



# **Clementia**

# **Reservoir Raw Water**

# **Utilization Plan**

Rancho Murieta Community Services District  
15160 Jackson Road  
Rancho Murieta, CA 9683

January 2013

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## 1.0 Introduction

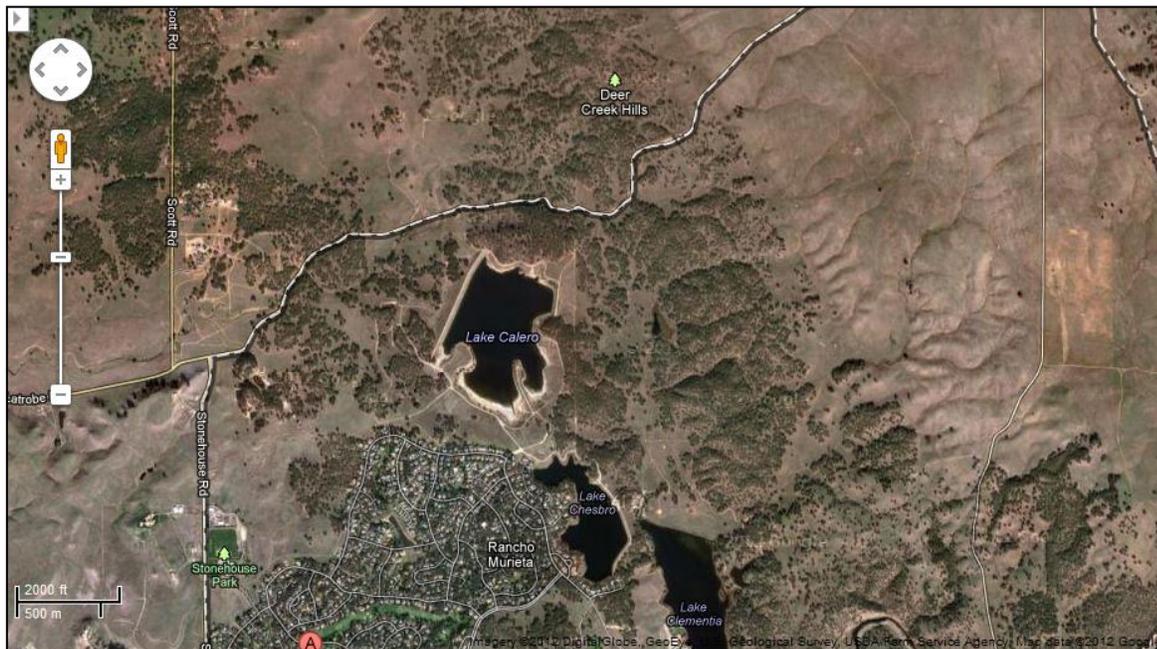
In times of drought it will be necessary to utilize the water stored in the Clementia reservoir to fill the Chesbro or Calero water supply reservoirs. The Clementia reservoir is capable of storing up to 1,000 acre-feet of raw water with stop logs installed at its dam's spillway or 907 acre-feet at the spillway. The determination to pump Clementia will be made in accordance with the District's need as determined by the District's staff and Board of Directors utilizing the Drought Tracker Model spreadsheet. Water stored at Clementia must be first pumped up through the existing raw water supply line to Calero before usage.

### 1.1 Water Rights

Water Rights related to the Clementia reservoir are License 13285 – Application 23419, and Application 23416. See the District's Water Rights binder for details on these water rights.

### 1.2 Clementia Water Shed

The Clementia Reservoir is fed from a two square mile water shed the lies to the north and east of it. No structures or development exists on this watershed to provide potential contamination associated with urban runoff. No historic mining operations of record have occurred in this area as well. Occasional cattle grazing occurs on the Deer Creek Hills preserve, operated by the Sacramento Valley Conservancy. Clementia's water quality is not as good as the water is in Chesbro or Calero, tending to be higher in turbidity and coliform counts, therefore utilization Clementia's water should be only when necessary.



*Aerial photo of watershed*

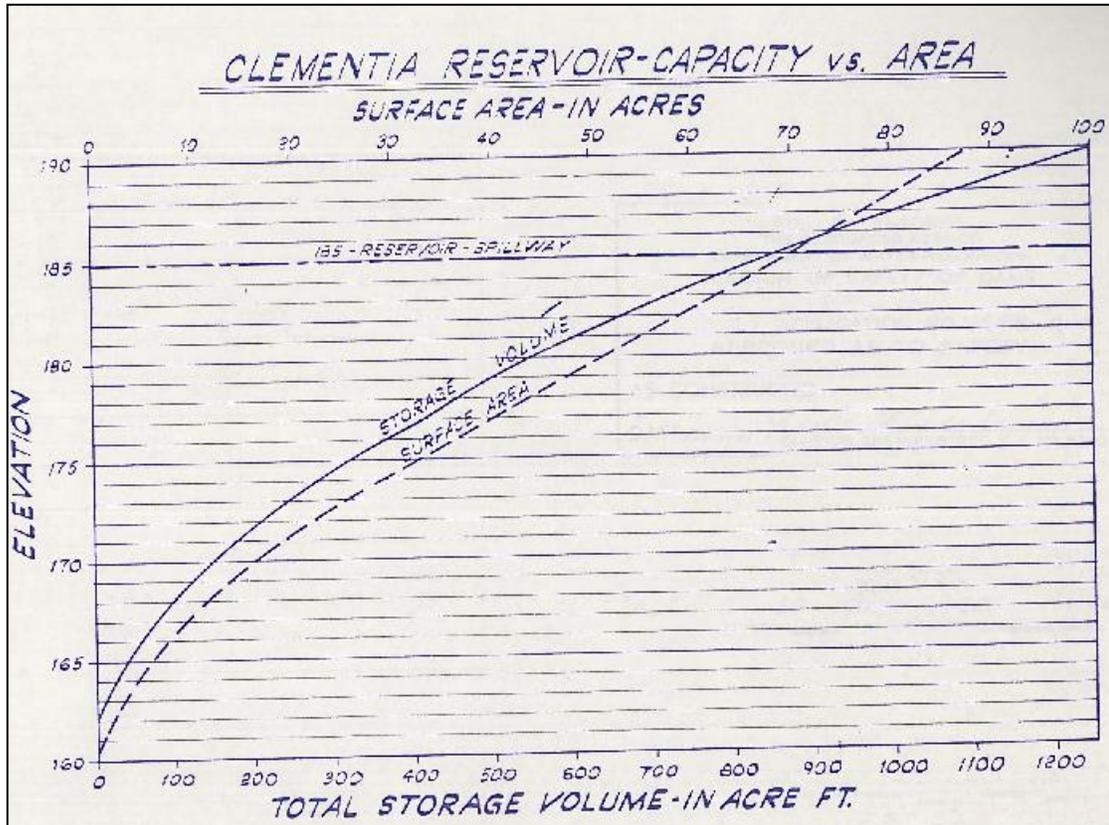
## 2.0 District Plans

Drawings related to this site are titled:

- 1) Clementia Dam – Raymond Vail & Associates (RVA) – 5/29/1973
- 2) Granlees – Calero Pipeline – Raymond Vail & Associates (RVA) – Feb.1980
- 3) Site Topography – Nolte & Associates – 10/1969

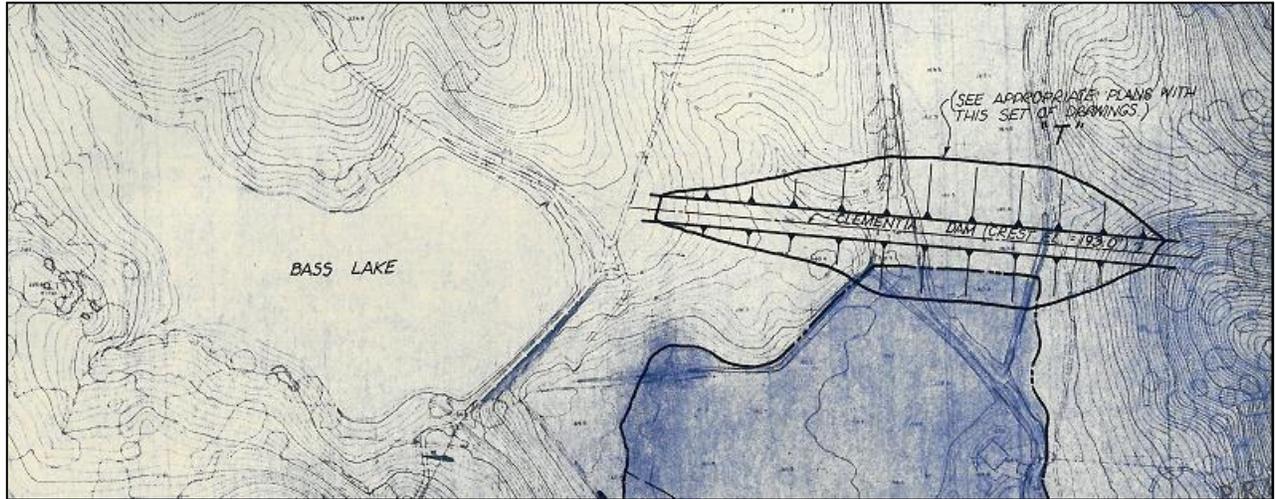
The following are relative scans of engineering drawings:

**Clementia Reservoir Capacity Curve**





## Elevation Map of Clementia



### 2.1 Point of Connection

The point of connection will be at the 33" raw water line inspection manhole as shown in the following photos.



The 25" inspection flange will have to be adapted to accept the discharge flow from Clementia. A 25" to 12" concentric reducer spool will have to be fabricated and installed to receive a flange, Bauer or camlock fitting.

### 2.3 Plan Overview



## ***2.4 Elevations***

Low point at Clementia	164.1'
Dam crest	193.0'
Dam Spillway	185.0'
Calero discharge valve	261.0'
High point on 33" line	273.0'
Suction Head	29'
Total Head elevation to Chesbro	109'
Total Friction Headloss	? The length of the line from the insertion manhole is 3,283 through a 33" concrete lined ductile iron pipe. There are an estimate of eight (8) 45's and two (2) 90s as well to be included in the friction determination.

## **3.0 Equipment and materials**

At the time this document was created, it is assumed that a pump and system capable of pumping of up to 3.5 mgd will be more than sufficient. Drought restrictions requiring up to 50% reduction in regular daily water use may be in effect.

Pump: dry prime suction lift, capable of 3.5 mgd, meeting current AQMD restrictions.

Suction line: 200 to 250' of screened, Bauer suction line.

Discharge line: 840' of firm or roll-flat discharge line, pressure rated to withstand discharge.

Connection Point: Flanged 25" to 12" reduction spool. Flanged 12" to 8" reduction spool. 8" flange to Bauer fitting or camlock fitting, depending on rental supplier's hoses.

### ***3.1 Procurement***

Contact Rain for Rent for Rent, Woodland office at (530)681-7149. They have the pumps and equipment to meet our needs.

### ***3.1 Staging***

The pump should be placed midway along the crest of the Clementia Dam with its intake run perpendicular into Clementia, approximately 200' out from the crest of the dam.

Gates and barricades will need to be installed around the temporary pump a pumping lines.

## **4.0 Easement**

Easement exists between the Rancho Murieta Association and the District, dated November 22, 1987, for water storage, operation and maintenance.