Permitted Appendix A, the following below.

3. Riparian diversions
   - Permitted year round, river water levels permitting.
   - Letter agreement with SWRCB dated June 29, 1990, permits operation of the Bass Lake, Yellow Bridge and Rock Plant pumps on alternate days, after 5/31 yearly.

B. Annual Operations

1. Equipment installation, removal, maintenance
   - The Bass Lake Pump, Yellow Bridget Pump and Rock Plant Pump cannot be installed until after spring floods.
   - These same pumps must be removed at the end of the irrigation season for when flow ceases in the river.

2. Records and reporting
   - See text Section 8.

C. Diversion Restrictions

1. McConnell Gage <u>- No diversions</u> are allowed unless "there is a continuous visible surface flow in the bed of the Cosumnes River from the permittee's point of diversion to the gauging stating at Highway 99 known as Cosumnes River at McConnell" (Ref. Permit 16762, paragraph 21).

   a. District operating procedures.

      (1) District employee shall drive south on Highway 99 past the McConnell Gauge and observe if flow is visible.

         (a) Three times a week, once flow starts at Granlees Dam.

         (b) Weekly during well0above-minimum-for diversion flows at Michigan Bar.

         (c) Daily during declining flows, near minimum for allowance diversion.

b. Recording and reporting.
McConnell Gauge observer(s) shall keep a daily log of date, hour and presence or absence of visible flow. Such data shall be incorporated into the annual diversion report to the SWRCB.

2. "Normal Year" Diversions
Diversion may be made, in "Normal Years", only when adequate flow exists in the river, as measured at Michigan Bar gauging station (Permit 16762 paragraph 18E). A schedule of maximum permitted diversions, as related to river flows, is detailed in paragraph 18 of permit 16762 (See Appendix A). A tabulation of these restrictions was spelled out by the SWRCB (Letter 25 January 1990) as follows:

Pump No.	Hp	Max Div. Rate cfs	Min. Michigan Bar flow to operate
1	125	6	76
1 +2	2 @ 125	12	181
3	500	15	184
3 +4	2 @ 500	30	199
3+4+5	3 @ 500	45	214

The relationships of the table above are also shown on the attached graph, title:
NORMAL YEARS DIVERSION
Permitted Diversions at Granlees Dam
Nov 1 - May 1

a. District Operating Procedures
1. Determination of flows at Michigan Bar
A readout of the hourly flows at Michigan Bar is accessible via a telephone/modem link from a computer at SWRCB. RMCSD has (6/91) installations and trained personnel for calling up this data as follows:

Personnel	Location
CSD Water Supt.	Plant and Home
CSD Accountant	Office and Home
Engineering Aide	Plant
Water Field Supv.	Plant

2. Pump Operation Criteria
(a) Flow zero to minimum.
- Up data for previous 16 hours at 0800 daily.
- Call up data for previous 8 hours at 1600 daily.
- No pump operation unless 24 hour data remains above minimum (76 cfs).

(b) Rising or stable flows.
- Call up data for last 16 hours at 0800 daily.
- No added pump unless last 12 hours data remains above next higher diversion rate.

(c) Falling flows.
- Call up data for last 16 hours at 0800 daily.
- Call up data for last 8 hours at 1600 daily
- Shut down pump(s) to next lower rate if 12 hour data trend so indicates.

(d) Off-hour operation
- No weekend pump operation; unless Normal Year total diversions are near "Dry Year" levels (see Dry Year below).
- If weekend operation required, data call up for past 24hours at 1600 Friday must show stable or rising flow.
- Night pumping rate to be reduced if 12 hour data call up at 1600 hours shown Michigan Bar flow decreasing.

3. Pump Operating Procedures.
Checklists for start/stop of both the 125 HP and 500 HP pumps for use by District operating personnel are attached at the end of this appendix.

3. Dry Year Diversions
Provisions are made in Permit 16762, paragraph 18C for accelerated diversion in "Dry Years as follows:

Date	Maximum to Storage, AF
Feb 1	400
Mar 1	2,000
Apr 1	4,400
May 31	4,050

Pumped diversions to storage, up to 46 cfs are permitted (with 70 cfs minimum flow at Michigan Bar and visible flow at McConnell) if the total amount that could have been diverted by the date specified under "Normal Year" operation was less than the amounts tabulated above.

These relationships have also been put into graphical form, attached, titled:
Dry Years Diversion

Accelerated Diversions at Granlees

a. District Operating Procedures
(1) Reservoir levels - Calero, Chesbro, Clementia
- Continue weekly readings.
- Increase reading frequency to daily in last weeks of January, February and March
- Read daily during pump operations.

(2) Michigan Bar Flows
- Call up data 0800 daily for last 16 hours.
- Diversions must not reduce flows over Granlees Dam to less than 70 cfs.

(3) Pump Operation Criteria

- Once started, diversion to storage must continue at maximum rate until stored volume limit for that period is reached.
- Diversion for direct usage, 6 cfs max., may be continued after storage limit is reached.

(4) Records and Reporting

- Michigan Bar flow)
- Pump Operations) Record daily
- Reservoir levels) Report annually

4. River Pumps

a. Bass Lake Pump.

(1) Permit Restrictions

(a) Permit 16762

- Dates: 11/1 - 5/31
- Rate: Part of 6 cfs direct usage diversions
- AFA: Part of total allowed diversion.

(b) License 6238

- Dates: 5/31 - 10/1 yearly
- Rate: 1.24 cfs max.
- AFA: No limit specified.

(c) Riparian diversions

- Agreement with SWRCB dated 6/29/90 allows alternate day operation.

(2) Operating procedures

(a) Installation after spring floods
(b) Start/stop per RMCC request and/or Bass Lake levels.
(c) Remove after irrigation season.

b. Yellow Bridge and Rock Plant Pumps

(1) Permit 16762 restrictions

- Dates: 11/1 - 5/31
- Rates: Part of 6 cfs direct usage diversions.
- AFA: part of total allowed diversions.

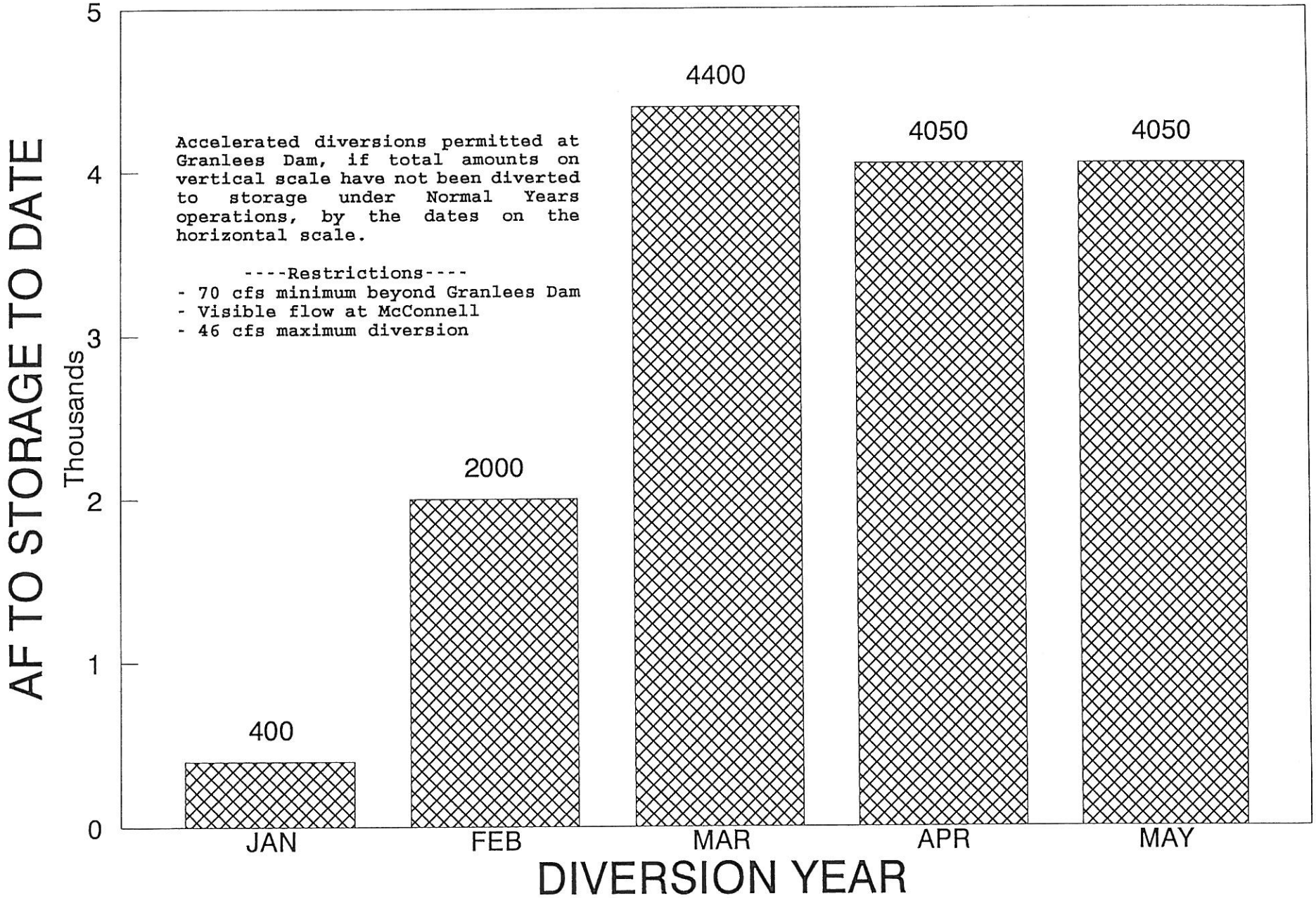
(2) Operating procedures

(a) Install after spring floods.
(b) Start/stop per RMCC and RMTC requests.
(c) Remove after river flow ceases.

c. Records and reporting.

- Read pump discharge flow meters daily.
- Report annually.

DRY YEAR DIVERSIONS



APPENDIX B-1

GRANLEES DAM DIVERSION PUMPS

Start/Stop Checklist - 125 HP Pumps

GRANLEES DAM DIVERSION PUMPS
Start/Stop Checklist
125 Horsepower (6 cfs) Pumps

1. Pre-start (Assumes that adequate flow has been determined to exist at Michigan Bar gauge).

A. Suction

1. Forebay: verify that forebay is at maximum level and inlet gate open.
2. Purge system.
   a. Start purge system, verify that air pressure is rising to accumulator tank.
   b. When compressor stops, initiate a PURGE cycle.
      - Inspect the suction screens to see that they are free of debris.
      - Run additional PURGE cycles if required to clean the suction screens.

B. Discharge

1. Storage reservoir selection.
   a. Operate valves at Granlees to discharge into either Clementia or Calero and Chesbro.
   b. If to Calero-Chesbro, open discharge gates at the reservoir selected.

C. Records

1. Read and record.
   a. Flow totalizer on either Clementia or Calero-Chesbro flow meters.
   b. Watt-hour meters.

2. Start and Run.

A. Initiate pump start sequence, using HAND mode.

B. Start up checks.

1. Verify that automatic shut-off valve (clay valve) is opening.
2. Check discharge pressure gauge for typical operating pressure.
3. Check suction well for adequate level.

C. Run.

1. Re-check suction well level, run additional PURGE cycles, if required.
2. Re-check discharge pressure gauge.
3. Check pump shaft packing gland.
4. Check for pump smooth operation.

3. Stop.

A. Initiate pump stop sequence, using OFF mode.

B. Shut down checks.

1. Verify closure of Clay valve and subsequently motor stop.

C. Shut-down operations.

1. Discharge.
   a. Shut valves to reservoir at Granlees.
   b. Shut gates at Calero or Chesbro.

2. Suction

If last pump in operations,

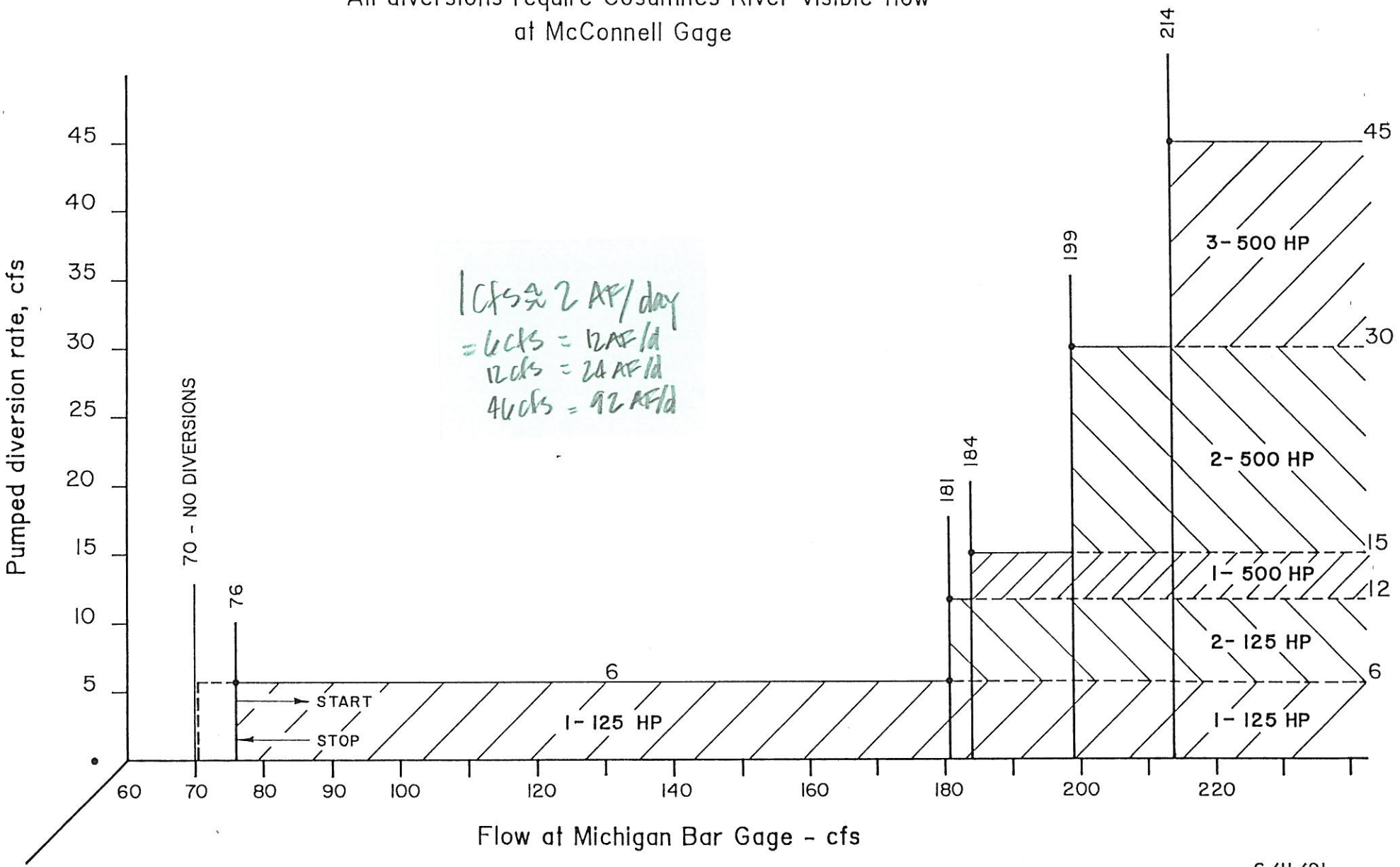
a. Shut down PURGE system.

b. Adjust forebay gates, etc.

NORMAL YEARS DIVERSIONS

Maximum Permitted Pumped Diversions at Granlees Dam
Nov. 1 - May 31

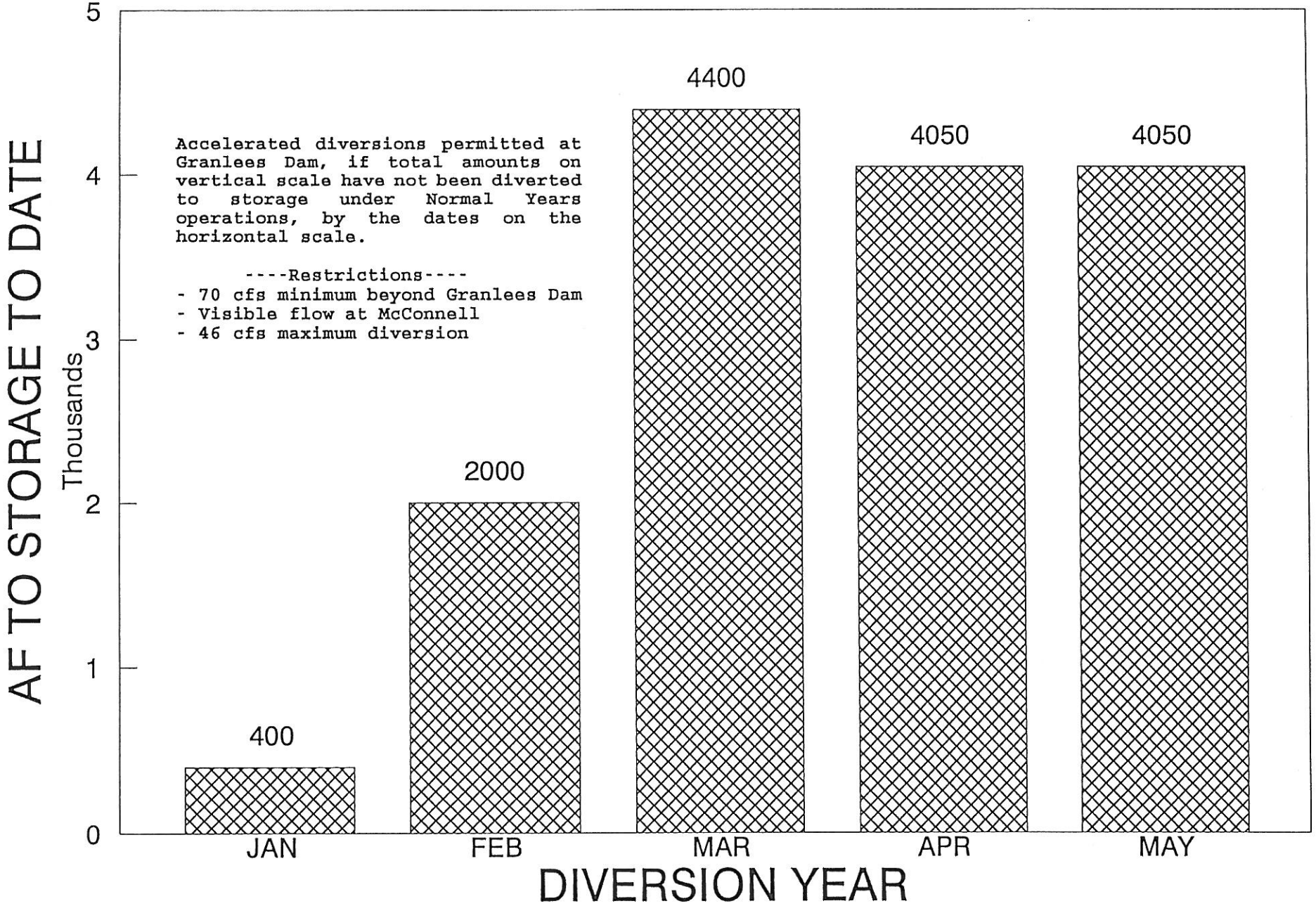
All diversions require Cosumnes River visible flow
at McConnell Gage



1 cfs ≈ 2 AF/day
= 6 cfs = 12 AF/d
12 cfs = 24 AF/d
46 cfs = 92 AF/d

6/11/91

DRY YEAR DIVERSIONS



APPENDIX B-2

GRANLEES DAM DIVERSION PUMPS

Start/Stop Checklist - 500 HP Pumps

GRANLEES DAM DIVERSION PUMPS
Start/Stop Checklist
500 Horsepower (15 cfs) Pumps

1. Pre-start (Assumes that adequate flow has been determined to exist at Michigan Bar Gauge).

A. Suction.
1. Forebay - verify that inlet gates are open and forebay is at maximum level.
2. Purge System
   a. Start air purge system, or verify that air accumulator tank is at operating pressure.
   b. If this is "first pump" start, initiate a PURGE cycle.
   c. Inspect suction screens to ascertain they are free of debris. Run additional PURGE cycles, if required.

B. Discharge.
1. Reservoir selection.
   a. Open discharge gate at Calero or Chesbro.
   b. Open valves at Granlees to direct flow to Calero and Chesbro.
   c. Open manual pump discharge valve.

C. Motor Cooling System
1. Open cooling water valve, at middle 500 HP pump beyond the pump discharge valve.
2. Blow down strainers on cooling water line.

D. Records.
1. Read and record.
   a. Flow totalizer on Calero-Chesbro round chart flow meter.
   b. Watt-hour meters.

2. Verify on round chart meter:
   a. Chart set to correct day and hour.
   b. Indicator pen inked, etc.

2. Start and Run.

A. Initiate pump start sequence, using HAND mode.

B. Start-up checks.
1. Verify that automatic valve (Bailey valve) is opening.
2. Check suction well for adequate level.
3. Check discharge pressure gauge for typical operating pressure.

C. Run.
1. Re-check suction well level, run PURGE cycle, if required, to clean suction screens.
2. Re-check discharge pressure gauge.
3. Check pump shaft packing gland.
4. Check for motor cooling water flow.

5. Check for smooth pump operation.

3. Stop.

A. Initiate pump stop sequence, using OFF mode.

B. Shut down checks.

1. Verify closure of Bailey valve, and subsequent motor stop.

C. Shut down operations.

1. Discharge.
   a. Shut pump discharge valve.
   b. If last pump, shut Granlees valves to Calero-Chesbro.
   c. Shut discharge gate at Chesbro or Calero.

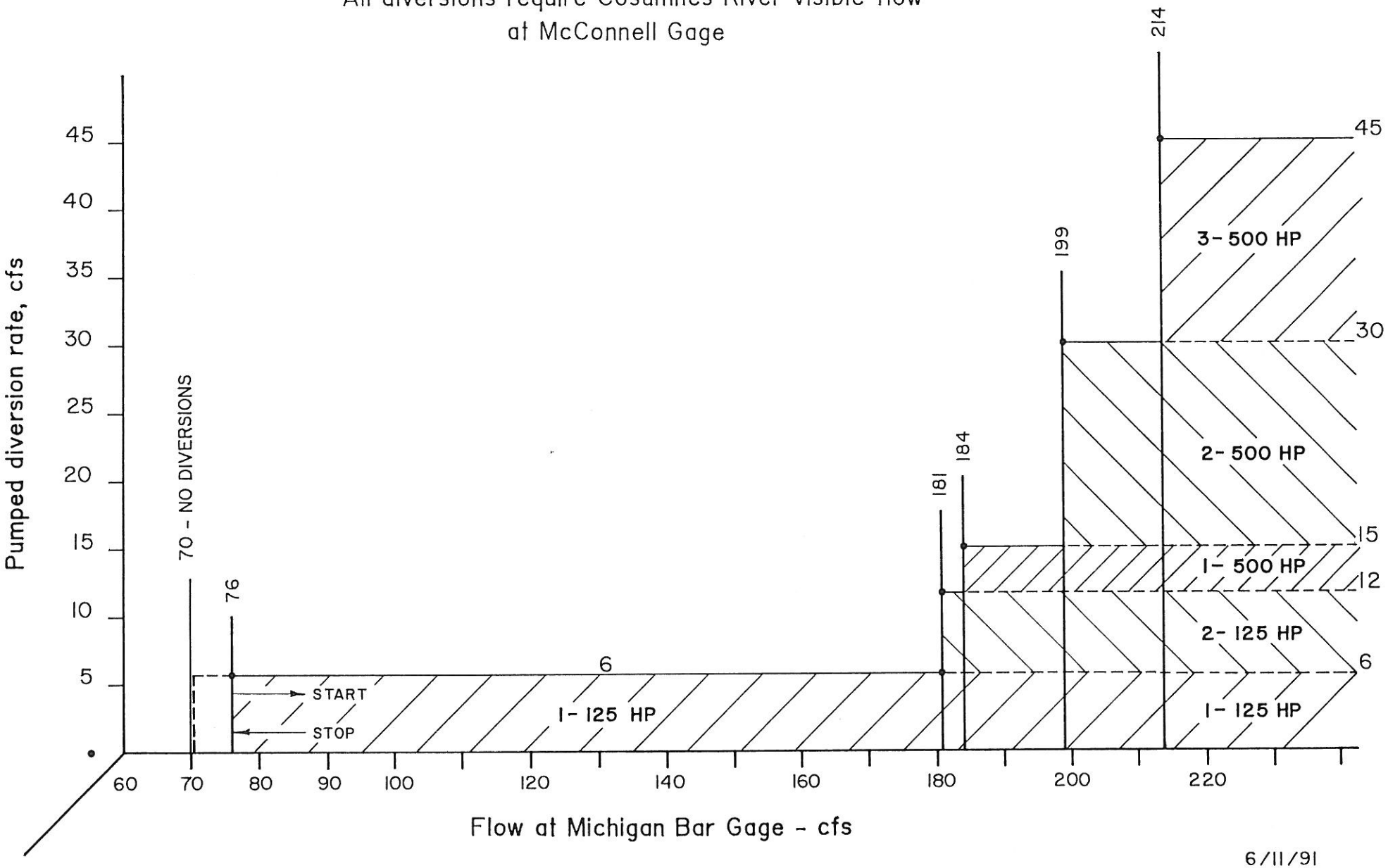
2. Motor cooling.
   a. If last 500 HP pump in operation, shut pump motor cooling water valve.

3. Suction.
   If last pump in operation:
   a. Shut down purge system.
   b. Adjust forebay gates, etc.

NORMAL YEARS DIVERSIONS

Maximum Permitted Pumped Diversions at Granlees Dam
Nov. 1 - May 31

All diversions require Cosumnes River visible flow
at McConnell Gage



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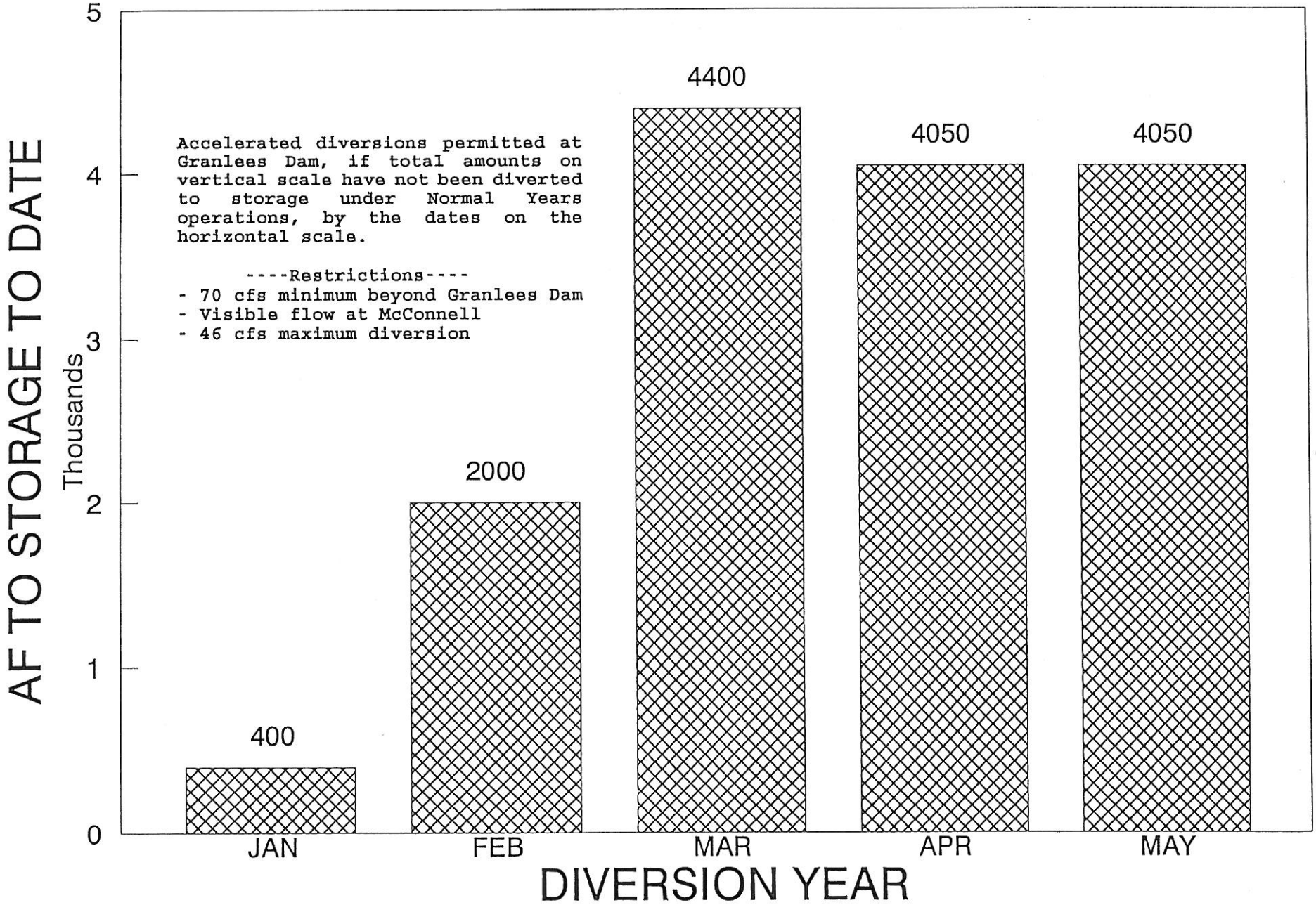
DRY YEAR DIVERSIONS



APPENDIX C

WASTE DISCHARGE PERMIT

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
CENTRAL VALLEY REGION
ROUTIER ROAD
SACRAMENTO, CA 95827-3098

CERTIFIED MAIL
P 037 327 382

11/9/90

4 May 1990

RECEIVED

MAY 7 1990

COUNTY SERVICES DISTRICT

Marion C. Cravens
Rancho Murieta Community Service Community
P.O. Box 1050
Rancho Murieta, CA 95683

TRANSMITTAL OF ADOPTED WASTE DISCHARGE REQUIREMENTS

Enclosed is an official copy of Order No. 90-124 as adopted by the California Regional Water Quality Control Board, Central Valley Region, at its last regular meeting.

F Wayne Pierson

F. WAYNE PIERSON
Chief, Central Regulatory Unit

PHH:ej

Enclosures - Adopted Order
Standard Provisions (discharger only)

cc+encl: Department of Health Services, Office of Drinking Water, Sacramento
Department of Fish and Game, Region II, Rancho Cordova
Department of Water Resources, Central District, Sacramento
Office of Chief Counsel, State Water Resources Control Board, Sacramento
Division of Water Quality, State Water Resources Control Board, Sacramento
Sacramento County Environemntal Health, Sacramento
Sacramento County Planning Department, Sacramento
Mr. Ken Giberson, Giberson & Associates, Gold River

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 90-124

WASTE DISCHARGE REQUIREMENTS
FOR

RANCHO MURIETA COMMUNITY SERVICE DISTRICT
WASTEWATER RECLAMATION FACILITY
SACRAMENTO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. Rancho Murieta Community Service District (hereafter Discharger) submitted a Report of Waste Discharge, dated 7 May 1985. On 4 January 1990, the Discharger requested an amendment to their waste discharge requirements.

2. The Board, on 8 August 1986, adopted Order No. 86-161 which prescribed requirements for a discharge from a tertiary treatment plant to two golf courses and open space within the community.

3. The north golf course is surrounded by homes and the land surrounding the south course is currently being developed. The tertiary treatment of reclaimed wastewater is in accordance with Section 60313(b), Article 4, Division 4, Title 22 of the California Code of Regulations (CCR).

4. The Rancho Murieta Community is a 3,500 acre development, which is 20 miles east of the City of Sacramento. The community is bisected by both the Cosumnes River and State Highway 16.

5. The Discharger discharges .6 million gallons per day from the treatment ponds to the treated wastewater equalization reservoirs. Depending upon daily irrigation demand, up to 1.5 mgd can be returned from the reservoirs and treated as specified in finding 3 above. Ultimate tertiary treatment capacity will be 3.0 mgd. The treatment project has a 40-year life expectancy.

6. The development and treatment facilities are in Sections 2 and 3, T17N, R8E, and Section 34, T8N, R8E, MDB&M, as shown on Attachment A, a part of this Order.

7. The beneficial uses of the Cosumnes River are municipal, industrial, and agricultural supply; recreation; esthetic enjoyment; navigation; ground water recharge; fresh water replenishment; hydroelectric power generation; and preservation and enhancement of fish, wildlife, and other aquatic resources.

8. The beneficial uses of the ground water are municipal, industrial, and agricultural supply.

9. The Board has adopted a Water Quality Control Plan, 2nd Edition, for the Sacramento-San Joaquin Delta Basin (5B) which contains water quality objectives for all waters of the Basin. These requirements are consistent with that Plan.

10. The County of Sacramento has approved a Negative Declaration in accordance with the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), and the State Guidelines.

11. The Board has reviewed the Negative Declaration and concurs with that there are no significant impacts.

12. Sacramento County has issued a use permit to Rancho Murieta indicating the primary use of recycled water shall be for watering the golf course.

13. The State Water Resources Control Board's Water Rights' permit for Rancho Murieta requires use of wastewater for irrigation purposes in lieu of water from other sources when the flow of wastewater reaches 424 acre-feet per annum.

14. A soils investigation of the site showed an abundance of clay with in situ permeabilities to 2×10^{-8} cm/sec (about 0.2 inches/year), and fine silts and sands in lower regions. Ponds have been constructed using compacted clays.

15. The action to adopted waste discharge requirements for this facility is exempt from the provisions of the California Environmental Quality Act, in accordance with Section 15301, Title 14, CCR.

16. This discharge is exempt from the requirements of Section 2511(b), Subchapter 15, Chapter 3, Title 23, of the CCR. The exemption is based on the following:

    a. The Board has issued waste discharge requirements.

    b. The discharge is in compliance with the applicable Water Quality Control Plan, and

    c. The wastewater does not need to be managed according to Chapter 30 of Division 4, Title 22, CCR, as a hazardous waste.

17. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge.

18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 86-161 is rescinded, and Rancho Murieta Community Services District, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. **Discharge Prohibitions:**

1. The direct discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. The by-pass or overflow of untreated or partially treated waste is prohibited.

3. The use of reclaimed wastewater for purposes other than irrigation is prohibited.

B. **Discharge Specifications:**

1. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.

2. The discharge shall not cause degradation of any water supply.

3. Reclaimed wastewater treated in accordance with Section 60313(b), Article 4, Division 4, Title 22, CCR may be discharged in the following designated areas: a) the north golf course; b) the south golf course; c) the treatment plant equalization reservoirs; d) the proposed Rancho Murieta Homeowner's Association corporation yard; and e) the proposed community park.

4. Collected screening, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer.

5. Reclaimed wastewater shall meet the criteria contained in Title 22, Division 4, CCR (Section 60301, et seq.).

6. Constituents and characteristics of the filtered reclaimed wastewater treated as specified in Section 60313(b), Article 4, Division 4, Title 22, of the CCR shall not exceed the following limits during irrigation of the north and south golf courses and other related facilities (i.e., parks and corporation yard):

Constituent or Characteristic	Units	Monthly Mean	Monthly Median	Maximum
Total Coliform Organisms	MPN/100 ml	--	2.2	23
Turbidity*	NTU	2	--	5

* Not to exceed 5, more than 5 percent of the time during 24-hour period.

7. The dissolved oxygen content of holding ponds shall not be less than 1.0 mg/l for 16 hours in any 24-hour period.

8. Conveyance and storage facilities shall be maintained to minimize the generation of vectors.

9. Reclaimed wastewater conveyance lines shall be clearly marked as such.

10. Reclaimed wastewater operations shall be well managed to minimize erosion and runoff.

C. **Provisions:**

1. The Discharger may be required to submit technical reports as directed by the Executive Officer.

2. The Discharger shall comply with the attached Monitoring and Reporting Program No. 90-124.

3. The Discharger shall comply with the "Standard Provisions and Reporting Requirements", dated 1 February 1990, which are a part of this Order.

4. The Discharger shall report promptly to the Board any material change or proposed change in the character, location, or volume of the discharge.

5. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.

6. The Board will review this Order periodically and may revise requirements when necessary.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 27 April 1990.

W.S. Johnson for

WILLIAM H. CROOKS, Executive Officer

3/22/90 PHH:ej Amended

Attachment

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 90-124

FOR

RANCHO MURIETA COMMUNITY SERVICE DISTRICT
WASTEWATER RECLAMATION FACILITY
SACRAMENTO COUNTY

EFFLUENT WASTE MONITORING

Samples and flows shall be taken prior to discharge of the two irrigation systems. Effluent samples should be representative of the volume and nature of the discharge. The following shall constitute the effluent monitoring program:

Constituents	Units	Type of Sample	Sampling Frequency
Flow	mgd	Continuous	Daily
pH	pH Units	Grab	Weekly
Settleable Matter	ml/l	Grab	Twice Weekly
Coliform Organisms	MPN/100 ml	Grab	Daily
Residual Chlorine	mg/l	Grab	Daily
Turbidity	NTU	Continuous	Daily

REPORTING

Quarterly monitoring reports shall be submitted to the Regional Board by the **15th day** of the following quarter.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly the compliance with waste discharge requirements.

The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Board.

Upon written request of the Board, the Discharger shall submit a report to the Board by **30 January** of each year. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year.

In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: W.S. Johnson for
WILLIAM H. CROOKS, Executive Officer

27 April 1990
(Date)

PHH:ej Amended

INFORMATION SHEET

RANCHO MURIETA COMMUNITY SERVICE DISTRICT
WASTEWATER RECLAMATIONS FACILITY
SACRAMENTO COUNTY

The Pension Trust Fund for Operating Engineers has constructed a development about 20 miles east of Sacramento, called Rancho Murieta (see location map). Rancho Murieta is a 3500 acre planned development with ultimate capacity consisting of 5,000 housing units, two golf courses, seven parks, five schools, recreation and shopping centers, and several lakes. Approved requirements will govern Phase I construction (approximately 50% complete), with an anticipated maximum sewage flow of 1.5 mgd.

The area is in rolling hills, and is traversed by the Cosumnes River. The sewage treatment facilities have been built on the Ione formation consisting of sand, silt, and some gravel. The Ione information is considered essentially nonwater bearing. Locally it produces at low rates, but the water is generally of poor quality.

The Rancho Murieta Community Service District operates the wastewater treatment plant for the entire development. The main treatment train consists of a series of oxidation ponds, flow equalization reservoirs, a dissolved air flotation unit, filtration and a chlorination system. The addition of polymer ahead of the dissolved air flotation unit reduces the turbidity, which improves the reliability of pathogen destruction. Reclaimed wastewater is treated to meet the criteria contained in Title 22, Division 4, California Code of Regulations (Section 60301, et seq.), and is utilized to irrigate two golf courses and other related facilities within the development.

The previous waste discharge requirements (Order No. 86-161) prescribed two separate discharge specifications for the discharge of reclaimed wastewater on the two golf courses in the development. Previously, land adjacent to the south course was undeveloped and the discharge specifications were less restrictive than specifications imposed for reclaimed wastewater use on the north course, which is surrounded by homes. Since, the land adjacent to the south course is currently being developed, these requirements have been revised to impose more restrictive discharge specification for use of reclaimed wastewater on the south course.

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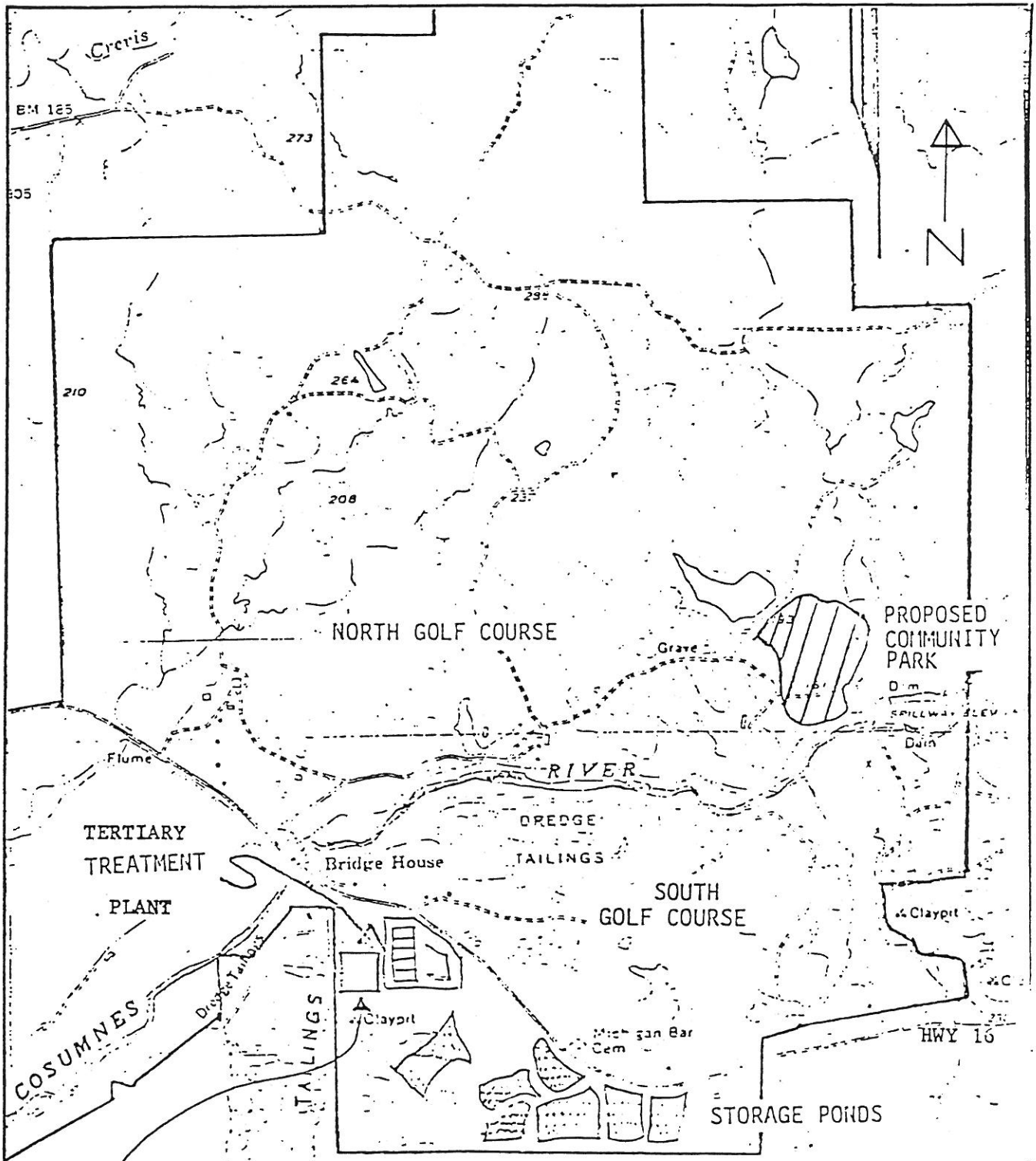

RANCHO MURIETA AND EL DORADO IRRIGATION DISTRICT RECLAMATION FACILITY

CARBONDALE AND FOLSOM SE QUADS

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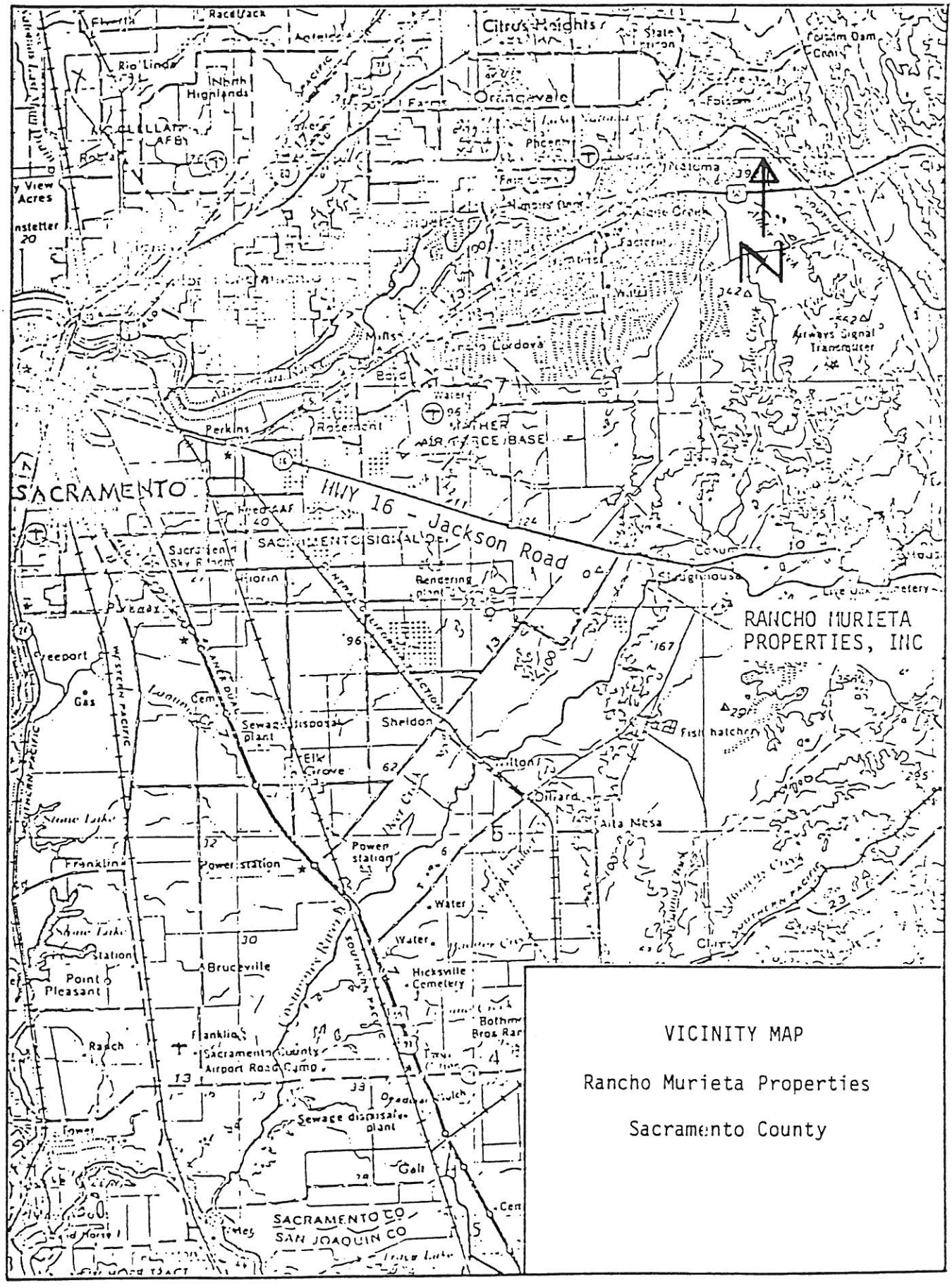

VICINITY MAP

Rancho Murieta Properties

Sacramento County

APPENDIX D

OPERATIONS MANUAL FOR THE RANCHO MURIETA

WATER TREATMENT PLANTS 1 & 2

OPERATIONS MANUAL FOR THE RANCHO MURIETA WATER TREATMENT PLANTS 1 & 2

CONTENTS

I. Equipment Control Systems
II. Alarm Response Procedures
III. Process Optimization
IV. Monthly Log Forms
V. Appendix

Written by: Dan Cortinovis

EQUIPMENT CONTROL SYSTEMS

This section describes how each equipment control system works, including automatic plant start up and shutdown sequences. Detailed information on the characteristics and maintenance requirements of individual pieces of equipment are found in the manufacturer's manuals and the Contract Drawing for the two plants. The Process Optimization section of this manual gives procedures for making adjustments to chemical dosages and equipment settings.

Each of the two water treatment plants operates as a separate unit with its own equipment and controls. On plant is designated as the "Lead" plant and the other as the "Lag" plant, using the Lead/Lag switch on the Plant No. 2 Control Panel.

Plant Startup and Shutdown

As water from the Reservoir No. 1 is used by the community, its level will tend to decrease. This decrease in level will cause the Lead plant to start up automatically, if its ode switch is set in the "Auto" mode. If the Reservoir No. 1 continues to drop, the Lag plant will start up, if its mode switch is set in the "Auto" mode. The finished water produced by one or both pants is pumped automatically from their clear wells to Reservoir No. 1 to maintain its level.

As water consumption decreases, the level in Reservoir No. 1 will tend to rise. This rise in level will secure both plants at the same time, if the Reservoir No. 1 level reaches the upper set point. If either plant's mode selector switch is placed in the "Manual" mode, it can be started regardless of the level in Reservoir No. 1.

When either plant starts up, the rate of raw water flow into that plant from Chesbro Lake is controlled by a flow rate control valve at a rate which has bee preset by the operator at the control panel for that particular plant. The chemical dosage pumps and chlorinator rotameters will have also been present to match the raw water flow rate, so that proper chemical dosage will be achieved when the plant starts up automatically.

The level control relays from Reservoir NO. 1 are located in the back of the plant No. 1 control panel. All of the controls for the Plant No. 1, including its raw water rate controller, are also contained in this panel. The motor starters for Plant No. 1 equipment are in the motor control center adjacent to the Plant No. 1 control panel.

The Plant No. 2 control panel contains the Tesco controller, a programmable computer with analog and digital inputs and outputs. The outputs from the Reservoir No. 1 level relays have been interfaced with the Tesco controller. The lead/Lag switch for Plants No. 1 and No. 2 is located on the Plant No. 2 panel. The recording charges and totalizers for both Plants No. 1 and No. 2 analyzers are located on the Plant No. 2 panel. The motor starters for Plant No. 2 equipment are located in the motor control center adjacent to the Plant No. 2 control panel.

The set points and timer setting for all the automated controls should be recorded in the Tesco Controller Manual, which also contains detailed procedures for examining and changing these settings if necessary. Any time a change is made, the new setting must be recorded in the appropriate blank in the Tesco Controller Manual, and on the sheet provided in this manual.

Raw Water Flow Rate Control Valves

When plant start up is activated, either manually or automatically, the raw water rate control valve for t hat plant begins to open. The flow meter immediately upstream of the valve sends a signal back to the

controller telling it what the flow is. The controller compares this flow to the preset desired flow rate set point and automatically adjusts the position of the control valve t maintain the desired flow.

The raw water rate control valves for Plants No. 1 and No. 2 operate in similar fashion. The older meter for Plant No. 1 is a venture type while the newer Plant No. 2 has a magnetic flow meter.

Drum Screens

The raw water flows through the drum screens before entering the treatment process. These screens remove debris which could damage downstream equipment.

Plant No. 1's drum screen and its flushing pump are started and stopped on manual local control. Plant No. 2's drum screen and its flushing water solenoid valve are started and stopped by a timing function in the Tesco Controller.

Rapid Mixers

After passing through the drum screen, the raw water enters the rapid mix basin, where chemicals are added. When the plant starts up, the drive for the rapid mixer starts automatically, so that chemicals will be properly mixed into the flow. The speed of rotation of the rapid mixers is adjustable manually at the unit. The rapid mixers (or "flash" mixers) for Plants No. 1 and No. 2 are similar.

Alum Feed System

Liquid Alum is fed to the rapid mix chambers. It reacts with alkalinity in the water to form a flow-like precipitate which helps to trap solid particles I the water, promoting settling.

There are three (3) variable-speed variable-stroke alum feed pumps in the Chemical Room The draw from the liquid alum storage tank and discharge to the rapid mix chambers. One pump is usually dedicated to each plant. The middle pump can be used for either plant.

When a plant starts up, its alum feed pump starts automatically and the dilution water solenoid valve opens. The liquid alum output rate is present by the operator so that the dosage will match the raw water flow rate.

Polymer Feed Systems

Polymer is fed to the rapid mix chambers to enhance the coagulation of alum floc and solids. Polymer can also be fed to the filter influent to enhance solids capture. Each plant has a completely separate polymer feed system. When a plant starts up, its polymer feed pump(s) start(s) automatically and the dilution water solenoid valve opens.

The polymer system for Plant No. 1 consists of a variable-speed pump which feeds polymer solution. Process water mixes with the polymer to dilute it for better dispersion in the rapid mix chamber.

Zinc Orthophosphate Feed System

Zinc Orthophosphate solution is fed to the finished water for corrosion control in the distribution system. For Plant No. 1 and Plant No. 2, it is fed immediately before the chlorine contact basins.

There are three (3) variable-speed variable -stroke zinc orthophosphate feed pumps in the Chemical Room. The draw from the zinc orthophosphate storage tank. One pump is usually dedicated to each plant. The middle pump can be used for either plant.

When a plant starts up, its zinc orthophosphate feed pump starts automatically and the dilution water solenoid valve opens. The zinc orthophosphate output rate is preset by the operator so that the dosage will match the raw water flow rate.

Lime Feed System

Each plant has a lime feeder to dissolve hydrated lime in water and feed it to the rapid mix basin for pH control to enhance coagulation, if necessary.

Potassium Permanganate Feed System

There is one potassium permanganate feeder for both plants. Potassium permanganate can be fed to the rapid mix basins or pre-plant for taste and odor control. At the time of this writing, the feeder was in storage.

Activated Carbon Feed System

There is one activated carbon feeder for both plants. Powered activated carbon can be fed to the rapid mix basins for taste and odor control.

Chlorine Feed System

Chlorine solution can be fed to any or all of three points:

- Rapid mix chamber to kill algae and enhance coagulation
- Pre-filter to prevent slime buildup on the media
- Post-filter for disinfection.

Chlorine gas is drawn from one-ton tanks or 150-pound cylinders through vacuum-regulator check units. The flow of chlorine gas is controlled at the chlorinator rotameters. After passing through the chlorinators, the gas is dissolved in process water by the injectors and piped to the application points.

Each plant has two (2) chlorinators. For Plant No. 2, one chlorinator is dedicated to post-filter use for disinfection. The other chlorinator is shared between rapid mix and post-filter, using rotameters on a solution distribution panel. For Plant No. 1, either chlorinator can be used for either pre- or post-chlorination.

When a plant starts up, the injector water solenoid valves open automatically. The flow of water through the injectors creates a vacuum to draw chlorine through the chlorinators at a rate preset to match the plant flow rate.

Flocculators

From the rapid mix chambers, the water flows t the flocculation compartments. The flocculators slowly stir the mixture of water and chemical precipitates so that the particles will agglomerate into large easily settled flocs. The flocculator drives start automatically when the plant starts up, unless they are locked out locally or at the motor control center. Plant No. 1 has three (3) flocculators. Plant No. 2 has only two (2) flocculators but they are larger.

Sedimentation Tanks Flight Drives

Each sedimentation tank has a set of drag-chain flights to scrape the settled sludge to the hopper at the east end of the tank. Plant No. 1 also has cross-collector at the hopper end, but Plant No. 2 does not. The flight drives start and stop according to timer settings, whenever a plant is in operation, unless they are locked out locally or at the motor control center. The flight drives for Plants No. 1 and No. 2 are similar, except that Plant No. w has variable-speed drivers.

The start and run times for Plant No. 2 flights are sent out from the Tesco Controller. The start and stop signals for Plant No. 1 flights are sent out by a drum timer located in the back of the Plant No. 1 Control Panel.

Sedimentation Tank Telescoping Valves

Each sedimentation tank in Plant No. 2 ha two motor-operated telescoping valves to draw sludge from the basin hoppers. Each sedimentation basin in Plant No. 1 has one (1) manually-controlled telescoping valve. The raising and lowering of the telescoping valves is controlled by timer settings in the Tesco panel for Plant No. 2 and manually for Plant No. 1.

When a telescoping valve is lowered, sludge from the hopper flows up through the valve, into its box and out through the pipeline to the reclamation basin. When the telescopic valve is raised, the flow of sludge stops.

Filter Bed Backwash Systems

The effluent from the sedimentation flows by gravity t the sand filter bed. As the water passes through the sand, any leftover particles of solids are removed. The filter bed is automatically backwashed by a cycle timer or by high water level in the filter. The backwash carriage drive and its pumps are controlled from a panel on the carriage and operate independently of the plant start/stop controls.

When a backwash cycle is initiated, the backwash and wash water pumps start and the carriage begins moving from one end of the filter to the other, stopping over each cell during backwashing. As the backwash pump flushes filtered water from the effluent channel up through the media to remove accumulated solids. The wash water pumps draw the mixture of backwash water and solids from the top of the media and discharges it into the wash water trough, where it flows into the reclamation basin.

If the backwash has been initiated by the cycle timer, the carriage stops when it reaches the opposite end of the filter from where it started. If the backwash has been initiated by high water level, meaning that the media is clogged with solids, the backwash will continue until the water level has dropped below the high level probe. After that, the carriage will continue until it reaches one end of the filter.

If the water level for in the filter drops below the low level probe, power is cut off to the backwash carriage so that the pumps will not run dry.

Since the filter for Plant No. 2 is a newer model, it has some differences from the filter for Plant No. 1. The Plant No. 2 filter has a media depth of 24 inches. The Plant No. 1 filter has a media depth of 11 inches. The manufacturer's manual for each unit contains detailed operation and maintenance.

Reclamation Basin Decant Pumps

Solids from the sedimentation basins and filters flow to the reclamation basins, where the solids settle to form sludge. A manually-operated telescoping valve at the west end of the reclamation basin is used to control the liquid level in the basin. When the level in the basin rises to the float switch attached to the telescoping valve, one of the two decant pumps will start to pump the clear water back to the raw water pipeline leading into the plant. When the level drops down below the V-notch in the telescoping valve, the pump will stop. The reclamation basin telescoping valve and decant pumps control are similar for Plants No. 1 and No. 2.

Reclamation Basin Sludge Removal

Sludge which settles in the reclamation basin is transferred to the sludge drying beds. Plant No. 1 has a manually-operated valve and gravity sludge line. Plant No. 2 has two sludge pumps, which are started and stopped by a timer function in the Tesco Controller.

Clearwell Pumps

After flowing through the chlorine contact basin, the finished water enters the clearwell. The clearwell pumps operate automatically to maintain the level in the clearwell.

Each clearwell ha three pumps. One is selected as “Lead”, one as “Lag”, and the other is a spare. When the clearwell level rises to the Lead pump start set point, the Lead pump starts to pump finished water up into Reservoir No. 1. If the level continues to rise, the Lag pump also starts. The pumps shut down on falling wet well level in the opposite sequence. The clearwell pump controls for Plant No. 1 and Plant No. 2 are similar.

There is a cross-tie pipeline with a valve between the chlorine contact tanks for Plant No. 1 and Plant No. 2. Opening this valve allows the finished water from either or both plants to be pumped up to Reservoir No. 1 by either or both sets f clearwell pumps.

Standby Generator

If utility power fails, the diesel-fueled standby generator will start automatically and the auto transfer switch will feed its power to the Pant No. 2 Control Panel and Motor Control Center. The Plant No. 1 Control Panel also receives power from the generator through a connection to the Plant No. 2 panel. This allows the level control relays, located in the back of the Pant No. 1 panel, to operate during a power failure.

The building lighting circuits are also powered by the generator. The Plant No. 1 Motor Control Center does not receive power from the generator, so only Plant No. 2 can be operated during a power failure.

The generator has a built in start up and exercising cycle so it will weekly start up automatically run for a brief period under full load and then shut down. The manufacturer’s manual for the generator contains compete operation and maintenance instructions.

TESCO LIQUITRONIC IV SETPOINTS
RANCHO MURIETA WATER TREATMENT PLANTS 1 AND 2

Record any changes on this sheet.
Refer to TESCO Manual for instructions.

SETPOINT	UNITS	FUNCTION	INITIAL VALUE	DATE	CHANGED TO	DATE
0	—	Test Pot Filter Const				
1	—	Clearwell Levl Filt Const				
2	—	Infl Flow Filter Const				
3	—	Effl Flow Filter Const				
10	sec	Infl Flow Sample Interval				
13	sec	HI Turbidity Alarm Delay				
14	sec	HI/LO Chlorine Alarm Dly				
15	sec	Pump 1 Fail Alarm Delay				
16	sec	Pump 2 Fail Alarm Delay				
17	sec	Pump 3 Fail Alarm Delay				
21	sec	Drum Screen ON Delay				
22	sec	Rapid Mix ON Delay				
23	sec	Flocculator 1 ON Delay				
24	sec	Flocculator 2 ON Delay				
34	sec	Pump Backspin Delay				
37	sec	Clearwell HI Lvl Alarm Dly				
38	sec	Clearwell LO Lvl Alarm Dly				
39	sec	Sequential ON Delay				
40	ft	Clearwell LO Alarm				
41	ft	Clearwell Lead Pump OFF				
42	ft	Clearwell Lag Pump OFF				
45	hrs	Automatic Purge Interval				
46	sec	Compressor ON Time				
47	sec	Solenoid Valve ON Time				
48	sec	Purge Recovery Time				
50	min	Sed Flight 1 ON Time				
51	min	Sed Flight 1 OFF Time				
52	mni	Sed Flight 2 ON Time				
53	min	Sed Flight 2 OFF Time				
54	min	Sludge Pump 1 ON Time				
55	min	Sludge Pump 1 OFF Time				
56	min	Sludge Pump 2 ON Time				
57	min	Sludge Pump 2 OFF Time				
58	min	Tele Valve 1 ON Time				
59	min	Tele Valve 1 OFF Time				
60	min	Tele Valve 2 ON Time				
61	min	Tele Valve 2 OFF Time				
62	min	Tele Valve 3 ON Time				
63	min	Tele Valve 3 OFF Time				
64	min	Tele Valve 4 ON Time				
65	min	Tele Valve 4 OFF Time				
70	gpm	LO Flow (Mod Valve Cont)				
71	ft	Clearwell Lead Pump ON				
72	ft	Clearwell Lag Pump ON				
80	gpm	HI Flow (Mod Valve Cont)				
90	ft	Clearwell HI Alarm				
101	—	Valve REVERSE Prop				
102	—	Valve FORWARD Prop				
105	gpm	Minimum Flow Sense				
110	sec/60	Totalizer Pulse Duration				
120	sec/60	Min Valve Pulse Time				

ALARM RESPONSE PROCEDURES
(Original 08/03/1988)

This section contains procedures for responding to each alarm for either plant and tells what to check to correct the problem.

There are three (3) separate alarm panels in the Control Room:

- Plant No. 1 Alarm Panel - Local annunciation and auto-dialer phone call out for Plant No. 2 alarms plus several alarms which apply to both plants.

- Plant No. 2 Alarm Panel - Local annunciation and auto-dialer phone call out for Plant No. 2 alarms plus several alarms which apply to both plants.

- Stand-by Generator Alarm Panel - Local annunciation for generator alarms only.

The Plant No. 2 Alarm Panel has been separated into three (3) channels for the auto-dialer phone call out:

- Channel 1 - Motor overloads only.

- Channel 2 - All other plant alarms.

- Channel 3 - Building alarms (fire and security).

If an alarm annunciates at the Plant No. 2 Alarm Panel, it must be acknowledged before the plant can be restarted, once the plant has been shut down. If Plant No. 2 will not start up, press the "Alarm Acknowledge" button.

Chlorine Residual High or Low - Plant No. 1 or No. 2

1. Take a grab sample from the clearwell and run a chlorine residual test to check the calibration of the analyzer.

2. Recalibrate analyzer if necessary.

3. If analyzer calibration is correct, increase or decrease the chlorine dosage.

Chlorine Supply Low - Plant No.1

1. Check to see if on-line cylinder is empty.

2. Switch over to full cylinder if necessary.

Reservoir Level Low

1. This alarm indicates that finished water flow rate is not keeping up with consumer demand.

2. If both plants are available for operation, both should be running if on "Auto".

3. Check operation of the clearwell pumps and discharge piping.

4. Increase raw water flow rates until reservoir level rises.

Power Failure

1. Check that standby generator has started.

2. Refer to manufacturer's manual for any generator problems.

3. Place Plant No. 2 in "Lead" position, since Plant No. 1 equipment cannot receive power from the generator.

Chlorinator Failure - Plant No. 1

1. Check chlorine supply.

2. Check injector water supply.

3. Check chlorinator rotameter.

Finished Water Turbidity - Plant No. 1 or No. 2

1. Plant will shut down if turbidity exceeds set point.

2. Make sure other plant is keeping with demand.

3. Check filter to make sure that it has backwashed properly. Manually check backwash if necessary.

4. Check sedimentation basin for excessive solids carryover. Adjust chemical dosages as necessary.

Chlorine Leak

1. At least two (2) trained people, all with air packs on, must be present for entry into a chlorine atmosphere.

2. One person should enter to shut off the cylinder valve, while the other observes from outside.

3. If shutting off the valve does not stop the leak, notify the emergency repair crew. They will use the repair kits to isolate the leaking valve.

4. If the cylinder valve was leaking, call the chlorine supplier to have the cylinder removed.

Water Flow Low - Plant No. 1

1. Check raw water flow control valve to see if it is stuck.

Finished Water (Clearwell) Level High or Low - Plant No. 1 or No. 2

1. Check pumps to make sure they are on auto and operable.

2. If pumps on one plant's clearwell are inoperable, open the cross-tie valve on the pipeline between Plant 1 and Plant 2 chlorine contact tanks so that finished water from either or both plants can be pumped from either clearwell.

Air Pressure Low

1. Check air system for malfunctions.

Fire Alarm or Security Alarm

1. The auto-dialer will notify Rancho Murieta guard station.

Motor Overload Alarms

1. Indicates that breaker has tripped due to over-current.

2. Lock out power to the motor and check equipment to see I f it is operable. If it is damaged or bound- up, initiate repairs.

3. If no problems can be found, restart the piece of equipment, observing its operation.

4. If breaker continues to trip on motor overload, have an electrician investigate.

PROCESS OPTIMIZATION

This section contains procedures for determining chemical dosages and equipment settings to produce finished water of the best possible quality. For a description of how each pieces of equipment is started, controlled and stopped, see the Equipment Control Systems Section.

Raw Water Flow Rate

The raw water flow rate selected by the operator at the plant control panel will be automatically maintained whenever the plant is in operation. In selecting the raw water flow rate, the operator should consider the following:

- Design flows: Plant 1 - 1.5 MGD Plant 2 - 2.0 MGD
- If the raw water flow rate exceeds the design rate, finished water quality may deteriorate.
- It is probably more efficient to have one or both plants running continuously at a lower raw water flow rate than to have them starting up and shutting down frequently at higher rates.

The rate of finished water consumption by the community will determine the raw water flow rates at which the plants can operator continuously. When the raw water flow rate for a plant must be changed, the chemical feed rates must also be adjusted to match.

The raw water flow meters may o occasionally malfunction or drift out of calibration. If the operator suspect that this may be the case, a rough estimate of actual flow rate can be derived by measuring the water level over the drum screen discharge weir with a yardstick and reading the flow from the graph in the Appendix of this manual. If the estimated flow from the graph is not within 10% of the meter reading, an instrumentation technician should check and calibrate the meter.

Drum Screens

No operating adjustments are necessary for the drum screens. When a plant is running, the drum screen and its spray water should be periodically checked for proper operation. Any accumulated debris should be removed.

If a drum screen malfunctions, it may be bypassed while it is being repaired. The manufacturer's manuals for the drum screens contain detailed information.

Rapid Mixers and Flocculators

The speed of rotation of the rapid misers and flocculators can be adjusted using the variable -speed drives. Adjust the speed only when the drive is running. Once the optimal speeds have been determined, they will probably not have to be changed as long as the same types of chemical coagulants are used.

The best way to determine the optimal speed setting for the rapid mixers is to observe the floc formation in the flocculation chambers. If the floc is stringy and not uniformly dispersed throughout the flocculation chamber, then the speed setting of the rapid mixer should be increased.

The speed settings of the flocculators should also be based on visual observation of the floc formation. If floc formation is sluggish and the floc appears to be settling in the flocculation chamber, the speed should

be increased. If floc shearing is occurring, as evidenced by tiny flocs and poor agglomeration due to excessive turbulence, then the speed should be decreased.

Alum and Polymer Dosages

The dosage of chemical coagulants (alum, polymer, lime) to the rapid mix chambers is critical to achieving good floc formation in the flocculation chambers and complete settling in the sedimentation basins. IF the dosages are too low, incomplete flocculation may occur, which will result in solids escaping from the sedimentation basins and clogging up the filters. If dosages are too high, chemicals are wasted, pH may be too high or too low, and floc may float or not settle properly.

An estimate of the optimum chemical dosages for proper coagulation and settling can be made using the Jar Test procedure in the Appendix of this manual. This will give the operator a starting point. Further fine-tuning of chemical dosages can be made by visually observing floc formation and settling and by frequently measuring the sedimentation basin effluent turbidity to determine which dosages give the lowest turbidity. Since t characteristics such as alkalinity and solids concentration in the raw water from Chesbro Lake my change with time, jar tests should b run frequently to assure that coagulant dosages are in the proper range.

It is also possible to add polymer to the filter influent. This may help to improve solids and/or increase run time between backwashes. If polymer is added to the filter influent, the operator should sample filter effluent turbidity and keep track of backwash run time to determine if any benefit is gained.

Lime Dosage

Lime can be sued to control pH for enhanced coagulation with alum, although the lime itself is not a coagulant. The pH of the raw water may change significantly from night to day because algae I n the lakes take up carbon dioxide when the sun is shining but not when it is dark. The optimum pH for coagulation with alum is in the range of 6.4 to 6.6.

Sedimentation Tanks

The sedimentation tanks sludge collector flights and telescoping sludge withdrawal valves are controlled by timers. The following criteria should be considered when setting these timers:

- If the collector flights are not run often enough, sludge will accumulate in the basin and may eventually escape in the effluent.
- Excessive running of the collector flights will result in excess wear on the equipment and may stir up the sludge.
- If the telescoping valves are not lowered often enough, sludge will accumulate in the hoppers and may eventually become septic and float.
- Excessive lowering of the telescoping valves my put excess flow to the reclamation basin, which may stir it up and hamper the sludge settling. This may also cause excessive recycling of reclamation basin decant water to the plant's raw water inlet.

Filter Backwashing

Filter backwashing is initiated by the cycled timer or high water level probe. Excessive backwashing wastes filtered water, so the operator should adjust the cycle timer to backwash the filter just before the level reaches the high probe. This will use the minimum amount of filtered water for backwashing while still keeping the filter clean.

The operator should also adjust the backwash pump bypass valve to provide the correct backwash flow rate. The manufacturer recommends 15-18 gallons per minute per square foot of media in a single cell. Insufficient backwash flow will result in incomplete cleaning of the media. Excessive backwash flow may wash media out of the filter and into the wash-water trough.

An aggregation of solids in sand filter beds, termed “mud balls” generally indicates incomplete backwashing due to insufficient backwash flow or too short a wash period. Mud balls can be prevented by increasing backwash flow and time. Once present, they can usually only be removed by screening or replacing the media. If not removed, small mud balls may agglomerate into larger ones, which can work their way down into the media and decrease filter efficiency.

Reclamation Basin Sludge Pumping

The reclamation basin sludge pump timers should be set for the minimum time which will allow all of the thickened sludge to be pumped out of the bottom. Excessive pumping will overload the drying beds with water, causing the sludge to dry more slowly. Insufficient pumping may allow sludge to accumulate and become septic, in which case it will float and cause odors.

The sludge blanket level in the reclamation basins can be easily checked visually by using a “core sampler” consisting of a long clear Lexan tube with a check valve in the bottom. Such a core sampler it available from Accu-Sludge, P.O. Box 2189-A, Truckee, California 95734, (916) 587-6732.

Chlorination

Chlorine is usually added to the raw water to kill algae cells so that they will coagulate better. The proper dosage can only be determined by operator experience. Observe flocculation at varying chlorine dosages to determine the optimum.

Chlorine may also be added to the filter influent if slime buildup on the media becomes a problem. Again, only operator experience will determine whether this is necessary and if so, what the best dosage is.

Chlorine is also added to the filtered water as it enters the chlorine contact basin to assure that any pathogenic (disease-causing) micro-organisms are killed before the water is distributed to the community. A chlorine residual in the finished water also helps to protect the consumers against any micro-organisms which might be introduced into the distribution system through an illegal cross-connection, although disinfection is not a substitute for an effective cross-connection control program.

The usual chlorine residual for finished water is about 0.5 mg/l. the results of bacteriological analyses should be continuously evaluated to make sure that the final chorine residual is sufficient.

Zinc Orthophosphate

The supplier of the Zinc Orthophosphate solution will provide dosage recommendations and corrosion coupons to place in the raw water and finished water to measure its effectiveness.

The Environmental Protection Agency has established a maximum allowable dosage of 19 mg/l as solution. The supplier’s initial dosage recommendation is 6 to 9 mg/l as solution. Note that the solution is 24% zinc. If the spectrophotometer reads in mg/1 of zinc, it must be divided by .24 to get mg/l as solution.

Potassium Permanganate and Activated Carbon

Potassium Permanganate or Activated Carbon can be added to the rapid mix chambers to control taste and odor causing substances. The usual potassium permanganate dosage is about 1 to 2 mg/l. the usual activated carbon dosage is about 10 to 50 lbs per MG.

Monthly Log - Water Treatment Plants
Rancho Murieta Community Services District

PAGE 0	
MO & YR:	
rev 8/3/88	
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FORMAT FOR DATA ENTRIES

20.4 ← ENTRY WITH THREE SIGNIFICANT FIGURES

— ← A "DASH" MEANS THAT NO DATA WILL BE AVAILABLE. (LOST SAMPLE, ETC.)

0 ← A "ZERO" MEANS NO FLOW OR QUANTITY FOR THAT DAY. (DON'T USE A "DASH".)

O/S ← UNIT IS "OUT OF SERVICE".

< ← "LESS THAN"

> ← "MORE THAN"

MAKE ALL ENTRIES IN PENCIL. INK SMEARS AND MAKES IT HARD TO CORRECT ERRORS.

TO HAVE REVISIONS OR ADDITIONS MADE TO THE BLANK RECORD FORMS, CONTACT:

Dan Cortinovis, Consulting Engineer
1136 Orchard Rd, Lafayette, CA 94549
(415) 283-5836

TOTAL ALL ENTRIES AND DIVIDE BY NUMBER OF ENTRIES, INCLUDING "ZEROS" BUT NOT "DASHES"

Monthly Log - Water Treatment Plant No. 1
Rancho Murieta Community Services District

PAGE 1		PLANT FLOWS AND OPERATING MODE									
MO & YR:		Raw Water			Finished Water			Plant Mode			
rev 8/3/88		Flow Setting MGD			Totalizer Reading	Flow Total MGD	Reservoir No. 1 Level, ft	Hand Off Auto	Lead or Lag		
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Monthly Log - Water Treatment Plant No. 1
Rancho Murieta Community Services District

PAGE 2		WATER QUALITY									
MO & YR:		Turbidity, NTU			pH		Chlorine	Zinc			
rev 8/3/88		Raw Water	Sed Basin Effluent	Finished Water	Raw Water	Finished Water	Finished Water mg/l	Finished Water mg/l			
DAY	DATE										
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Monthly Log - Water Treatment Plant No. 1
Rancho Murieta Community Services District

PAGE 3		CHLORINATION									
MO & YR:		Cylinder Weights, lbs					Chlorine Used, lbs/day				
rev 8/3/88		No. 1 150 lb	No. 2 150 lb	No. 3 150 lb	No. 4 150 lb	One Ton	Raw Water	Pre Filter	Post Filter	Total	
DAY	DATE										
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Monthly Log - Water Treatment Plant No. 1
Rancho Murieta Community Services District

PAGE 4		CHEMICALS									
MO & YR:		Alum				Zinc Orthophosphate				Polymer	
rev 8/3/88		Tank Level gallons	Used gallons	Feed Rate ml/min	Dosage mg/l	Tank Level Gallons	Used Gallons	Feed Rate ml/min	Dosage mg/l	Rapid Mix ml/min	Pre Filter ml/min
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Monthly Log - Water Treatment Plant No. 1
Rancho Murieta Community Services District

PAGE 5		CHEMICALS									
MO & YR:		Lime			Activated Carbon			Permanganate			
rev 8/3/88		Pounds On Hand	Used lbs/day	Dosage mg/l	Pounds On Hand	Used lbs/day	Dosage lbs/MG	Gallons On Hand	Used gal/day	Dosage mg/l	
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Monthly Log - Water Treatment Plant No. 1
Rancho Murieta Community Services District

PAGE 6		EQUIPMENT									
MO & YR:		Speed Settings				Timer Settings					
rev 8/3/88		Rapid Mixer	Floc-culator No. 1	Floc-culator No. 2	Floc-culator No. 3	Sludge Collector No. 1	Sludge Collector No. 2	Filter Back Wash			
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Monthly Log - Water Treatment Plant No. 2
Rancho Murieta Community Services District

PAGE 1		PLANT FLOWS AND OPERATING MODE									
MO & YR:		Raw Water			Finished Water			Plant Mode			
rev 8/3/88		Flow Setting MGD	Totalizer Reading	Flow Total MGD	Totalizer Reading	Flow Total MGD	Reservoir No. 1 Level, ft	Hand Off Auto	Lead or Lag		
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Monthly Log - Water Treatment Plant No. 2
Rancho Murieta Community Services District

PAGE 2		WATER QUALITY										
MO & YR:		Turbidity, NTU			pH		Chlorine	Zinc				
rev 8/3/88		Raw Water	Sed Basin Effluent	Finished Water	Raw Water	Finished Water	Finished Water mg/l	Finshed Water mg/l				
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Monthly Log - Water Treatment Plant No. 2
Rancho Murieta Community Services District

PAGE 3		CHLORINATION									
MO & YR:		Cylinder Weights, lbs					Chlorine Used, lbs/day				
rev 8/3/88		No. 1 150 lb	No. 2 150 lb	No. 3 150 lb	No. 4 150 lb	One Ton	Raw Water	Pre Filter	Post Filter	Total	
DAY	DATE										
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Monthly Log - Water Treatment Plant No. 2
Rancho Murieta Community Services District

PAGE 4		CHEMICALS									
MO & YR:		Alum				Zinc Orthophosphate				Polymer	
rev 8/3/88		Tank Level gallons	Used gallons	Feed Rate ml/min	Dosage mg/l	Tank Level Gallons	Used Gallons	Feed Rate ml/min	Dosage mg/l	Rapid Mix ml/min	Pre Filter ml/min
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Monthly Log - Water Treatment Plant No. 2
Rancho Murieta Community Services District

PAGE 5		CHEMICALS									
MO & YR:		Lime			Activated Carbon			Permanganate			
rev 8/3/88		Pounds On Hand	Used lbs/day	Dosage mg/l	Pounds On Hand	Used lbs/day	Dosage lbs/MG	Gallons On Hand	Used gal/day	Dosage mg/l	
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Monthly Log - Water Treatment Plant No. 2
Rancho Murieta Community Services District

PAGE 6		EQUIPMENT									
MO & YR:		Speed Settings				Timer Settings					
rev 8/3/88		Rapid Mixer	Floc-culator No. 1	Floc-culator No. 2		Sludge Collector No. 1	Sludge Collector No. 2	Filter Back Wash	Reclaim Sludge Pumps		
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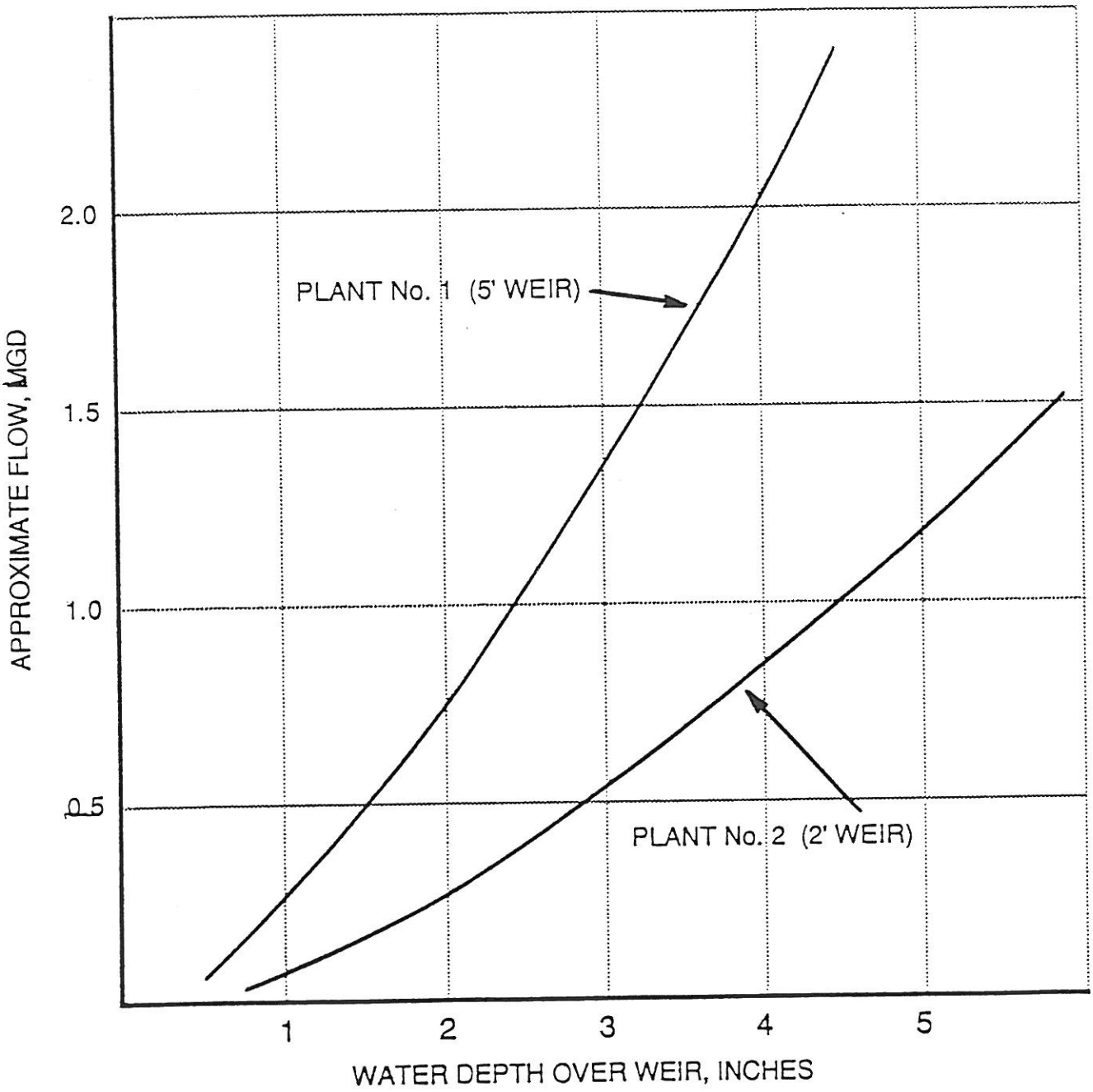
Rancho Murieta Community Services District
Water Treatment Plants 1 & 2

Graph for Estimating Raw Water Flow from Water Level Over Drum Screen Discharge Weirs



JAR TEST PROCEDURE

For Estimating Optimal Coagulant Dosages

Adapted from New York State Department of Health Manual of Instruction for Water Treatment Plant Operators*

1. Measure 500 ml of raw water into each of six (6) beakers and place in stirring device.

2. Starting with first jar on the left, add gradually increasing dosages of coagulant solutions to the beakers. First jar on left should represent under-dosing and last jar on right should represent over-dosing.

   (To accurately measure the coagulants, it will be necessary to dilute them to 100:1 or 1000:1 before adding to the beakers.)

3. Stir the beakers for 15 minutes at 10 - 15 rpm.

4. Observe floc formation during stirring and record whether poor, fair, good or excellent.

5. Allow floc to settle, usually 15 to 60 minutes.

6. Draw a portion of the clear water from each jar with pipettes.

7. Determine turbidity and pH of each clear water portion.

8. Select the dosages with give the best coagulation and settling, and determine actual dosages to use in plant with the following formula:
   (ml of coagulant for 500 ml) X (raw water flow, gpd) X (1.29) = ml per day of coagulant to add to plant

   For example:
   (0.015 ml alum used for 500 ml) X (1,000,000 gpd) X (1.29) = 19,350 ml/day alum solution = 13.43 ml/minute alum solution

* Available from: Health Education Service
  P.O. Box 7126
  Albany, NR 12224

MUD BALL TEST

For Evaluation the Condition of Filter Media

Adapted from New York State Department of Health Manual of Instruction for
Water Treatment Plant Operators*

1. Backwash filter in usual manner then drain media.

2. Collect four (4) samples of media from different parts of the filter using a sampling tube three (3) inches in diameter and six (6) inches deep.

3. Place the collected samples in a #10 mesh wire sieve (1/10 inch square openings).

4. Raise and lower the sieve gently in a bucket of water until all the sand has been separated from the mud balls.

5. Measure the total volume of mud balls by placing them into a graduated cylinder part full of water and noting the increase in water level.

6. Calculate the percent of mud balls as follows:

$$\frac{\text{Volume of Mud Balls, ml}}{\text{Volume of Sand Samples, ml}} \times 100 = \text{Percent Mud Balls}$$

(The total volume of four (4) sand samples, each with a length of six inches (6”) and diameter of 3 inches (3”) would be 2,760 ml.)

7.

Percent of Mud Balls by Volume	Condition of Filter Media
0.0 to 0.1	Excellent
0.1 to 0.2	Very Good
0.2 to 0.5	Good
0.5 to 1.0	Fair
1.0 to 2.5	Fairly Bad
2.5 to 5.0	Bad
5.0 or more	Very Bad

* Available from: Health Education Service
P.O. Box 7126
Albany, NR 12224

APPENDIX E

OPERATIONS MANUAL FOR THE RANCHO MURIETA WASTEWATER RECLAMATION FACILITY

OPERATIONS MANUAL FOR THE RANCHO MURIETA WASTEWATER RECLAMATION FACILITY

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I. Introduction

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  e. Process Control
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IV. Alarm Response Procedures

V. Monthly Log Forms

Written by: Dan Cortinovis

INTRODUCTION

This manual contains system descriptions and operating procedures for the secondary and tertiary treatment systems. It does not include figures, drawings, design criteria, or equipment characteristics, since these are already available in the 1983 Operations and Maintenance Manual, Contract Drawings, and manufacturers' manuals.

The manual is separated into four sections: Secondary System, Tertiary System, Alarm Response Procedures, and Monthly Log Forms. Each subsection is numbered independently so that additions can be made without renumbering every page in the manual.

The Secondary and Tertiary sections contain descriptions of how the systems work, along with daily operations checklists. The Tertiary section contains startup and shutdown procedures. It also includes criteria for making process control adjustments.

The Alarm Response Procedures outline the steps for investigating and correcting conditions which generate an alarm at the Tesco panel. The monthly log forms are recording daily readings such as flows, run times, adjustment settings, and test results.

This manual is based on actual operating procedures in use when it was written. If facilities or conditions change, or if improved operating procedures are implemented, the appropriate sections should be updated.

SECONDARY SYSTEM DESCRIPTION

The purpose of secondary treatment is to reduce the Biochemical Oxygen Demand (BOD) and Suspended Solids (SS) of the wastewater prior to tertiary treatment. Secondary treatment takes place in the aeration ponds and may continue to some small degree in the reservoirs.

Several physical and biological processes take place in the ponds. In the first pond, inorganic sand and grit settles to the bottom and remains there until the pond is drained and cleaned. Organic sewage solids also settle and are decomposed by anaerobic bacteria in the bottom layer, where there is no Dissolved Oxygen (DO). The decomposition of these solids produces methane and carbon dioxide.

The methane escapes into the atmosphere. The carbon dioxide may be taken up by algae, but only when the sun is shining. When it is dark, carbon dioxide also escapes into the atmosphere.

In the upper layers, where there is DO, aerobic bacteria decompose non-settleable suspended and dissolved organic matter. During daylight hours, the algae produce dissolved oxygen as they are taking up carbon dioxide which the bacteria are producing. When it is dark, the floating aerators are the only source of dissolved oxygen.

The aerators are controlled by timing programs in the Liquitronic IV programmable controller in the Tesco panel. The Pond 1A aerator usually runs continuously, since the BOD is highest in the first pond.

If the DO in a pond drops below 1.0 mg/1 during daylight hours, the run time of the aerator should be increased. If the DO is consistently above 2.0 mg/1 during dark hours, the run time may be decreased to conserve power.

In the later ponds, BOD and SS removal continues. Ammonia is converted to nitrate by aerobic bacteria. Facultative bacteria may convert this nitrate to nitrogen gas which escapes into the atmosphere, or the nitrate may be taken up by algae.

The secondary effluent should contain less than 30 mg/1 of BOD and 30 mg/1 of SS. Most of this will be contained in the algae, which will be removed in tertiary treatment. If the BOD of the secondary effluent is higher than 30 mg/1, or if septic conditions and sulfide odors occur, the aerator run times should be increased. If this does not solve the problem, I t is possible that the detention time has become too short, indicating the need for more ponds, or that the ponds need to be cleaned.

SECONDARY OPERATIONS CHECKLIST

1. Record all meter readings on monthly log sheets every day.
   a. Check the aerator run hours.
   b. If an aerator has not been running, check that it has power and is operable.
   c. If the aerator is bound up, an alarm should have been generated. (See Alarm Response Procedures.)

2. Each day, check the ponds for possible septic conditions and sulfide odors.
   a. If necessary, increase aerator turn times.

3. Take weekly pond and reservoir samples and record DO, temperature, pH, turbidity, and level on monthly log sheets.
   a. If the DO is less than 1.0 mg/1 during daylight hours, increase aerator run time.
   b. If the DO is consistently higher than 2.0 mg/1 during dark hours, consider decreasing run time. (See Secondary System Description.)

4. Run monthly BOD analyses on pond and reservoir samples.
   a. If secondary effluent BOD is higher than 30 mg/1, increase aerator run times.
   b. If BOD remains higher than 30 mg/1, measure sludge accumulation and clean the ponds is necessary. (See Secondary System Description.)

5. Check the hydropneumatic system.
   a. Grease the pumps weekly.

6. Check the service air compressors.
   a. Call Summit View Industrial Equipment for periodic lubrication and maintenance (phone number in Rolodex file).

7. Check subdrain pumps operation and oil level.
   a. Add oil if necessary.

TERTIARY SYSTEM DESCRIPTION

The purpose of tertiary treatment is to remove algae from the treated wastewater and disinfect it so it can be used for golf course irrigation. This is accomplished by Dissolved Air Flotation (DAF), filtration, and chlorination. The following is a basic description of the processes. Guidelines for making adjustments to achieve the required effluent quality are contained in the Tertiary Process Control subsection.

Wastewater for tertiary treatment is usually drawn from Reservoir No. 1, but may be also drawn from Reservoir No. 2 or Pond No. 3 if the level in Reservoir No. 1 is too low. The tertiary lift pumps transfer water into the DAF unit. Chlorine solution is added at the tertiary lift station to enhance coagulation of the algae.

In the DAF unit, alum and polymer solutions are metered into the depressurization zone. The alum reacts with alkalinity in the wastewater to form floc particles of aluminum hydroxide. The long-chain polymer molecules help to tangle up this floc with algae cells.

Service air is dissolved in recycled DAF effluent in the pressurization tank. This mixture of dissolved air and water is fed back into the DAF unit. In the depressurization zone, tiny bubbles of dissolved air expand and are attached to the floc/polymer/algae particle to float them to the surface. These solids are skimmed off and sent to the sludge drying beds, along with any solids which have settled to the bottom of the DAF unit.

Caustic and acid feed systems have been provided to automatically adjust the pH of the DAF influent in response to signal from a pH probe in the tertiary lift pumps wet well. To date, it has not been necessary to use this system.

The clarified effluent from the DAF unit flows by gravity to a three-cell Zimpro Hydro Clear filter. Any remaining particles of floc not removed in the DAF until are strained out by the sand in the filter cells. As the sand in a particular cell becomes clogged with solids, the level in the cell must rise in order to force the water through by gravity.

When the level rises to the lowest of two sensors in the cell, a pulse cycle is automatically initiated. During the pulse cycle, air from one of the two blowers agitates the surface of the media to loosen accumulated solids. The one of the backwash pumps runs briefly to force air up through the sand to further loosen the solids.

After a present number of pulse cycles have occurred, the filter cell is allowed to remain in service until the headloss causes the level to reach the upper sensor. Then the cell is automatically removed from service, backwashed with filtered water from the chlorine contact basin, and placed back in service. The backwash water carries accumulated solids out through the drain valve and into Pond 1A.

The filter is also equipped with a manually- initiated automatic degreasing system to remove grease accumulations from the filter media. Degreasing solution is fed to one cell at a time, agitated with water, allowed to soak and backwashed out.

Chlorine solution is added to the filtered effluent as it enters the chlorine contact chamber. As the water flow through the chamber and into the equalization basin, the chlorine kills bacteria and viruses which could cause a health hazard on the golf course.

The final effluent from the equalization basin is pumped to the North golf course by turbine pumps or flows to the South golf course Lakes 16-17 by gravity through the golf course controller valve. In full automatic

operation, the rise and fall of equalization basin level will start and stop the tertiary lift pumps and treatment unit.

TERTIARY PREPARATION FOR STARTUP

1. Two weeks prior to start up:

   a. Establish an estimated operating schedule, based on quantity of water in the reservoirs and projected use y the golf courses.

   b. Check all tertiary equipment to make sure that it has power and is operable. Green light for each motor n Tesco Panel will light when pushed if power is on. Main power breaker and individual motor breakers must be on.

   c. Check equipment locally to make sure it is not locked out, including tertiary lift pumps, DAF recirc pumps, DAF drive, air blowers and air compressors.

   d. Check the supply of chlorine, alum, and polymer. Order quantities based on projected operating schedule.

   e. Re-install the pH probe in the tertiary lift pump wet well if it has been removed.

   f. Check laboratory supplies and set up for Coliform tests.

   g. Run turbidity on samples from various reservoir levels to estimate best quality water for tertiary treatment.

   h. Make sure that either valve from the reservoirs (MV-1 or MV-2) is open and that water is in the tertiary lift well.

2. On the day of start up:

   a. Load dry polymer hopper or pen valves to liquid polymer tank. Start polymer unit mixing and aging. Switch settings should be as follows:

	DRY	LIQUID
Feeder SCR	On	Off
Feeder Control	Auto	Off
Chemical Feed	Dry	Liquid
Mode Selection	Auto	Auto
Mixing Water	Auto	Auto
Metering Pump Control	On	On
Aging Tank Mixer	Auto	Auto
Liquid Polymer Pump	Off	Auto
Polymer Transfer Pump	Off	Auto
Solution Tank Level System	On	On
Alarm System	On	On
Aging Tank Level System	On	On

   b. Open valves from chlorine cylinders to chlorinators.

c. Open filter bypass valve during initial DAF operation located on pipe entering ground between DAF and filter.

d. Open valve from chlorine contact tank to Receiver No. 1 and close valve from chlorine contact tank to Equalization Basin. Both valves are located in roadway between chlorine contact tank and equalization basin.

e. Make sure all valves from air compressors to receiver and from receiver to piping are open. Turn air compressors on by pushing start buttons on yellow cabinets. Make sure receiver charges up to about 140 psi.

f. Start sample to chlorine residual analyzer. Refer to manufacturer's manual.

TERTIARY START UP PROCEDURES

1. Place “Tertiary Plant Controls” switch on the Tesco Panel in the Auto position.
   a. If the “Filter” alarm sounds, reset it at the Tesco Panel and also inside the Filter Control Panel (Audit Reset).

   b. One of the tertiary lift pumps will start pumping 1.5 MGD into the DAF unit. If less flow is desired, partially open the tertiary lift pump discharge bypass valve. Tertiary flow is indicated at Tesco Panel inside building.

   c. If the tertiary plant does not start up, check the tertiary lift pump wet well level to be sure that flow is coming into it. Also check that the equalization basin level is not high.

   d. All tertiary equipment and chemical feed systems will start automatically.

2. When the level in the DAF unit reaches the probe in the effluent box, the pressurization pumps will start.

   a. The filter bypass valve, located between the DAF unit and the filter, should have been opened during preparation for stat up, so that DAF effluent flows directly to the chlorine contact basin.

   b. Adjust the DAF chemical feeds and pressurization system to achieve satisfactory operation before closing the filter bypass valve. (See Tertiary Process Control.)

3. Remove any filter cell inlet slide gates and close t he filter bypass valve.

   a. Observe the filter cells to assure proper operation. (See Tertiary Process Control.)

4. Adjust the chlorine solution feed to the chlorine contact tank until the amount of residual chlorine needed for disinfection is present in the effluent.

   a. (See Tertiary Process Control.)

5. Divert the chlorine contact tank to equalization basin. Close from chlorine contact tank to reservoir. Both valves are located in roadway between chlorine contact tank and equalization basin.

TERTIARY NORMAL OPERATION

1. Each day, record the filter panel readings and chemical feed settings on the monthly log sheets.

2. If drawing water from Reservoir No. 1, adjust the variable level suction device (called the "Eagle") t get the lowest possible DAF influent turbidity.

3. Check the calibration of the chlorine residual analyzer by running a hand sample. Recalibrate if necessary. Replace the charge if necessary.

4. Run turbidity analyses on the DAF influent, DAF effluent, and filtered water. Adjust alum and polymer dosages to achieve the best possible effluent. (See Tertiary Process Control.)

5. Observe filter for proper pulsing and backwash cycles. If necessary, adjust pulse cycle count to achieve lowest total backwash time, as indicated by backwash time counters. (See Tertiary Process Control.)

6. Check polymer mixing system for proper operation.

7. Record chemical inventory quantities on monthly log sheets an order if necessary.

8. Check for proper operation of service air system.

9. Twice a day, open the DAF bottom sludge valve for 30 seconds to remove bottom sludge and to help flush float sludge out to the drying beds.

10. At least once a week, check the chlorine leak detectors.

11. During wastewater reclamation operations, the following tests must be run on the effluent prior to discharge to the irrigation system, in accordance with Regional Water Quality Control Board Order No. 82-052, issued May 28, 1982. (A copy of this order is in the back of the 1983 O&M Manual.)

Constituent or Characteristic	Units	Type of Sample	Frequency of Sampling
Flow	gallons/day	Continuous	Daily
pH	pH number	Grab	Weekly
Settleable Solids	ml/l	Grab	Twice Weekly
Coliform Organisms	MPN/100 ml	Grab	Daily
Residual Chlorine	mg/l	Grab	Daily
Turbidity	NTU	Continuous	Daily

12. Constituents and characteristics of the filtered reclaimed wastewater shall not exceed the following limits during irrigation:

Constituent or Characteristic	Units	Monthly Mean	Monthly Median	Maximum
Settleable solids	ml/l	0.1	--	0.2
Coliform Organisms	MPN/100 ml	--	2.2	23
Turbidity*	NTU	2	--	5

*Not to exceed 5 more than 5% of the time during 24-hour period.

13. The dissolved oxygen content of any wastewater holding lagoons shall not be less than 1.0 mg/l for 16 hours in any 24- hour period.

TERTIARY PROCESS CONTROL

The guidelines given in this section are based on design criteria and operating experience with the Rancho Murieta plant and other plants. Since conditions and influent characteristics are continuously changing, process control targets must be frequently re-evaluated to assure that the effluent requirements are met. By recording daily readings and test results on the Monthly Log Sheets, you can compare performance with targets.

Chlorination

Chlorination is the most important process used in the reclamation plant because effective disinfection is necessary to protect public health. Chlorine may also be used for odor control and to enhance algae coagulation, but these are of lesser importance.

Of the three (3) chlorinators, only the one with feeds the solution distribution panel for the Tertiary Lift Station, Pre Filter, and Contact Chamber is normally used. The other two chlorinators, Parshall Flume and Aeration Pond No. 1, would usually be only for odor control.

Of the three solution rotameters, on the two for the Tertiary Lift Station and Contact Chamber are normally used. The Pre-filter feed is not used because of concern for possible corrosion of the filter under drain screens.

Since the solution from the chlorinator is split to two rotameters, a simple calculation is used to determine how many pounds per day of chlorine are being fed to each application point. Add the two rotameters readings together to make the denominator (bottom) of a fraction. Use a single rotameters reading to make the numerator (top) for the fraction. Multiply the chlorinator reading by that fraction to determine the dosage for that rotameters.

For example, say that the chlorinator reads 50 lbs/day, one rotameters read 30% and the other reads 60%.

(60 lbs/day) X (30%/90%) = 20 lbs/day for one rotameter.
(60 lbs/day) x (60%/90%) = 40 lbs/day for the other rotameter.

Adjust the Tertiary Lift Station rotameter until the DAF effluent contains between 0.1 and 0.3 mg/1 residual chlorine. This will assure that enough chlorine is present in the DAF until to enhance algae coagulation, but not so much that it could corrode the filter.

Adjust the Contact Chamber rotameter to achieve the dosage necessary to achieve a Total Coliform concentration of <2.2 MPN (less than 2.2 Most Probable Number of organisms per 100 ml.) The necessary dosage target can only be determined through operating experience by checking the daily Coliform results.

The design criteria for Chlorine Contact Chamber dosage are 5 mg/1 or about 63 lbs/day for a flow of 1.5 MGD. However, this high of a dosage may cause problems with golf course irrigation, so the dosage should be adjusted to the lowest possible rate (about 1.5 mg/1 in the past) which will meet the <2.2 MPN limit.

Chlorine Dosage in mg/1 can be converted to chlorine feed in lbs/day using the following formula:

(Flow, MGD) X (Dsage, mg/1) X (8.34 lbs/gal) = Feed, lbs/day
For example, for a flow of 1.5 MGD and a dosage of 5 mg/1:
(1.5 MGD) X (5 mg/1) X (8.34 lbs/gal) = 63 lbs/day

pH Control

The optimal pH for precipitation of aluminum hydroxide floc from alum added to the DAF unit is approximately 6.4. However, the pH of the influent is constantly changing throughout the day. During sunlight hours, algae take up dissolved carbon dioxide, which raises the pH. When it is dark, carbon dioxide accumulates, forming carbonic acid which lowers the pH.

To maintain the pH near the optimum for precipitation, automated acid and caustic feed systems have been provided. A pH probe in the tertiary lift station pump well sends a signal to a controller in the chemical feed room. The controller compares the pH to the set point which the operator has entered and then regulate the output of a caustic or acid feed pump to maintain the desired pH.

To date, the caustic and acid feed system has not been operated. As long as effluent requirements can be met without it, the costs and hazards associated with it can be avoided. If it becomes necessary to adjust the pH, the system must be checked out and calibrated and acid and caustic must be ordered.

Polymer Mixing and Aging

The concentration and aging time of the mixed polymer are critical to the effectiveness in enhancing algae removal in the DAF unit. Most suppliers recommend that the polymer be mixed to about 0.5 percent solution and aged for about 20-30 minutes before feeding. The supplier of the current product should be consulted to verify this.

The concentration of mixed polymer is controlled by the mixing water flow rotameter and either the Feeder SCR if using dry polymer or the liquid polymer transfer pump if using liquid polymer. The actual weight of dry polymer mixed can be estimated by holding small cup under the feeder output for about 10 second, which the polymer and then multiplying by the time it takes to mix a batch.

In the past, when using dry polymer Percol 727, the feeder has been set at 10-12 percent, the mixing water at 17-18 gal/min., and the aging timer at 20 minutes. The dilution water flow is not as critical since its function is simply to carry the polymer solution out to the DAF unit and help to disperse it in the feed zone. IN the past, the dilution water has also been set at about 17-18 gal/min.

If the polymer solution has been sitting in the aging or feed tank for more than a few days, it loses it effectiveness and may also become difficult to remove. If you are getting ready to shut down the plant for an extended period of time, you can turn the aging tank and solution tank level controls off in advance to allow the remaining polymer to be used up before shutdown. You can also make sure that the dry polymer hopper is nearly empty. After shutdown, drain any leftovers and wash down the tanks. Also remove any dry polymer left in the hopper to prevent it from caking up.

Alum and Polymer Feed Rates

For a particular set of condition, there is a combination of alum and polymer feed rates which will give the best DAF unit performance without wasting chemicals. By frequently running turbidity tests on the DAF influent and effluent, you can compare performance with various chemical feed rates. Unfortunately, conditions change so you may have to do this fairly often.

The following are some things to consider in determining the best chemical dosage:

a. Unless the pH control system is being used, the pH of the DAF influent will change from day to night. If the plant is being operated continuously, it may be necessary to change the alum and polymer feed from day to night.

b. The type and concentration of solids in the influent and also the temperature, may change if you change the suction point in Reservoir No. 1 or change to Reservoir No. 2 or Pond No. 3.

c. Type of algae, temperature and other influent characteristics will often change with the weather.

DAF Air Dissolution System

There are two important adjustments to the air dissolution system for the DAF unit: back pressure and air flow rate. The back pressure valve on the discharge of the pressurization tank controls both the pressure in the tank and the recycle pump flow rate. In the past, the back pressure valve has been throttled to raise the tank pressure to about 70-75 psi, resulting in a recycle flow rate of about 300-350 (about 30-35 percent of the influent flow rate).

The inlet air pressure to the pressurization tank should be regulated to at least 10 psi higher than the dissolution tank pressure to make sure that the air can get into the tank. The air flow rate should be just enough to let a small amount of air bleed off from the tank. IN the past, this has been 1-2 cfm.

Filter Operation

The objectives of filter operation are to produce an effluent with a monthly mean turbidity of less than 2 NTU and to minimize the total backwash time, since backwashing wastes product water back to Pond No. 1A.

The best possible filtered effluent quality can be achieved by removing as much of the solids as possible in the DAF unit, as described above and by making sure that the filter is properly operating as described below.

To minimize the amount of backwash time, the filter cells go through an automated pulsing cycle as described under Tertiary System Description. Try different settings of the pulse count limited knobs to determine which setting will result in the lowest overall backwash time. IN the past, the knobs have been set at 6 pulses before backwash. The backwash time has been set at 4 minutes. The pulse cycle time has been set at 5 - 10 minutes.

The media and under drain system must be kept clean to maintain satisfactory performance. If the media becomes coated with grease, initiate a degreasing cycle, as described in the manufacturer's manual.

It is extremely important to backwash each cell before shutting the filter down, to prevent accumulated solids from caking up the media while the filter is out of service. Also, this assures that after the next startup, the filter can produce enough clan water to displace any dirty water in the chlorine contact basin before backwash begins.

It is also extremely important not to allow the filter to be backwashed with dirty water, since solids could plug the under drain system. If water has been sitting on t he chlorine contact basin, it may contain small aquatic organisms which are large enough to plug the under drain system. This caused a very expensive repair job in a similar but larger plant.

The Zimpro-Hydroclear manufacturer's manual contains additional information on operation, maintenance, and process control for the filter.

Tesco Liquitronic IV Programmable Controller

Under normal operations, the operator will not need to change any of the set points in the Tesco Controller. If changing conditions make it necessary to change a set point, refer to the manufacturer's manual, which lists the existing set points and give instructions for changing them.

The Tesco Controller performs the following functions:

- Starts and stops the aerators according to preset times.
- Starts and stops the hydropneumatic pumps according to the pressure in the hydropneumatic tank.
- Opens the air valve to the hydropneumatic tank if the level reaches the probe.
- Starts and stops the drying bed sump pumps on level.
- Opens the Parshall Flume chlorinator at a present flow. (Not in use at time of this writing.)
- Purges flume and Stillwell bubblers at present intervals.
- Generates high and low level alarms for tertiary lift well and equalization basin.
- Opens the sludge wasting valve t present intervals. (Not in use at the time of this writing.)
- Permits automatic operation of the Tertiary Plant as long as the following input conditions are satisfied:
    a) Equalization pond level is not high.
    b) Tertiary lift pump well level is not low.
    c) Turbidity is not above high set point.

TESCO LIQUITRONIC IV SETPOINTS
RANCHO MURIETA WATER TREATMENT PLANTS 1 AND 2

Record any changes on this sheet.
Refer to TESCO Manual for instructions.

SETPOINT	UNITS	FUNCTION	INITIAL VALUE	DATE	CHANGED TO	DATE
0	—	Test Pot Filter Const				
1	—	Clearwell Levl Filt Const				
2	—	Infl Flow Filter Const				
3	—	Effl Flow Filter Const				
10	sec	Infl Flow Sample Interval				
13	sec	HI Turbidity Alarm Delay				
14	sec	HI/LO Chlorine Alarm Dly				
15	sec	Pump 1 Fail Alarm Delay				
16	sec	Pump 2 Fail Alarm Delay				
17	sec	Pump 3 Fail Alarm Delay				
21	sec	Drum Screen ON Delay				
22	sec	Rapid Mix ON Delay				
23	sec	Flocculator 1 ON Delay				
24	sec	Flocculator 2 ON Delay				
34	sec	Pump Backspin Delay				
37	sec	Clearwell HI Lvl Alarm Dly				
38	sec	Clearwell LO Lvl Alarm Dly				
39	sec	Sequential ON Delay				
40	ft	Clearwell LO Alarm				
41	ft	Clearwell Lead Pump OFF				
42	ft	Clearwell Lag Pump OFF				
45	hrs	Automatic Purge Interval				
46	sec	Compressor ON Time				
47	sec	Solenoid Valve ON Time				
48	sec	Purge Recovery Time				
50	min	Sed Flight 1 ON Time				
51	min	Sed Flight 1 OFF Time				
52	mni	Sed Flight 2 ON Time				
53	min	Sed Flight 2 OFF Time				
54	min	Sludge Pump 1 ON Time				
55	min	Sludge Pump 1 OFF Time				
56	min	Sludge Pump 2 ON Time				
57	min	Sludge Pump 2 OFF Time				
58	min	Tele Valve 1 ON Time				
59	min	Tele Valve 1 OFF Time				
60	min	Tele Valve 2 ON Time				
61	min	Tele Valve 2 OFF Time				
62	min	Tele Valve 3 ON Time				
63	min	Tele Valve 3 OFF Time				
64	min	Tele Valve 4 ON Time				
65	min	Tele Valve 4 OFF Time				
70	gpm	LO Flow (Mod Valve Cont)				
71	ft	Clearwell Lead Pump ON				
72	ft	Clearwell Lag Pump ON				
80	gpm	HI Flow (Mod Valve Cont)				
90	ft	Clearwell HI Alarm				
101	—	Valve REVERSE Prop				
102	—	Valve FORWARD Prop				
105	gpm	Minimum Flow Sense				
110	sec/60	Totalizer Pulse Duration				
120	sec/60	Min Valve Pulse Time				

TERTIARY SHUTDOWN PROCEDURES

1. If plant will be shut down for an extended period, plan to use up as much as possible of the mixed polymer solution. (See Tertiary Process Control.)

    a. Turn aging tank level control system off to prevent initiation of polymer mixing.
    b. After aging tank has been transferred to solution tank, turn off transfer pump and solution tank level control.

2. Immediately prior to shut down, backwash and isolate each filter cell as follows:

    a. Insert inlet slide gate to Cell No. 1.
    b. Manually initiate backwash of Cell No. 1 by pushing both the “Manual Backwash” and “Cell No. 1” buttons on the Filter Control panel.
    c. Allow the chlorine contact basin to refill.
    d. Insert inlet slide gate for Cell No. 2, as above.
    e. Manually backwash Cell No. 2 as above.
    f. Allow chlorine contact tank to refill.
    g. Open filter bypass valve between DAF unit and filter.
    h. Manually backwash Cell No. 3, as above.
    i. Filter is not out of service.

3. Place the “Tertiary Plant Control” switch on the Tesco Panel in the Off position.

    a. Check at all equipment has shut down.
    b. Check that all chemical feed has stopped.
    c. Plant is now out of service.

4. If the plant will be out of service for a short time:
    a. Briefly pump water into the DAF to raise the level (with the filter bypass open) and manually start the skimmer to remove accumulated float solids. Then open bottom sludge valve for a final flush to the drying beds.

5. If the plant will be out of service for an extended period:
    a. Remove DAF float, sludge and bottom sludge again the next day, as above, or else drain the DAF tank and wash it down.
    b. Clean out the dry polymer hopper, aging tank, and feed tank.
    c. Close the valves on the Chlorine cylinders.

6. At the time of this writing, leaks in the air piping may make it necessary to shut down the air compressors except when air is needed for the tertiary plant and hydropneumatic tanks.

7. During periods of extended shutdown, it is advisable to manually exercise all valves monthly, especially the air-operated filter valves to keep them from sticking.

ALARM RESPONSE PROCEDURES

M1, M2, M3 - Pond 1A, 1B, 3 Aerator O/L (overload)

1. Lock out power to the aerator.
2. Check the aerator from the boat to determine if something is wrapped around the impeller.
3. Remove the debris if possible.
4. Restart the aerator only after you are sure that it can turn freely.
5. If the debris cannot be removed or if the aerator is bound up for some other reason, pull it into the shore for repairs.
6. If an aerator will be out of service for an extended period, increase the run time of other aerators to compensate.
7. If the Pond 1A aerator is out of service, substitute an aerator from a less critical pond.

M4, M5 - Lift Pump 1, 2 O/L (overload)

1. Lock out power to pump.
2. Check pump shaft for free rotation.
3. Make sure discharge valves are open.
4. If shaft will rotate, try to restart pump.
5. If shaft will not rotate, remove pump for removal of debris or repairs.

Chlorine Feed room (leak detector)

1. If you are sure that the leak is only in the chlorine feed room and not in the chlorine storage room, you may safely enter the storage room and close the cylinder valve but only with an outside observe with an air pack watching.
2. Leave the chlorinator running for a while to draw chlorine out of the piping.
3. If the tertiary plant is operating, divert filtered water back to the reservoirs or shut the plant down. Do not allow unchlorinated water to enter the chlorine contact basin.
4. Use the chlorine feed room fan to clear the room before entry.
5. Investigate the cause of the leak and repair.
6. Do not open the cylinder valve again until the leak has been repaired.
7. After opening the cylinder valve, check the repair with ammonia vapor.

Chlorine Storage Room (leak detector)

1. At least two trained people, all with air packs on, must be present for entry to the chlorine atmosphere.
2. One person should enter to shut off the cylinder valve while the other observes from outside.
3. If shutting off the valve does not stop the leak, use the repair kits t isolate the leaking valve.
4. Leave the chlorinator running to draw chlorine from the piping.
5. Then bypass the chlorine contact basin or shut down the tertiary plant, as above. Do not allow unchlorinated water to enter the chlorine contact basin.
6. If the cylinder valve is leaking, call the supplier to remove the cylinder. Rotate ton cylinder for gas discharge only.
7. If the leak was in piping or fittings, repair and check with ammonia vapor before re-opening the cylinder valve.

Tertiary Low Flow/High Flow

1. Tertiary flow if outside of the alarm set point range.

High/Low Chlorine Residual

1. Check to see that the chlorinator is receiving chlorine and that chlorine solution is being fed to the chlorine contact basin.
2. Run a chlorine residual test on the chlorine contact tank effluent to verify the analyzer reading.
3. Raise or lower the chlorine dosage to bring the residual into the desired range.

Burglar Alarm, Smoke Detector

1. The burglar alarm and smoke detector are telemetered to the Rancho Murieta security post, and they will dispatch an officer to investigate.

Dissolved Air Flotation, Filter

1. Check the DAF unit or filter for proper level and equipment operation.

M6, M7, M8, M9 - Sludge Bed Pump 1, 2, Hydro Pump 1, 2, 0/L

1. Loc out power to pump
2. Check pump for rotation.
3. Remove pump for repair if it will not operate.

pH Meter

1. Tertiary influent pH is outside of the alarm set point range.
2. If pH adjustment system is in operation, run pH on a hand sample to verify pH probe reading.
3. Check pH controller and caustic and acid feed pumps for proper operation.

Compressor

1. This alarm was for the original air compressors, which have been replaced by package units.

Bubbler No. 1 High/Low (Tertiary Lift Station)

1. Check tertiary lift station wet well level to verify bubbler.
2. Be sure that valves are open to one of the reservoirs.
3. Investigate possible pluggage of the suction piping.

Bubbler No. 2 High/Low (Equalization Pond)

1. Check equalization pond level to verify bubbler reading.
2. If high, shut down tertiary plant.
3. If low, either start up tertiary plant or shut down equalization pond withdrawal pumps.

Golf Course Pump Station

1. Notify golf course of alarm condition.

Power Failure

1. This alarm is telemetered to the Rancho Murrieta security post.
2. First priority is to get the sewage pump stations back in operations.
3. When power to the water reclamation plant has been restored, rest the main breaker.

APPENDIX F-1

SAMPLES OF ANNUAL REPORTS TO SWRCB

February 5, 1991

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, Ca 95812-2000

Ref: Annual Reports

Gentlemen,

The annual reports required for water diversions at Rancho Murieta are submitted with this letter.

Attached are the permit reports for 1990;

APPLICATION NUMBER	PERMIT NUMBER
023416	016762
023417	016763
023418	016764
023419	016765

Attached are the license reports for 1988, 1989 and 1990;

APPLICATION NUMBER	LICENSE NUMBER
A-016142	006238
A-016143	006239
A-020057	008013

If you have any questions please contact me at (916) 354-2428.

Sincerely,

R. Lee Lawrence
District Superintendent

cc: Marion Cravens, District Manager
Ken Giberson, District Engineer

Rancho Murieta Community Services District
14670 CANTOVA WAY • P.O. BOX 1050 • RANCHO MURIETA, CA 95683 • (916) 354-2428 FAX (916) 354-2082

DIVISION OF WATER RIGHTS
P.O. BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST. SACRAMENTO, CA
(916) 324-5626

REPORT OF LICENSEE FOR 1988, 1989, 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: A020057

LICENSE: 008013

TELEPHONE NUMBER:
(916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE:

UNNAMED STREAM

COUNTY:

SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
RECREATION	// NOV 15 TO APR 15	.0 AC
STOCKWATERING	// NOV 15 TO APR 15	.0 AC

AMOUNT: 0.000 8.0 AC-FT

THIS REPORT IS REQUIRED BY THE TERMS AND CONDITIONS OF YOUR LICENSE

IMPORTANT! EVERY license is subject to the conditions therein. I have currently reviewed my license: YES [X] NO [ ]. I am complying with the conditions of my license: YES [XX] NO [ ]. Identify any noncompliance by license term number under "Remarks" on reverse side. This report is important in providing the record of use needed in maintaining your water right. It should be filled out carefully and returned promptly to the above-listed address.

THE PROJECT HAS BEEN ABANDONED, AND I REQUEST REVOCATION OF THE LICENSE: YES [ ] NO [X]

COMPLETE FOR DIRECT DIVERSION PROJECTS

1. Have you used the full licensed amount of water each year? YES [X] NO [ ].
2. State the quantity of water used each month in gallons or acre-feet (if not known, check months water was used).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual
1988	X	X	X	X							X	X	
1989	X	X	X	X							X	X	
1990	X	X	X	X							X	X	

COMPLETE FOR STORAGE PROJECTS	1988	1989	1990
3. Did your reservoir spill this year?	Yes	Yes	No
4. If not, how many feet below spillway vertically was the water level at maximum storage?			
5. Have you emptied the reservoir?	No	No	No
6. How many feet below spillway vertically was it drawn down at end of season?	3'-4'	3'-4'	3'-4'
USE (COMPLETE FOR ALL PROJECTS)			
7. Acreage irrigated			
Crops grown			
8. Stockwatering – number of stock			
kind of stock			
9. Domestic – number of persons			
garden area, etc.			
10. Recreational – nature of use	Boating, Swimming, Fishing all 3 years		
11. Industrial – nature of use			
12. Municipal – approximate population			
13. Power generation – K.W.			
14. Other			

15. If no water was used in one or more years, briefly state the reason on the reverse side under "Remarks".
16. If either the location of the point of diversion or place of use has been changed and the permission of this Board has not yet been obtained, please describe nature of change on the reverse side under "Remarks".

(REPORT CONTINUES ON REVERSE SIDE)

NOTE: The following questions relate to the Board's continuing responsibility to insure that appropriated water is best developed, conserved, and utilized in the public interest as required by the Water Code. Please answer those questions which are applicable to your project.

CONSERVATION OF WATER (WATER PURVEYORS)

17. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detection program [ ]; (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [XX]; (4) Other (describe in "Remarks") [ ].

18. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage more efficient irrigation systems (sprinkler, drip, etc.) where applicable [ ]; (2) Return flow systems on individual farms [ ]; (3) Return flow system areawide [X]; (4) Water pricing to encourage reduced use [X]; (5) Charges for drainage of irrigated lands [X]; (6) Other (describe in "Remarks") [ ].

19. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations to control wasteful use [ ]; (2) Public education program on water conservation [ ]; (3) Pricing to encourage reduced use [X]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks" [ ].

20. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water use for major crops by each farm [ ]; (3) Other (describe in "Remarks") [X].

CONSERVATION OF WATER (WATER USERS)

Describe any water conservation efforts you may have started: _____

22. If credit toward beneficial use of water under this license for water not used due to a conservation effort is claimed under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.):
19__ _____ 19__ _____ 19__ _____

WATER QUALITY AND WASTEWATER RECLAMATION

23. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters: _____

24. After use, the water is (1) retained in reservoir [X]; (2) discharged into a stream or lake [ ]; (3) discharged into settling ponds [X]; (4) Other [X]. Describe: All reclaimed water is used on golf courses.

25. Does or will water being discharged contain waste materials? YES [ ] NO [X].
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe: _____

26. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or which would impair the water for beneficial uses? YES [ ] NO [X]. Describe: _____

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR LICENSE, PLEASE ANSWER IN REMARKS SECTION BELOW.

7. Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by waste to a degree which unreasonably affects such water for other beneficial uses? YES [ ] NO [ ].

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriated water is claimed under Section 1010 of the Water Code, please show amounts of reduced diversion and amounts of reclaimed water used.

28. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? YES [ ] NO [ ]
If yes, please describe. _____

29. What is present availability or current potential for using reclaimed water from a wastewater treatment plant or polluted water in place of the appropriated water to satisfy all or part of your water needs?

30. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

31. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS: (Identify the item you are explaining. Additional pages may be attached.)

2. For this information please refer to Application 023416, Year 1990

20. Water usage is metered.

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and belief

Date: January 14, 1991 Sign Here: Marion C Cravens
LICENSEE (OR AGENT OR DESIGNEE)

DIVISION OF WATER RIGHTS
P.O. BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST. SACRAMENTO, CA
(916) 324-5626

REPORT OF LICENSEE FOR 1988, 1989, 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: A016142

LICENSE: 006238

TELEPHONE NUMBER:
(916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE:

COSUMNES RIVER
(OTHER SOURCES NOT SHOWN)

COUNTY:

SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
IRRIGATION	MAY 01 TO OCT 31 // OCT 01 TO MAY 01	109.0 AC
STOCKWATERING	MAY 01 TO OCT 31 // OCT 01 TO MAY 01	.0 AC

AMOUNT: 1.240 CFS 45.0 AC-FT

THIS REPORT IS REQUIRED BY THE TERMS AND CONDITIONS OF YOUR LICENSE

IMPORTANT! EVERY license is subject to the conditions therein. I have currently reviewed my license: YES [X] NO [ ]. I am complying with the conditions of my license: YES [X] NO [ ]. Identify any noncompliance by license term number under "Remarks" on reverse side. This report is important in providing the record of use needed in maintaining your water right. It should be filled out carefully and returned promptly to the above-listed address.

THE PROJECT HAS BEEN ABANDONED, AND I REQUEST REVOCATION OF THE LICENSE: YES [ ] NO [X]

COMPLETE FOR DIRECT DIVERSION PROJECTS

1. Have you used the full licensed amount of water each year? YES [X] NO [ ].
2. State the quantity of water used each month in gallons or acre-feet (if not known, check months water was used).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual
1988	X	X	X	X	X	X	X	X	X	X	X	X	
1989	X	X	X	X	X	X	X	X	X	X	X	X	
1990	X	X	X	X	X	X	X	X	X	X	X	X	

COMPLETE FOR STORAGE PROJECTS	1988	1989	1990
3. Did your reservoir spill this year?	No	No	No
4. If not, how many feet below spillway vertically was the water level at maximum storage?	Full	Full	Full
5. Have you emptied the reservoir?	No	No	No
6. How many feet below spillway vertically was it drawn down at end of season?	2.0'	2.0'	2.0'
USE (COMPLETE FOR ALL PROJECTS)			
7. Acreage irrigated	109	109	109
Crops grown			
8. Stockwatering – number of stock			
kind of stock			
9. Domestic – number of persons			
garden area, etc.			
10. Recreational – nature of use			
11. Industrial – nature of use			
12. Municipal – approximate population			
13. Power generation – K.W.			
14. Other			

15. If no water was used in one or more years, briefly state the reason on the reverse side under "Remarks".
16. If either the location of the point of diversion or place of use has been changed and the permission of this Board has not yet been obtained, please describe nature of change on the reverse side under "Remarks".

(REPORT CONTINUES ON REVERSE SIDE)

NOTE: The following questions relate to the Board's continuing responsibility to insure that appropriated water is best developed, conserved, and utilized in the public interest as required by the Water Code. Please answer those questions which are applicable to your project.

CONSERVATION OF WATER (WATER PURVEYORS)

17. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detection program [X]; (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [ ]; (4) Other (describe in "Remarks") [ ].

18. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage more efficient irrigation systems (sprinkler, drip, etc.) where applicable [X]; (2) Return flow systems on individual farms [ ]; (3) Return flow system areawide [X]; (4) Water pricing to encourage reduced use [X]; (5) Charges for drainage of irrigated lands [ ]; (6) Other (describe in "Remarks") [ ].

19. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations to control wasteful use [ ]; (2) Public education program on water conservation [ ]; (3) Pricing to encourage reduced use [X]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks" [ ].

20. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water use for major crops by each farm [ ]; (3) Other (describe in "Remarks") [X].

CONSERVATION OF WATER (WATER USERS)

Describe any water conservation efforts you may have started: 1.) Stop run off
2.) Golf courses are irrigated by sprinkler system

22. If credit toward beneficial use of water under this license for water not used due to a conservation effort is claimed under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.):
19__ _____ 19__ _____ 19__ _____

WATER QUALITY AND WASTEWATER RECLAMATION

23. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters:

24. After use, the water is (1) retained in reservoir [X]; (2) discharged into a stream or lake [ ]; (3) discharged into settling ponds [X]; (4) Other [X]. Describe: All reclaimed water is used on golf courses.

25. Does or will water being discharged contain waste materials? YES [ ] NO [X].
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe: _____

26. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or which would impair the water for beneficial uses? YES [ ] NO [X]. Describe: _____

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR LICENSE, PLEASE ANSWER IN REMARKS SECTION BELOW.

7. Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by waste to a degree which unreasonably affects such water for other beneficial uses? YES [ ] NO [X].

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriated water is claimed under Section 1010 of the Water Code, please show amounts of reduced diversion and amounts of reclaimed water used.

28. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? YES [ ] NO [ ].
If yes, please describe. _____

29. What is present availability or current potential for using reclaimed water from a wastewater treatment plant or polluted water in place of the appropriated water to satisfy all or part of your water needs?

30. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

31. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS: (Identify the item you are explaining. Additional pages may be attached.)

2. For this information please refer to Application 023416, Year 1990

20. Water usage is metered

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and belief.

Date: January 14, 1991 Sign Here: Marion C Cravens
LICENSEE (OR AGENT OR DESIGNEE)

DIVISION OF WATER RIGHTS
P.O. BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST. SACRAMENTO, CA
(916) 324-5626

PROGRESS REPORT BY PERMITTEE FOR 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: 023416

PERMIT: 016762

TELEPHONE NUMBER:
(916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE:

COSUMNES RIVER
(OTHER SOURCES NOT SHOWN)

COUNTY:

SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
IRRIGATION	NOV 01 TO MAY 31 // NOV 01 TO MAY 31	500.0 AC
INDUSTRIAL	NOV 01 TO MAY 31 // NOV 01 TO MAY 31	.0 AC
MUNICIPAL	NOV 01 TO MAY 31 // NOV 01 TO MAY 31	.0 AC
RECREATION	NOV 01 TO MAY 31 // NOV 01 TO MAY 31	.0 AC

AMOUNT: 6.000 CFS 4050.0 AC-FT COMPLETE USE BY: 12/01/2000

IMPORTANT! EVERY permit is issued subject to the conditions therein expressed. I have currently reviewed my permit: YES [XX] NO [ ]. I am complying with the conditions under which my permit has been issued: YES [X] NO [ ]. Identify any noncompliance by permit term number under "Remarks" on reverse side. This report is important in providing the record of use needed in establishing your water right. It should be filled out carefully and returned promptly to the above address.

THE PROJECT HAS BEEN ABANDONED AND I REQUEST REVOCATION OF THIS PERMIT: YES [ ] NO [X].

CONSTRUCTION WORK

1. Has construction work commenced? YES [X] NO [ ]. Is construction completed? YES[ ] NO [X].
2. If incomplete, describe briefly the work done, including cost: Pumping plant, storage reservoir, two (2) water treatment plants, 1 wastewater treatment plant and basic water supply system is completed
3. If not completed, give estimated date of completion: 2005
4. What percent of construction work remains to be done? 30% Explain: 2 water treatment plants, 1 wastewater treatment plant, 1 storage reservoir and place of use still being developed

USE OF WATER

5. Has use of water commenced? YES [X] NO [ ]. Check appropriate box(es) below and explain how water was used.

(a) [X] Irrigation Portions of 2 golf courses, plus parks and landscaped areas
Total acres irrigated — Name of crops served and acreage of each

(b) [ ] Stockwatering _____
Number of animals

(c) [X] Industrial Construction work
Nature of use

(d) [ ] Domestic _____
Number of persons, area of garden, lawn, etc.

(e) [X] Municipal 4,194
Approximate population

(f) [X] Recreational Boating, fishing & water contact sport
Boating, fishing, water contact sports

(g) [ ] Power generation _____
Installed horsepower capacity

(h) [ ] Other _____

6. Amount of water used each month under this permit in gallons or acre-feet. (If not known, check months water was used.)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual
X	X	X	X	X						X	X	

7. Has use of water, both amount and season, been as great as you expect in any future year under this permit? YES [ ] NO [X]. If "No", explain in "Remarks".
8. Has location of the intake, place of use, or type of use been changed? YES [ ] NO [X]. Explain in "Remarks".
9. Did the source go dry? YES [X] NO [ ]. If so, during what months? July, August, September

STORAGE PROJECTS ONLY

10. Did your reservoir spill this year? YES [X] NO[ ]. If not, how many feet below spillway vertically was the water level at maximum storage? _____ Have you emptied the reservoir? YES [ ] NO [X]. If not, how many feet below spillway vertically was it drawn down at end of season? Calero - 8.7', Chesbro - 4.3', Clementia - 7.6'

(REPORT CONTINUES ON REVERSE SIDE)

PLEASE ANSWER ONLY THOSE QUESTIONS BELOW WHICH ARE APPLICABLE TO YOUR PROJECT.

MUNICIPAL, COMMUNITY, OR SUBDIVISION PROJECTS ONLY

CONSERVATION OF WATER

11. How many service connections to date? 1398 Total population served by the water system: 4,194

12. Estimated number of service connections under full use: 5968

13. Are the connections individually metered; YES [X] NO [ ].

14. Do you plan to meter the connections? YES [ ] NO [ ]. When?

15. Sewage generated by those to whom you deliver water is disposed of by: Septic tanks and leach lines [ ]; Seepage pits [ ]; Central treatment plan [X] operated by Rancho Murieta C.S.D.; Other [ ] (specify under "Remarks").

16. Is water service provided to an area or subdivision including a recreational reservoir: YES [X] NO[ ].

17. Name of area or subdivision so served: Rancho Murieta, California

18. State surface area at maximum water level in recreational reservoir(s) referred to in 16. Identify surface area(s) by name of dam or reservoir: Clementia Reservoir - 70 acres, Laguna Joaquin - 25 acres

19. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detection program [XX]. (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [ ]; (4) Other (describe in "Remarks") [ ].

20. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage more efficient irrigation systems (sprinkler, drip, etc.), where applicable [ ]; (2) Return flow systems on individual farms [ ]; (3) Return flow system areawide [ ]; (4) Water pricing to encourage reduced use [ ]; (5) Charges for drainage of irrigated lands [ ]; (6) Other (describe in "Remarks") [ ].

21. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations to control wasteful use [ ]; (2) Public education program on water conservation [X]; (3) Pricing to encourage reduced use [X]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks") [ ].

22. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water use for major crops by each farm [ ]; (3) Other (describe in "Remarks") [X]. Water usage is individually metered

23. Describe any water conservation efforts you may have started: Public education through television notices

24. If credit toward beneficial use of water under this permit for water not used due to a conservation effort is claimed under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.): a) irrigation of 2/3 of 150 acre golf course. b) collecting run-off water from golf course & re-using it for irrigation.

WATER QUALITY AND WASTEWATER RECLAMATION

25. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters: Top of hill reservoirs

26. After use, the water is (1) retained in reservoir [X]; (2) discharged into a stream or lake [ ]; (3) discharged into settling ponds [X]; (4) other [X]. Describe: Reclaimed for irrigation purposes

27. Does or will water being discharged contain waste materials? [ ] YES [X] NO.
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe:

28. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or which would impair the water for beneficial uses? [ ] Yes [X] No. Describe: 0 (zero) discharge permit

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR PERMIT, PLEASE ANSWER IN REMARKS SECTION BELOW.

29. Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by waste to a degree which unreasonably affects such water for other beneficial uses? [ ] Yes [ ] No.

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriated water is claimed under Section 1010 of the Water Code, please show the amounts of reclaimed water used.

30. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? [X] Yes [ ] No.
If Yes, please describe: All wastewater is reused on golf courses. 0 (zero) discharge permit.

31. What is present availability or current potential for using reclaimed water from a wastewater treatment plant or polluted water in place of the appropriated water to satisfy all or part of your water needs?

32. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

33. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS (Identify the item you are explaining. Additional pages may be attached.)

6. Please see attached Annual Diversion Reports for Complete System (2 sheets)

7. Project still being developed.

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and belief.

Dated: January 14, 1991 at Rancho Murieta (Location) California (State)

Sign here: Marion C Craven
PERMITTEE (OR AGENT OR DESIGNEE)

RANCHO MURIETA COMMUNITY SERVICES DISTRICT
P.O.Box 1050, Rancho Murieta, CA 95683
14670 Cantova Way (916) 354-2428
ANNUAL DIVERSION REPORTS FOR COMPLETE SYSTEM

YEAR: 1990 BY: N. BAILEY CHECKED BY: R. Lee Lawrence

1. FROM: Cosumnes River at Yellow Bridge Pump, TO: Irrigation
TOTAL ACRE FEET 158.55

2. FROM: Lake Clementia Storage, TO: Lake 10
TOTAL ACRE FEET 55.50

3. FROM: Cosumnes River at Granlee Dam, TO: Lake Clementia
TOTAL ACRE FEET 22.51

4. FROM: Cosumnes River at Granlee Dam, TO: Lakes Calero/Chesbro
TOTAL ACRE FEET 1,210.45

5. FROM: Cosumnes River at River Pump, TO: Lake 10
TOTAL ACRE FEET 78.73

6. FROM: Cosumnes River at River Pump, TO: Bass Lake
TOTAL ACRE FEET 276.90

7. FROM: Cosumnes River Rock Crusher Pump, TO: Rock Crusher
TOTAL ACRE FEET 69.24

8. FROM: Lake 10 Storage, TO: RMCC South Course Irrigation
TOTAL ACRE FEET 215.52

9. FROM: Lake 16/17, TO: RMCC South Course Irrigation work work
TOTAL ACRE FEET 153.87

10. FROM: Water Treatment Plant #1, TO: Distribution System
TOTAL ACRE FEET 451.66

11. FROM: Water Treatment Plant #2, TO: Distribution System
TOTAL ACRE FEET 352.46

12. FROM: Water Treatment Plant total, TO: Distribution System
TOTAL ACRE FEET 804.12

13. FROM: North Main Wastewater Lift Station, TO: Wastewater Plt
TOTAL ACRE FEET 312.04

14. FROM: South Main Wastewater Lift Station, TO: Wastewater Plt
TOTAL ACRE FEET 0.65

15. FROM: All Wastewater Lift Stations, TO: Wastewater Plant
TOTAL ACRE FEET 312.69

16. FROM: Wastewater Treatment Plant, TO: South Course
TOTAL ACRE FEET 335.57

17. FROM: Wastewater Treatment Plant, TO: North Course
TOTAL ACRE FEET 0

18. FROM: Lake Calero Storage, TO: Lake Chesbro Storage
TOTAL ACRE FEET 296.37

19. FROM: Laguna Joaquin Storage, TO: RMA Irrigation
TOTAL ACRE FEET 105.25

20. FROM: Bass Lake Pump Station, TO: North Course
TOTAL ACRE FEET 346.54

21. FROM: Lake Clementia Storage, TO: Farmers Irrigation
TOTAL ACRE FEET 265.80

22. FROM: Cosumnes River at Granlee Recorder, TO: CIA Ditch
TOTAL ACRE FEET 1,955.40

23. FROM: CIA Ditch Recorder Equestrian Arena, TO: CIA Ditch
TOTAL ACRE FEET 1,405.10

24. Lake Clementia Storage Levels
High Elev: 185.26' Low Elev: 177.70' Average: 181.48'
High Ac Ft: 907.1 Low Ac Ft: 447.5 Average: 677.3 AC.FT.

25. Lake Chesbro Storage Levels
High Elev: 261.50' Low Elev: 257.16' Average: 259.33'
High Ac Ft: 1,144.0 Low Ac Ft: 980.1 Average: 1,062.1 AC.FT.

26. Lake Calero Storage Levels
High Elev: 279.81' Low Elev: 271.12' Average: 275.47'
High Ac Ft: 2,622.5 Low Ac Ft: 1,903.5 Average: 2,263.0 AC.FT.

P.O. BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST SACRAMENTO, CA
(916) 324-5626

PROGRESS REPORT BY PERMITTEE FOR 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: 023417

PERMIT: 016763

TELEPHONE NUMBER:
(916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE: UNNAMED STREAM

COUNTY: SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
RECREATION	// NOV 01 TO MAY 31	.0 AC
STOCKWATERING	// NOV 01 TO MAY 31	.0 AC

AMOUNT: 0.000 130.0 AC-FT COMPLETE USE BY: 12/01/1990

IMPORTANT! EVERY permit is issued subject to the conditions therein expressed. I have currently reviewed my permit: YES [X] NO [ ]. I am complying with the conditions under which my permit has been issued: YES [X] NO [ ]. Identify any noncompliance by permit term number under "Remarks" on reverse side. This report is important in providing the record of use needed in establishing your water right. It should be filled out carefully and returned promptly to the above address.

THE PROJECT HAS BEEN ABANDONED AND I REQUEST REVOCATION OF THIS PERMIT: YES [ ] NO [X].

CONSTRUCTION WORK

1. Has construction work commenced? YES [X] NO [ ]. Is construction completed? YES[X] NO [ ].
2. If incomplete, describe briefly the work done, including cost: _____
3. If not completed, give estimated date of completion: _____
4. What percent of construction work remains to be done? _____ Explain: _____

USE OF WATER

5. Has use of water commenced? YES [X] NO [ ]. Check appropriate box(es) below and explain how water was used.

(a) [ ] Irrigation _____ (Total acres irrigated) (Name of crops served and acreage of each)

(b) [ ] Stockwatering _____ (Number of animals)

(c) [ ] Industrial _____ (Nature of use)

(d) [ ] Domestic _____ (Number of persons, area of garden, lawn, etc.)

(e) [ ] Municipal _____ (Approximate population)

(f) [X] Recreational Wildlife and aesthetics (Boating, fishing, water contact sports)

(g) [ ] Power generation _____ (Installed horsepower capacity)

(h) [ ] Other _____

6. Amount of water used each month under this permit in gallons or acre-feet. (If not known, check months water was used.)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual
X	X	X	X	X						X	X	

7. Has use of water, both amount and season, been as great as you expect in any future year under this permit? YES [ ] NO [X]. If "No", explain in "Remarks".
8. Has location of the intake, place of use, or type of use been changed? YES [ ] NO [X]. Explain in "Remarks".
9. Did the source go dry? YES [X] NO [ ]. If so, during what months? July - August - September

STORAGE PROJECTS ONLY

10. Did your reservoir spill this year? YES [X] NO[ ]. If not, how many feet below spillway vertically was the water level at maximum storage? _____ Have you emptied the reservoir? YES [ ] NO [XX]. If not, how many feet below spillway vertically was it drawn down at end of season? 3.5'

(REPORT CONTINUES ON REVERSE SIDE)

PLEASE ANSWER ONLY THOSE QUESTIONS BELOW WHICH ARE APPLICABLE TO YOUR PROJECT.

MUNICIPAL, COMMUNITY, OR SUBDIVISION PROJECTS ONLY

CONSERVATION OF WATER

11. How many service connections to date? 1398 Total population served by the water system: 4,194

12. Estimated number of service connections under full use: 5968

13. Are the connections individually metered; YES [X] NO [ ].

14. Do you plan to meter the connections? YES [ ] NO [ ]. When? _____

15. Sewage generated by those to whom you deliver water is disposed of by: Septic tanks and leach lines [ ]; Seepage pits [ ]; Central treatment plan [X] operated by Rancho Murieta C.S.D. ; Other [ ] (specify under "Remarks").

16. Is water service provided to an area or subdivision including a recreational reservoir: YES [X] NO[ ].

17. Name of area or subdivision so served: Rancho Murieta, California

18. State surface area at maximum water level in recreational reservoir(s) referred to in 16. Identify surface area(s) by name of dam or reservoir: Clementia Reservoir - 70 acres., Laguna Juaquin - 25 acres

19. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detection program [X]; (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [ ]; (4) Other (describe in "Remarks") [ ].

20. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage more efficient irrigation systems (sprinkler, drip, etc.), where applicable [ ]; (2) Return flow systems on individual farms [ ]; (3) Return flow system areawide [ ]; (4) Water pricing to encourage reduced use [ ]; (5) Charges for drainage of irrigated lands [ ]; (6) Other (describe in "Remarks") [ ].

21. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations to control wasteful use [ ]; (2) Public education program on water conservation [X]; (3) Pricing to encourage reduced use [XX]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks") [ ].

22. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water use for major crops by each farm [ ]; (3) Other (describe in "Remarks") [X]. Water usage is individually metered

23. Describe any water conservation efforts you may have started: Public education through television notices

24. If credit toward beneficial use of water under this permit for water not used due to a conservation effort is claimed under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.): a) irrigation of 2/3 of 150 acre golf course. b) collecting run-off water from golf courses & re-using it for irrigation

WATER QUALITY AND WASTEWATER RECLAMATION

25. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters: Top of hill reservoirs

26. After use, the water is (1) retained in reservoir [X]; (2) discharged into a stream or lake [ ]; (3) discharged into settling ponds [X]; (4) other [X]. Describe: Reclaimed for irrigation purposes

27. Does or will water being discharged contain waste materials? [ ] YES [X] NO.
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe: _____

28. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or which would impair the water for beneficial uses? [ ] Yes [X] No. Describe: 0 (zero) discharge permit

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR PERMIT, PLEASE ANSWER IN REMARKS SECTION BELOW.

Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by waste to a degree which unreasonably affects such water for other beneficial uses? [ ] Yes [ ] No.

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriated water is claimed under Section 1010 of the Water Code, please show the amounts of reclaimed water used.

30. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? [X] Yes [ ] No.
If Yes, please describe: All wastewater is re-used on golf courses. 0 (zero) discharge permit.

31. What is present availability or current potential for using reclaimed water from a wastewater treatment plant or polluted water in place of the appropriated water to satisfy all or part of your water needs?

32. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

33. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS (Identify the item you are explaining. Additional pages may be attached.)

6. For this information please refer to Application 023416, Year 1990

7. Project still being developed

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and belief.

Dated: January 14, 1991 at Rancho Murieta (Location) California (State)

Sign here: Marion C Cravens
PERMITTEE (OR AGENT OR DESIGNEE)

PROGRESS REPORT BY PERMITTEE – P/ 12

DIVISION OF WATER RIGHTS
P.O. BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST. SACRAMENTO, CA
(916) 324-5625

PROGRESS REPORT BY PERMITTEE FOR 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: 023418

PERMIT: 016764

TELEPHONE NUMBER:
(916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE:		COUNTY:
UNNAMED STREAM		SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
RECREATION	// NOV 01 TO MAY 31	.0 AC
STOCKWATERING	// NOV 01 TO MAY 31	.0 AC

AMOUNT: 0.000 130.0 AC-FT COMPLETE USE BY: 12/01/1990

IMPORTANT! EVERY permit is issued subject to the conditions therein expressed. I have currently reviewed my permit: YES [X] NO [ ]. I am complying with the conditions under which my permit has been issued: YES [ ] NO [XX]. Identify any noncompliance by permit term number under "Remarks" on reverse side. This report is important in providing the record of use needed in establishing your water right. It should be filled out carefully and returned promptly to the above address.

THE PROJECT HAS BEEN ABANDONED AND I REQUEST REVOCATION OF THIS PERMIT: YES [ ] NO [X].

CONSTRUCTION WORK

1. Has construction work commenced? YES [ ] NO [X]. Is construction completed? YES[ ] NO [X].
2. If incomplete, describe briefly the work done, including cost: _____
3. If not completed, give estimated date of completion: 1992
4. What percent of construction work remains to be done? 100% Explain: _____

USE OF WATER

5. Has use of water commenced? YES [ ] NO [X]. Check appropriate box(es) below and explain how water was used.

(a) [ ] Irrigation _____ (Total acres irrigated) (Name of crops served and acreage of each)

(b) [ ] Stockwatering _____ (Number of animals)

(c) [ ] Industrial _____ (Nature of use)

(d) [ ] Domestic _____ (Number of persons, area of garden, lawn, etc.)

(e) [ ] Municipal _____ (Approximate population)

(f) [ ] Recreational _____ (Boating, fishing, water contact sports)

(g) [ ] Power generation _____ (Installed horsepower capacity)

(h) [ ] Other _____

6. Amount of water used each month under this permit in gallons or acre-feet. (If not known, check months water was used.)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual

7. Has use of water, both amount and season, been as great as you expect in any future year under this permit? YES [ ] NO [X]. If "No", explain in "Remarks".
8. Has location of the intake, place of use, or type of use been changed? YES [ ] NO [X]. Explain in "Remarks".
9. Did the source go dry? YES [X] NO [ ]. If so, during what months? July - August - September

STORAGE PROJECTS ONLY

10. Did your reservoir spill this year? YES [ ] NO[ ]. If not, how many feet below spillway vertically was the water level at maximum storage? _____ Have you emptied the reservoir? YES [ ] NO [ ]. If not, how many feet below spillway vertically was it drawn down at end of season? _____

PLEASE ANSWER ONLY THOSE QUESTIONS BELOW WHICH ARE APPLICABLE TO YOUR PROJECT.

MUNICIPAL, COMMUNITY, OR SUBDIVISION PROJECTS ONLY

CONSERVATION OF WATER

11. How many service connections to date? 1398 Total population served by the water system: 4,194

12. Estimated number of service connections under full use: 5968

13. Are the connections individually metered; YES [X] NO [ ].

14. Do you plan to meter the connections? YES [ ] NO [ ]. When?

15. Sewage generated by those to whom you deliver water is disposed of by: Septic tanks and leach lines [ ]; Seepage pits [ ]; Central treatment plan [X] operated by Rancho Murieta C.S.D.; Other [ ] (specify under "Remarks").

16. Is water service provided to an area or subdivision including a recreational reservoir: YES [X] NO[ ].

17. Name of area or subdivision so served: Rancho Murieta, California

18. State surface area at maximum water level in recreational reservoir(s) referred to in 16. Identify surface area(s) by name of dam or reservoir: Clementia Reservoir - 70 acres, Laguna Joaquin - 25 acres

19. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detection program [XX]; (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [ ]; (4) Other (describe in "Remarks") [ ].

20. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage more efficient irrigation systems (sprinkler, drip, etc.), where applicable [ ]; (2) Return flow systems on individual farms [ ]; (3) Return flow system areawide [ ]; (4) Water pricing to encourage reduced use [ ]; (5) Charges for drainage of irrigated lands [ ]; (6) Other (describe in "Remarks") [ ].

21. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations to control wasteful use [ ]; (2) Public education program on water conservation [X]; (3) Pricing to encourage reduced use [X]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks") [ ].

22. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water use for major crops by each farm [ ]; (3) Other (describe in "Remarks") [X]. Water usage is individually metered

23. Describe any water conservation efforts you may have started: Public education through television notices

24. If credit toward beneficial use of water under this permit for water not used due to a conservation effort is claimed under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.): a) irrigation of 2/3 of 150 acre golf course. b) collecting run-off water from golf courses & re-using it for irrigation

WATER QUALITY AND WASTEWATER RECLAMATION

25. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters: Top of hill reservoirs

26. After use, the water is (1) retained in reservoir [X]; (2) discharged into a stream or lake [ ]; (3) discharged into settling ponds [X]; (4) other [X]. Describe: Reclaimed for irrigation purposes

27. Does or will water being discharged contain waste materials? [ ] YES [X] NO.
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe:

28. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or which would impair the water for beneficial uses? [ ] Yes [X] No. Describe: 0 (zero) discharge permit

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR PERMIT, PLEASE ANSWER IN REMARKS SECTION BELOW.

29. Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by waste to a degree which unreasonably affects such water for other beneficial uses? [ ] Yes [ ] No.

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriated water is claimed under Section 1010 of the Water Code, please show the amounts of reclaimed water used.

30. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? [X] Yes [ ] No.
If Yes, please describe: All wastewater is re-used on golf courses. 0 (zero) discharge permit

31. What is present availability or current potential for using reclaimed water from a wastewater treatment plant or polluted water in place of the appropriated water to satisfy all or part of your water needs?

32. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

33. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS (Identify the item you are explaining. Additional pages may be attached.)

6. For this information please refer to Application 023416, Year 1990

7. Project still being developed

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and belief.

Dated: January 14, 1991 at Rancho Murieta (Location) California (State)

Sign here: Marion C Cresmen
PERMITTEE (OR AGENT OR DESIGNEE)

PROGRESS REPORT BY PERMITTEE – P[illegible]12

DIVISION OF WATER RIGHTS
P.O. BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST. SACRAMENTO, CA
(916) 324-5626

PROGRESS REPORT BY PERMITTEE FOR 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: 023419

PERMIT: 016765

TELEPHONE NUMBER:
(916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE:

UNNAMED STREAM

COUNTY:

SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
RECREATION	// NOV 01 TO MAY 31	.0 AC
STOCKWATERING	// NOV 01 TO MAY 31	.0 AC

AMOUNT: 0.000 1240.0 AC-FT COMPLETE USE BY: 12/01/1990

IMPORTANT! EVERY permit is issued subject to the conditions therein expressed. I have currently reviewed my permit: YES [X] NO [ ]. I am complying with the conditions under which my permit has been issued: YES [X] NO [ ]. Identify any noncompliance by permit term number under "Remarks" on reverse side. This report is important in providing the record of use needed in establishing your water right. It should be filled out carefully and returned promptly to the above address.

THE PROJECT HAS BEEN ABANDONED AND I REQUEST REVOCATION OF THIS PERMIT: YES [ ] NO [X].

CONSTRUCTION WORK

1. Has construction work commenced? YES [X] NO [ ]. Is construction completed? YES[X] NO [ ].
2. If incomplete, describe briefly the work done, including cost: _____
3. If not completed, give estimated date of completion: _____
4. What percent of construction work remains to be done? _____ Explain: _____

USE OF WATER

5. Has use of water commenced? YES [X] NO [ ]. Check appropriate box(es) below and explain how water was used.

(a) [ ] Irrigation _____ (Total acres irrigated) (Name of crops served and acreage of each)

(b) [ ] Stockwatering _____ (Number of animals)

(c) [ ] Industrial _____ (Nature of use)

(d) [ ] Domestic _____ (Number of persons, area of garden, lawn, etc.)

(e) [ ] Municipal _____ (Approximate population)

(f) [X] Recreational Boating, wildlife, fishing & Aesthetics (Boating, fishing, water contact sports)

(g) [ ] Power generation _____ (Installed horsepower capacity)

(h) [ ] Other _____

6. Amount of water used each month under this permit in gallons or acre-feet. (If not known, check months water was used.)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual
X	X	X	X	X						X	X	

7. Has use of water, both amount and season, been as great as you expect in any future year under this permit? YES [ ] NO [X]. If "No", explain in "Remarks".
8. Has location of the intake, place of use, or type of use been changed? YES [ ] NO [X]. Explain in "Remarks".
9. Did the source go dry? YES [X] NO [ ]. If so, during what months? July - August - September

STORAGE PROJECTS ONLY

10. Did your reservoir spill this year? YES [X] NO[ ]. If not, how many feet below spillway vertically was the water level at maximum storage? _____ Have you emptied the reservoir? YES [ ] NO [X]. If not, how many feet below spillway vertically was it drawn down at end of season? 7.6'

(REPORT CONTINUES ON REVERSE SIDE)

PLEASE ANSWER ONLY THOSE QUESTIONS BELOW WHICH ARE APPLICABLE TO YOUR PROJECT.

MUNICIPAL, COMMUNITY, OR SUBDIVISION PROJECTS ONLY

CONSERVATION OF WATER

11. How many service connections to date? 1398 Total population served by the water system: 4,194

12. Estimated number of service connections under full use: 5968

13. Are the connections individually metered; YES [X] NO [ ].

14. Do you plan to meter the connections? YES [ ] NO [ ]. When?

15. Sewage generated by those to whom you deliver water is disposed of by: Septic tanks and leach lines [ ]; Seepage pits [ ]; Central treatment plan [X] operated by Rancho Murieta C.S.D.; Other [ ] (specify under "Remarks").

16. Is water service provided to an area or subdivision including a recreational reservoir: YES [X] NO[ ].

17. Name of area or subdivision so served: Rancho Murieta, California

18. State surface area at maximum water level in recreational reservoir(s) referred to in 16. Identify surface area(s) by name of dam or reservoir: Clementia Reservoir - 70 acres, Laguna Juaquin - 25 acres

19. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detection program [X]; (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [ ]; (4) Other (describe in "Remarks") [ ].

20. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage more efficient irrigation systems (sprinkler, drip, etc.), where applicable [ ]; (2) Return flow systems on individual farms [ ]; (3) Return flow system areawide [ ]; (4) Water pricing to encourage reduced use [ ]; (5) Charges for drainage of irrigated lands [ ]; (6) Other (describe in "Remarks") [ ].

21. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations to control wasteful use [ ]; (2) Public education program on water conservation [X]; (3) Pricing to encourage reduced use [X]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks") [ ].

22. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water use for major crops by each farm [ ]; (3) Other (describe in "Remarks") [X]. Water usage is individually metered

23. Describe any water conservation efforts you may have started: Public education through television notices

24. If credit toward beneficial use of water under this permit for water not used due to a conservation effort is claimed under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.): a) irrigation of 2/3 of 150 acre golf course. b) collecting run-off water from golf courses & re-using it for irrigation.

WATER QUALITY AND WASTEWATER RECLAMATION

25. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters: Top of hill reservoirs

26. After use, the water is (1) retained in reservoir [X]; (2) discharged into a stream or lake [ ]; (3) discharged into settling ponds [X]; (4) other [X]. Describe: Reclaimed for irrigation purposes

27. Does or will water being discharged contain waste materials? [ ] YES [X] NO.
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe:

28. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or which would impair the water for beneficial uses? [ ] Yes [X] No. Describe: 0 (zero) discharge permit

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR PERMIT, PLEASE ANSWER IN REMARKS SECTION BELOW.

29. Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by waste to a degree which unreasonably affects such water for other beneficial uses? [ ] Yes [ ] No.

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriated water is claimed under Section 1010 of the Water Code, please show the amounts of reclaimed water used.

30. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? [X] Yes [ ] No.
If Yes, please describe: All wastewater is re-used on golf courses. 0 (zero) discharge permit

31. What is present availability or current potential for using reclaimed water from a wastewater treatment plant or polluted water in place of the appropriated water to satisfy all or part of your water needs?

32. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

33. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS (Identify the item you are explaining. Additional pages may be attached.)

6. For this information please refer to Application 023416, Year 1990

7. Project still being developed

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and belief.

Dated: January 14, 1991 at Rancho Murieta (Location) California (State)

Sign here: Marion C Craven
PERMITTEE (OR AGENT OR DESIGNEE)

DIVISION OF WATER RIGHTS
P O BOX 2000 SACRAMENTO, CA 95812-2000
901 P ST. SACRAMENTO, CA
(916) 324-5626

REPORT OF LICENSEE FOR 1988, 1989, 1990

OWNER OF RECORD:

RANCHO MURIETA COMMUNITY SERVICES DIST
P O BOX 1050
RANCHO MURIETA, CA 95683

APPLICATION: A016145
LICENSE: 006239
TELEPHONE NUMBER: (916) 985-3481

IF OWNER'S NAME/ADDRESS/PHONE NO. IS WRONG OR MISSING, PLEASE CORRECT.

SOURCE: UNNAMED SOURCE

COUNTY: SACRAMENTO

PURPOSE:	DIVERSION/STORAGE SEASON:	ACRES/HP:
RECREATION	// OCT 01 TO MAY 01	.0 AC
FISH & WILDLIFE	// OCT 01 TO MAY 01	.0 AC

AMOUNT: 0.000 20.0 AC-FT

THIS REPORT IS REQUIRED BY THE TERMS AND CONDITIONS OF YOUR LICENSE

IMPORTANT! EVERY license is subject to the conditions therein. I have currently reviewed my license: YES [X NO [ ]. I am complying with the conditions of my license: YES [X] NO [ ]. Identify any noncompliance by licens term number under "Remarks" on reverse side. This report is important in providing the record of use needed i maintaining your water right. It should be filled out carefully and returned promptly to the above-listed address.

THE PROJECT HAS BEEN ABANDONED, AND I REQUEST REVOCATION OF THE LICENSE: YES [ ] NO [X

COMPLETE FOR DIRECT DIVERSION PROJECTS

1. Have you used the full licensed amount of water each year? YES [X] NO [ ].
2. State the quantity of water used each month in gallons or acre-feet (if not known, check months water was used).

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Annual
1988	X	X	X	X	X					X	X	X	
1989	X	X	X	X	X					X	X	X	
1990	X	X	X	X	X					X	X	X	

COMPLETE FOR STORAGE PROJECTS	1988	1989	1990
3. Did your reservoir spill this year?	No	No	No
4. If not, how many feet below spillway vertically was the water level at maximum storage?	2'	2'	3'
5. Have you emptied the reservoir?	No	No	No
6. How many feet below spillway vertically was it drawn down at end of season?	5'	5'	5'
USE (COMPLETE FOR ALL PROJECTS)			
7. Acreage irrigated			
Crops grown			
8. Stockwatering – number of stock			
kind of stock			
9. Domestic – number of persons			
garden area, etc.			
10. Recreational – nature of use	Boating, fishing,	swimming, all 3 years	
11. Industrial – nature of use			
12. Municipal – approximate population			
13. Power generation – K.W.			
14. Other			

15. If no water was used in one or more years, briefly state the reason on the reverse side under "Remarks".
16. If either the location of the point of diversion or place of use has been changed and the permission of this Boar has not yet been obtained, please describe nature of change on the reverse side under "Remarks".

(REPORT CONTINUES ON REVERSE SID

NOTE: The following questions relate to the Board's continuing responsibility to insure that appropriated water is be developed, conserved, and utilized in the public interest as required by the Water Code. Please answer thos questions which are applicable to your project.

CONSERVATION OF WATER (WATER PURVEYORS)

17. What measures are you using or planning to reduce water losses in conveyance systems? (1) Seepage or leak detectio program [ ]; (2) Lining canals [ ]; (3) Phreatophyte and aquatic vegetation control [ ]; (4) Other (describe i "Remarks") [ ].

18. What measures are used to encourage consumers to conserve water in agricultural use? (1) Program to encourage mo efficient irrigation systems (sprinkler, drip, etc.) where applicable [ ]; (2) Return flow systems on individu farms [ ]; (3) Return flow system areawide [ ]; (4) Water pricing to encourage reduced use [ ]; (5) Charges f drainage of irrigated lands [ ]; (6) Other (describe in "Remarks") [ ].

19. What measures are used to encourage municipal and industrial consumers to conserve water? (1) Regulations t control wasteful use [ ]; (2) Public education program on water conservation [ ]; (3) Pricing to encourage reduce use [ ]; (4) Assistance to industry in design of recycle systems [ ]; (5) Other (describe in "Remarks" [ ].

20. What records are maintained on water use and conservation? (1) Loss rate from conveyance system [ ]; (2) Water u for major crops by each farm [ ]; (3) Other (describe in "Remarks") [ ].

CONSERVATION OF WATER (WATER USERS)

21. Describe any water conservation efforts you may have started: _____

22. If credit toward beneficial use of water under this license for water not used due to a conservation effort is claim under Water Code Section 1011, please show the amounts of water conserved (acre feet or mg.):
19__ _____ 19__ _____ 19__ _____

WATER QUALITY AND WASTEWATER RECLAMATION

23. Describe methods you are using to minimize erosion and to prevent the entry of silt into surface waters: _____

24. After use, the water is (1) retained in reservoir [ ]; (2) discharged into a stream or lake [ ]; (3) discharged in settling ponds [ ]; (4) Other [ ]. Describe: _____

25. Does or will water being discharged contain waste materials? YES [ ] NO [ ].
(1) Domestic [ ]; (2) Municipal [ ]; (3) Industrial [ ]; (4) Agricultural [ ]; (5) Other [ ]. Describe: _____

26. Does or will water being discharged contain any specific material which is deleterious to fish and wildlife or whi would impair the water for beneficial uses? YES [ ] NO [ ]. Describe: _____

TO THE EXTENT THE FOLLOWING QUESTIONS APPLY TO YOUR LICENSE, PLEASE ANSWER IN REMARK SECTION BELOW.

27. Are you now or have you been using reclaimed water from a wastewater treatment facility or water polluted by was to a degree which unreasonably affects such water for other beneficial uses? YES [ ] NO [ ].

If credit toward use under this water right through substitution of reclaimed or polluted water in lieu of appropriat water is claimed under Section 1010 of the Water Code, please show amounts of reduced diversion and amounts reclaimed water used.

28. Are you now or have you been reclaiming or reusing any of the water appropriated under this right? YES [ ] NO [If yes, please describe. _____

29. What is present availability or current potential for using reclaimed water from a wastewater treatment plant polluted water in place of the appropriated water to satisfy all or part of your water needs?

30. What is the current potential for reusing the appropriated water to satisfy part of your water needs?

31. If you produce reclaimed water, or polluted water, is there a potential for others to use it?

REMARKS: (Identify the item you are explaining. Additional pages may be attached.)

2. For this information please refer to Application 023416, Year 1990

I declare under penalty of perjury that the information in this report is true to the best of my knowledge and beli

Date: January 14, 1991 Sign Here: Marion C Crawford

LICENSEE (OR AGENT OR DESIGNEE)

APPENDIX F-2

SAMPLE OF RMCSD MONTHLY DIVERSION REPORT

RANCHO MURIETA COMMUNITY SERVICES DISTRICT
14670 CANTOVA WAY * P.O. BOX 1050 * RANCHO MURIETA, CA 95683
(916) 354-2428 * FAX NO. (916) 354-2082

MONTHLY DIVERSION REPORT

(From Diversion Book)

For _____, 19 _____

Prepared by: _____ Date: _____ Ck by: _____ Date: _____

==========

1. Yellow Bridge Pump To North Golf Course

Meter: Type Propeller Size 8" Units x 100 cu.ft. Manuf. Water Specialties

Previous _____ Present _____ Production _____

Comments: _____

==========

2. River Pump To Bass Lake - North Golf Course

Meter: Type Propeller Size 8" Units x 100 cu.ft. Manuf. Water Specialties

Previous _____ Present _____ Production _____

Comments: _____

==========

3. Reclaimed Wastewater To Bass Lake - North Golf Course

Meter: Type Propeller Size 14" Units x 1,000 Gal. Manuf. Sparling

Previous _____ Present _____ Production _____

Comments: _____

==========

4. Bass Lake Pump Station To North Golf Course Irrigation

Meter: Type Propeller Size 10" Units x 1,000 Gal. Manuf. McCrometer

Previous _____ Present _____ Production _____

Comments: _____

==========

5. River Pump To Lake 10 - South Golf Course

Meter: Type Propeller Size 8" Units x 1,000 Gal. Manuf. Water Specialties

Previous _____ Present _____ Production _____

Comments: _____

==========

6. Lake Clementia To Lake 10 - South Golf Course or CIA Ditch

Meter: Type Propeller Size 10" Units x 100 cu.ft. Manuf. Water Specialties

Previous _____ Present _____ Production _____

Comments: _____

==========

7. Lake 10 Pump Station To South Golf Course Irrigation

Meter: Type Propeller Size 8" Units x 1,000 Gal. Manuf. McCrometer

Previous _____ Present _____ Production _____

Comments: _____

8. Reclaimed W.W. To Lakes 16/17 - South Golf Course

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

9. Lake 16/17 Pump Station To South Golf Course Irrigation

Meter: Type Propeller Size 8" Units x 1,000 Gal. Manuf. McCrometer

Previous _____ Present _____ Production _____

Comments: _____

10. Laguna Joaquin Pump Station To RMA Common Area Irrigation

Meter: Type Propeller Size 8" Units x 1,000 Gal. Manuf. McCrometer

Previous _____ Present _____ Production _____

Comments: _____

11. Rock Crusher Pump To Op. Eng. Rock Crusher/Pond

Meter: Type Propeller Size 8" Units x 100 cu.ft. Manuf. Water Specialties

Previous _____ Present _____ Production _____

Comments: _____

12. Granlee's Pump Station To Lake Calero/Lake Chesbro

Meter: Type Electronic Size 33" Units x 10,000 Gal. Manuf. Sparling

Previous _____ Present _____ Production _____

Comments: _____

13. Granlee's Pump Station To Lake Clementia

Meter: Type Electronic Size 21" Units x 1,000 Gal. Manuf. Sparling

Previous _____ Present _____ Production _____

Comments: _____

14. Water Plant No. 1 Effluent

Meter: Type Propeller Size 14" Units x 1,000 Gal. Manuf. McCrometer

Previous _____ Present _____ Production _____

Comments: _____

15. Water Plant No. 2 Effluent

Meter: Type Electronic Size 8" Units x 1,000 Gal. Manuf. Foxb.

Previous _____ Present _____ Production _____

Comments: _____

16. Water Plant No. 3 Effluent

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

TOTAL WATER PLANTS EFFLUENT **Production** _____

Comments: _____

17. Main Lift North To Wastewater Plant Effluent

Meter: Type Electronic Size 12" Units x 1,000 Gal. Manuf. Sparling

Previous _____ Present _____ Production _____

Comments: _____

18. Main Lift South To Wastewater Plant Effluent

Meter: Type Electronic Size 6" Units x 1,000 Gal. Manuf. Sparling

Previous _____ Present _____ Production _____

Comments: _____

19. Main Lift East To Wastewater Plant Effluent

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

TOTAL WASTEWATER PLANT INFLUENT **Received** _____

Comments: _____

20. **Wastewater Plant No. 1 Production**

Meter: Type Electronic Size 8" Units x 1,000 Gal. Manuf. Sparling

Previous _____ Present _____ Production _____

Comments: _____

21. **Wastewater Plant No. 2 Production**

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

TOTAL WASTEWATER PLANTS PRODUCTION **Production** _____

Comments: _____

22. **Lake Calero Storage Levels**

Previous El. (ft.) Present El. (ft.) Storage (ac.ft.)

Comments: _____

23. **Calero Main Dam - Center Sub-Drain Pump Station**

Meter: Type Nutating Disk Size 2" Units0,000,000 cu.ft. Manuf. Rockwell

Previous _____ Present _____ Production _____

Comments: _____

24. **Calero Main Dam - North Sub-Drain Pump Station**

Meter: Type Nutating Disk Size 2" Units0,000,000 cu.ft. Manuf. Rockwell

Previous _____ Present _____ Production _____

Comments: _____

25. **Calero East Dam Sub-Drain Pump Station**

Meter: Type Nutating Disk Size 2" Units 0,000,000 Gal. Manuf. Precision

Previous _____ Present _____ Production _____

Comments: _____

26. **Lake Calero Siphon To Lake Chesbro**

Meter: Type Electronic Size 30" Units x 1,000 Gal. Manuf. Monitek

Previous _____ Present _____ Production _____

Comments: _____

==========

27. Lake Chesbro Storage Levels

Previous El. (ft.) Present El. (ft.) Storage (ac. ft.)

Comments: _____

==========

28. Chesbro Dam Sub-Drain Pump Station

Meter: Type Nutating Disk Size 2" Units 0,000,000 cu.ft. Manuf. Rockwell

Previous _____ Present _____ Production _____

Comments: _____

==========

29. Lake Clementia Storage Levels

Previous El. (ft.) Present El. (ft.) Storage (ac. ft.)

Comments: _____

==========

30. Clementia Dam Sub-Drain Pump Station

Meter: Type Nutating Disk Size 2" Units 0,000,000 cu.ft. Manuf. Rockwell

Previous _____ Present _____ Production _____

Comments: _____

==========

31. W.W.R.P. Reservoir No. 1 Storage Levels

Previous El. (ft.) Present El. (ft.) Storage (ac. ft.)

Comments: _____

==========

32. W.W.R.P. Reservoir No. 2 Storage Levels

Previous El. (ft.) Present El. (ft.) Storage (ac. ft.)

Comments: _____

==========

33. Michigan Bar Dam No. 1 Sub-Drain

Pumped: Yes _____ No _____ Volume _____

Comments: _____

==========

34. Granlee's CIA Ditch Water Level Recorder

Water Level Recorder: Type F Chart: F-1 Manuf. Leupold & Stevens

Monthly Flow (Cu. Ft) _____ From: _____ To: _____

Comments: _____

==========

R.M.C.S.D. **MONTHLY DIVERSION REPORT** Page 6 of 6 Mo. _____ Yr. _____

==========

35. Lone Pine CIA Ditch Water Level Recorder

Water Level Recorder: Type F Chart: F-1 Manuf. Leupold & Stevens

Monthly Flow (Cu. Ft) _____ From: _____ To: _____

Comments: _____

==========

36. _____

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

==========

37. _____

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

==========

38. _____

Meter: Type _____ Size _____ Units _____ Manuf. _____

Previous _____ Present _____ Production _____

Comments: _____

==========

APPENDIX F-3

SAMPLE OF CIA DITCH DIVERSION REPORT AT GRANLEES RECORDER

1990

GRANLEES RECORDER
DIVERSON FROM RIVER TO C.I.A. CANAL

(3 Pages KLL 1-11-91)

DATES FROM	DATES TO	TOTAL C.F.	TOTAL A.F.	TOTAL GAL.
1-2-90	1-9-90	62.640	1.4	468,547
1-9-90	1-16-90	0	0	0
1-16-90	1-19-90	0	0	0
NOTE:				
RECORDER 1-19-90	REMOVED FROM to 3-12-90			
→ 3-12-90	3-19-90	2,907,000	66.7	21,744,360
— NOTE:				
RECORDER YET, FLOW THE DAILY	NOT INSTALLED WAS CALC. BY CHECKS.			
RECORDER 3-19-90 to	REMOVED FROM 4-3-90			
4-3-90	4-10-90	2,707,200	62.1	20,249,856
4-10-90	4-17-90	2,376,000	54.5	17,772,480
4-17-90	4-24-90	795,600	18.3	5,951,088
4-24-90	5-1-90	2,547,360	58.5	19,054,253
5-1-90	5-8-90	2,287,800	52.5	17,112,744
5-8-90	5-15-90	0	0	0
5-15-90	5-22-90	3,640,680	83.6	27,232,286
5-22-90	5-29-90	3,363,120	77.2	25,156,138
5-29-90	6-5-90	0	0	0
6-5-90	6-12-90	879,480	20.2	6,578,510
6-12-90	6-19-90	5,617,440	128.9	42,018,451
6-19-90	6-26-90	5,414,760	124.3	40,502,405
6-26-90	7-3-90	5,385,600	123.6	40,284,288
7-3-90	7-10-90	4,635,360	106.4	34,672,493

1990

GRANLEES RECORDER
DIVERSON FROM RIVER TO C.I.A. CANAL

DATES		TOTAL C.F.	TOTAL A.F.	TOTAL GAL.
FROM	TO			
7-10-90	7-17-90	4,687,200	107.6	35,060,256
7-17-90	7-24-90	4,388,760	100.8	32,827,925
7-24-90	7-31-90	3,070,080	70.5	22,964,198
7-31-90	8-7-90	2,386,800	54.8	17,853,264
8-7-90	8-14-90	227,700	5.2	1,703,196
8-14-90	8-21-90	0	0	0
8-21-90	8-28-90	0	0	0
8-28-90	9-4-90	1,916,640	44.0	14,336,467
9-4-90	9-11-90	3,346,560	76.8	25,032,269
9-11-90	9-18-90	0	0	0
9-18-90	9-25-90	0	0	0
9-25-90	10-2-90	3,065,760	70.4	22,931,885
10-2-90	10-9-90	4,536,000	104.1	33,929,280
10-9-90	10-16-90	3,954,600	90.8	29,580,408
10-16-90	10-23-90	2,522,340	57.9	18,867,103
10-23-90	10-30-90	1,923,840	44.2	14,390,323
10-30-90	11-6-90	2,012,400	46.2	15,052,752
11-6-90	11-13-90	2,200,500	50.5	16,459,740
11-13-90	11-20-90	1,989,000	45.7	14,877,720
11-20-90	11-27-90	330,480	7.6	2,471,990
11-27-90	12-4-90	0	0	0
12-4-90	12-11-90	0	0	0
12-11-90	12-18-90	0	0	0

1990

GRANLEES RECORDER
DIVERSON FROM RIVER TO C.I.A. CANAL

DATES		TOTAL C.F.	TOTAL A.F.	TOTAL GAL.
FROM	TO			
12-18-90	12-25-90	0	0	0
12-25-90	1-1-91	0	0	0
TOTALS		85,178,700	1,955.4	637,136,676

APPENDIX F-4

SAMPLE OF CIA DITCH DIVERSION REPORT AT ARENA RECORDER

1990

ARENA RECORDER
DIVERSON FROM RIVER TO C.I.A. CANAL

(3 Pages AZX 1-11-91)

DATES		TOTAL C.F.	TOTAL A.F.	TOTAL GAL.
FROM	TO			
1-2-90	1-9-90	1,062,720	24.4	7,949,146
1-9-90	1-16-90	332.640	7.6	2,488,147
1-16-90	1-23-90	241,920	5.6	1,809,562
1-23-90	1-30-90	300,600	6.9	2,248,488
1-30-90	2-6-90	311,400	7.1	2,329,272
2-6-90	2-13-90	0	0	0
2-13-90	2-20-90	28,800	0.7	215,424
2-20-90	2-27-90	60,480	1.4	452,390
2-27-90	3-6-90	747,000	17.1	5,587,560
3-6-90	3-13-90	2,941,200	67.5	22,000,176
3-13-90	3-20-90	1,195,200	27.4	8,940,096
3-20-90	3-27-90	241,920	5.6	1,809,562
3-27-90	4-3-90	153,900	3.5	1,151,172
4-3-90	4-10-90	1,247,760	28.6	9,333,245
4-10-90	4-17-90	1,489,500	34.2	11,141,460
4-17-90	4-24-90	851,760	19.6	6,371,165
4-24-90	5-1-90	1,330,560	30.5	9,952,589
5-1-90	5-8-90	652,320	15.0	4,879,354
5-8-90	5-15-90	244,800	5.6	1,831,104
5-15-90	5-22-90	2,257,200	51.8	16,883,856
5-22-90	5-29-90	3,507,840	80.5	26,238,643
5-29-90	6-5-90	336,600	7.7	2,517,768
6-5-90	6-12-90	564,300	13.0	4,220,964

1990

ARENA RECORDER
DIVERSON FROM RIVER TO C.I.A. CANAL

DATES		TOTAL C.F.	TOTAL A.F.	TOTAL GAL.
FROM	TO			
6-12-90	6-19-90	2,281,500	52.4	17,065,620
6-19-90	6-26-90	3,182,400	73.1	23,804,352
6-26-90	7-3-90	2,786,400	64.0	20,842,272
7-3-90	7-10-90	2,308,500	53.0	17,267,580
7-10-90	7-17-90	2,555,280	58.7	19,113,494
7-17-90	7-24-90	2,476,800	56.9	18,526,464
7-24-90	7-31-90	1,643,400	37.7	12,292,632
7-31-90	8-7-90	2,615,760	60.0	19,565,885
8-7-90	8-14-90	1,603,800	36.8	11,996,424
8-14-90	8-21-90	1,503,000	34.5	11,242,440
8-21-90	8-28-90	1,432,440	32.9	10,714,651
8-28-90	9-4-90	1,941,840	44.6	14,524,963
9-4-90	9-11-90	3,150,000	72.3	23,562,000
9-11-90	9-18-90	1,841,400	42.3	13,773,672
9-18-90	9-25-90	291,600	6.7	2,181,168
9-25-90	10-2-90	496,800	11.4	3,716,064
10-2-90	10-9-90	841,680	19.3	6,295,766
10-9-90	10-16-90	1,088,640	25.0	8,143,027
10-16-90	10-23-90	1,512,000	34.7	11,309,760
10-23-90	10-30-90	1,512,000	34.7	11,309,760
10-30-90	11-6-90	1,393,920	32.0	10,426,522
11-6-90	11-13-90	1,298,880	29.8	9,715,622
11-13-90	11-20-90	1,330,560	30.5	9,952,589

1990

ARENA RECORDER
DIVERSON FROM RIVER TO C.I.A. CANAL

DATES		TOTAL C.F.	TOTAL A.F.	TOTAL GAL.
FROM	TO			
11-20-90	11-27-90	18,792	0.4	140,564
11-27-90	12-4-90	0	0	0
12-4-90	12-11-90	0	0	0
12-11-90	12-18-90	0	0	0
12-18-90	12-25-90	0	0	0
12-25-90	1-1-91	0	0	0
TOTALS		61,207,812	1,405.1	457,834,434