# APPENDIX F

## Hydrologic Modeling Technical Memoranda Nos. 5–7 (Stetson Engineers, 2006)

# Draft Technical Memorandum No. 5
# Hydrologic Impact Analysis of
# Possible Cachuma Operations Alternatives

# D R A F T
# TECHNICAL MEMORANDUM No. 5

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**TO:** Ernest Mona
State Water Resources Control Board

**DATE:** August 11, 2005
rev. October 2, 2006

cc: Diane Riddle (SWRCB)
Dana Heinrich (SWRCB)
David Fee (URS)

**FROM:** Ali Shahroody and Curtis Lawler

**JOB NO:** 1893

**RE:** Hydrologic Impact Analysis of Possible Cachuma Operations Alternatives

## 1. INTRODUCTION

Three variations of CalTrout's proposed Alternative 3A2 were identified for analysis by the State Water Resources Control Board's (SWRCB) staff. The additional analyses requested by the Board staff (12/20/04) were in connection with the Draft Environmental Impact Report (DEIR) on the "Consideration of Modifications to the U.S. Bureau of Reclamation's Water Right Permits 11308 and 11310 (Applications 11331 and 11332) To Protect Public Trust Values and Downstream Water Rights on the Santa Ynez River below Bradbury Dam (Cachuma Reservoir)" dated August 2003. The three possible alternatives (identified as Alternatives 5A, 5B and 5C) are essentially identical to the DEIR Alternatives 3A, 3B and 3C except that the new alternatives would use the CalTrout Alternative 3A2 operating criteria for releases from Cachuma Reservoir for fish during wet and above-normal water year types. Otherwise, during below-normal, dry, and critical year types, the releases would be the same as Alternatives 3A, 3B and 3C of the Draft EIR as set forth in the Biological Opinion (BO).

Hydrologic impact analyses were performed using the Santa Ynez River Hydrology Model (SYRHM) to determine impacts to water supply of Cachuma Project Member Units. Included in this memorandum are the results of hydrologic impact analyses (similar to those presented in the Draft EIR) for:

- Cachuma Reservoir Releases
- Cachuma Storage and Elevations
- Santa Ynez River Flows

- Groundwater Storage in the Above Narrows Alluvial Basin
- Water Rights Releases (WR 89-18)
- Member Unit's Supply and Demand
- State Water Project Deliveries

## 2. ANALYSIS OF NEW ALTERNATIVES

### 2A. BACKGROUND

The Draft EIR alternatives are briefly described below for reference, followed by a brief description of the three possible new Alternatives 5A, 5B, and 5C.

**Draft EIR Alternatives**

The alternatives included in the Draft EIR are described as follows:

**1**. Operations under the Order WR 89-18.

**2**. Current operations under Orders WR 89-18 and 94-5 and the Biological Opinion interim flow requirements (environmental baseline conditions and the no project alternative).

**3A**. Operations under the Biological Opinion assuming the U.S. Bureau of Reclamation (USBR) achieves a 3.0-foot surcharge, except that releases for fish rearing and passage will be provided with current 0.75-foot surcharge.

**3B**. Operations under the Biological Opinion assuming USBR achieves a 3.0-foot surcharge, except that releases for fish rearing and passage will be provided with a 1.8-foot surcharge.

**3C**. Operations under the Biological Opinion assuming USBR achieves a 3.0-foot surcharge.

**4A**. Operations under the Biological Opinion assuming USBR achieves a 3.0-foot surcharge and provision of State Water Project (SWP) water directly to the City of Lompoc in exchange for water available for ground-water recharge in the Below Narrows Account established by Order WR 73-37, as amended by Order WR 89-18.

**4B.** Operations under the Biological Opinion assuming USBR achieves a 3.0-foot surcharge and discharge of SWP water to the river near Lompoc in exchange for water available for groundwater recharge in the Below

Narrows Account established by Order WR 73-37, as amended by Order WR 89-18.

**Three New Alternatives:**

The three new alternatives identified for analysis are described as follows:

**5A**. Operations under the proposed CalTrout Alternative 3A2 during wet and above-normal water year types, with operations under the Biological Opinion during below-normal, dry and critical water year types, assuming USBR achieves a 3.0-foot surcharge, except that releases for fish rearing and passage will be provided with current 0.75-foot surcharge.

**5B**. Operations under the proposed CalTrout Alternative 3A2 during wet and above-normal water year types, with operations under the Biological Opinion during below-normal, dry and critical water year types, assuming USBR achieves a 3.0-foot surcharge, except that releases for fish rearing and passage will be provided with a 1.8-foot surcharge.

**5C**. Operations under the proposed CalTrout Alternative 3A2 during wet and above-normal water year types, with operations under the Biological Opinion during below-normal, dry and critical water year types, assuming USBR achieves a 3.0-foot surcharge.

## 2B. MODIFICATION OF FLASHBOARDS FOR 3-FOOT SURCHARGE

Historically, Cachuma Reservoir was filled to the lake elevation of 750 feet with the one-foot flashboards providing freeboard at the top of the four radial gates. In year 1998, USBR used 0.75 feet of the flashboards to increase the reservoir storage to a new elevation of 750.75 feet, leaving 0.25 feet of freeboard when the four radial gates at the spillway were closed. Similarly, USBR surcharged the reservoir by about 0.75 feet in years 2000 and 2001.

USBR replaced the one-foot flashboards with 4-foot flashboards in 2004. The new flash boards were constructed as extensions at the top of existing radial gates. The new flashboards will be used to surcharge 3.0 feet of storage above the historical lake elevation of 750 feet while providing one foot of freeboard.

In February 2004, County of Santa Barbara (County), Cachuma Conservation Release Board (CCRB), Improvement District No. 1 (ID No. 1), and Santa Barbara County Water Agency (SBCWA) entered into a Memorandum of Understanding (MOU) on the reservoir surcharge and recreational resources at the lake. The MOU allowed USBR to surcharge

Cachuma Reservoir by 1.8 feet after April 1, 2004. The County agreed to modify the boat launch ramp to raise it to 751.8 feet elevation prior to that date. USBR was allowed to surcharge the reservoir by 3.0 feet five years from the execution of the MOU or upon relocation of the County park's water treatment plant and associated facilities, whichever occurs first.

With the storm events of late December 2004 and early January 2005, Cachuma Reservoir spilled on January 10, 2005. The winter storm operations at Bradbury Dam provided an opportunity to observe the lake elevation near 753 feet in relation to the County park facilities. On January 14, 2005, a survey of the water treatment plant, intake facility and boat launch area was undertaken by Stetson Engineers while the lake elevation was held at 753.1 feet. Based on the results of January 14, 2005 survey, the parties agreed to revise the February 2004 MOU. According to the revised MOU (2005), CCRB and ID No. 1 agreed to construct a barrier (gabion) to protect water treatment plant from damage due to potential wave run-up. The revised MOU allowed USBR to raise the lake elevation to 752.47 starting in 2005. The revised MOU also provided that the County will complete the modification of the boat launch ramp to accommodate the lake elevation of 753.0 feet by February 14, 2009.

With the surcharge of Cachuma Reservoir to 2.47 feet (actual surcharge was 2.32 feet) in 2005, USBR and Cachuma Member Unites (CCRB and ID No. 1) have initiated releases to meet the long-term flow requirements under the Biological Opinion, which are set for the 3.0-foot surcharge. As a result of above events, the reservoir was not operated under the 1.8-foot surcharge.

The SWRCB staff has indicated that Alternative 2 is the baseline for the CEQA analysis and provides a conservative representation of existing conditions for the water supply impact analysis in this technical memorandum (7/22/05). The surcharge analyses for 1.8 feet (Alternative 3B) and 3.0 feet (Alternative 3C) would provide a range for the 2.47-foot surcharge for the purpose of impact evaluation. The SWRCB staff has requested to delete Alternatives 1 and 3A because those conditions do not exist any more (6/9/05). Similarly, the new Alternative 5A is deleted. The SWRCB staff has also requested (6/9/05) to delete Alternative 4A because the City of Lompoc is not agreeable to this arrangement which makes the alternative infeasible.

In light of the present surcharge, the SWRCB staff has requested to undertake a sensitivity analysis in relation to the 2.47-foot surcharge (8/2/05). The results of sensitivity analysis are presented in Section 4 of this technical memorandum.

## 2C. MODELING OF ALTERNATIVES

The SYRHM was utilized for the hydrologic analysis of the alternatives. Stetson's Technical Memoranda (Dec. 2000, revised Dec. 2001) provide an overview of the SYRHM and modeling results prepared for the SWRCB Draft EIR (August 2003) which included hydrologic analyses for the seven alternatives (Alternatives 1, 2, 3A, 3B, 3C, 4A and 4B). The model documentation is provided in the "Santa Ynez River Hydrology Model Manual" dated April 2004.

The proposed releases from Cachuma Reservoir for fish in the Draft EIR alternatives (Alternatives 3A, 3B, 3C, 4A and 4B) are based on the Biological Opinion by the National Marine Fisheries Service (NOAA Fisheries) (Sep. 2000) and the Lower Santa Ynez River Fish Management Plan (FMP) (Oct. 2000). According to the Biological Opinion, these long-term releases would begin when the reservoir is surcharged 3.0 feet as shown in Table 1.

**TABLE 1**
**PROPOSED PROJECT REARING TARGET FLOWS**

| Lake Storage Conditions (acre-feet) | Reservoir Spill? (AF = acre-feet) | Long Term Target Flow (cfs) | Long Term Target Site |
|---|---|---|---|
| > 120,000 | Spill is greater than 20,000 AF | 10[1] | Highway 154 |
| > 120,000 | Spill is greater than 20,000 AF | 1.5 (if steelhead present)[2] | Alisal Road |
| > 120,000 | No spill or spill is less than 20,000 AF | 5 | Highway 154 |
| > 120,000 | If spill greater than 20,000 AF in previous year | 1.5 (if steelhead present)[2] | Alisal Road |
| 30,000 - 120,000 | No spill | 2.5 | Highway 154 |
| < 30,000 | No spill | Periodic release; < or = 30 AF/month[3] | Stilling basin & long pool |

[1]*Only up to 10 cfs will be released from Cachuma Reservoir to meet target flows if reservoir is not spilling or WR 89-18 releases are not being made.*

[2]*Only if steelhead are present in the Alisal Reach.*

[3]*Reclamation must also consult with NMFS in this situation.*

In addition to the above long-term flow targets, the Biological Opinion requires a 2 cfs target flow in Hilton Creek as part of the terms and conditions to implement reasonable and prudent measure No. 2. Once the 3.0-foot surcharge is achieved, an additional amount of about 9,200 acre-feet of water will be stored in Cachuma Reservoir. According to the Biological Opinion, up to 3,200 acre-feet of the surcharge will be dedicated to the fish passage account and 500 acre-feet will be allocated to the adaptive management account. The remaining surcharge

water (5,500 acre-feet) will be dedicated for the mainstem rearing target flows. The water in these two accounts is allowed to carryover from one year to the next; however, the accounts are deemed to spill first and are then reset to their maximum amount of 3,700 acre-feet. Water in the passage account would be used to supplement naturally occurring storms by augmenting the descending limb of the storm hydrograph in the Santa Ynez River downstream of Bradbury Dam.

The variation in the possible Cachuma Operations Alternatives 5B and 5C from the Draft EIR Alternatives 3B and 3C operations for fish and downstream habitat is the incorporation of the release criteria under the proposed CalTrout Alternative 3A2 during wet and above-normal year types. The origin of the CalTrout Alternative 3A2 is from the Cachuma Contract Renewal EIS/EIR (1995). The 1995 EIS/EIR describes Alternative 3A2 as follows (pg. 6.1-11):

> **Alternative 3A2** involves operation of Lake Cachuma with releases to maintain the following minimum streamflows at selected locations downstream of the dam in order to improve steelhead habitat and general aquatic and riparian habitat conditions.
>
> - 48 cfs 15 February to 14 April, then
> - 20 cfs to 1 June, then
> - 25 cfs for one week, then
> - Ramp releases to 10 cfs by 30 June, then
> - Hold at 10 cfs to 1 October, then
> - 5 cfs for the rest of the year.
>
> Under this alternative, the above flows are to be maintained at both San Lucas and Alisal bridges. These flows would be created by both natural streamflow and releases from the dam.

Figure 1 shows the flow requirements under Alternative 3A2. Please note that the rearing flow targets under Alternative 3A2 for July to January are similar to the long-term targets of the BO/FMP in a spill year (spill of greater than 20,000 acre-feet) in which rearing flows would be 10 cfs after the spill and then 5 cfs starting in the next water year when the storage in Cachuma Reservoir remains above 120,000 acre-feet. However, Alternative 3A2 has these flow requirements (10 and 5 cfs) at both the Highway 154 Bridge (San Lucas Bridge) and the Alisal Bridge, while the long-term BO/FMP has these flow requirements at the Highway 154 Bridge with 1.5 cfs flows at Alisal Bridge in the spill year and year after spill. Other major differences between Alternative 3A2 releases and the long-term BO/FMP releases are that the BO/FMP fish flow targets at the Highway 154 Bridge drop to 2.5 cfs (no target requirements at the Alisal Bridge) when Cachuma storage recedes below 120,000 acre-feet. The long-term BO/FMP uses a

different strategy for passage flows for steelhead. The operating criteria under Alternative 3A2 use steady releases for passage regardless of the occurrence of storm events while the long-term BO/FMP plan for passage releases is based on augmenting the descending limb of a storm hydrograph in non-spill years and non-dry years.

The Alternative 3A2 operating criteria for fish water releases has been shown to have significant water supply impacts to the Project Member Units in both studies performed for the 1995 Cachuma Contract EIS/EIR and the 2003 SWRCB hearings. Variations of Alternative 3A2 have been suggested to reduce the water supply impacts to the Member Units. In the 2003 SWRCB hearings, CalTrout proposed a variation called "3A2 Adjusted for Dry Years."

## 2D. DESCRIPTION OF ALTERNATIVES 5B AND 5C

The new Alternatives 5B and 5C are variants of the CalTrout Alternative 3A2. These alternatives would operate under two different sets of hydrologic conditions for releases of water from Cachuma Reservoir for fish. In years when the runoff condition is determined to be wet or above normal, the criteria for fish water releases would be based on the proposed CalTrout Alternative 3A2. In other years when the runoff condition is determined to be below normal, dry, or critical, the criteria for fish water releases would be under the long-term BO/FMP. The attempt is to reduce the impacts to water supplies by switching to the long-term BO/FMP operating criteria in years of below-normal, dry, and critical runoff conditions. In years of wet and above-normal runoff conditions, the releases would be under the proposed CalTrout 3A2 operating criteria.

## 2E. SANTA YNEZ RIVER HYDROLOGIC YEAR CLASSIFICATION

The water year hydrologic classification for the Santa Ynez River is based on inflows to Cachuma Reservoir for the period 1918-1993 (76 years). Cachuma Reservoir inflows are from the SYRHM used in the analysis of the Draft EIR alternatives. The water year types are defined consistent with the SWRCB classification method and Cachuma Reservoir inflows are used as an index for water year classification. Figure 2 shows a frequency analysis of Cachuma Reservoir inflows, which includes operations of Jameson and Gibraltar and 50% cloud seeding. Water year classification was conducted to determine five water-year types based on roughly twenty-percentile grouping of ranked data. The developed five-water year types are shown in Table 2 below:

**TABLE 2**
**CACHUMA RESERVOIR INFLOW INDEX FOR WATER YEAR CLASSIFICATION**

| Water Year Classification | Index (Cachuma Reservoir Inflow) (AF) |
|---|---|
| Wet | Greater than 117,842 |
| Above Normal | Equal to or less than 117,842 and greater than 33,707 |
| Below Normal | Equal to or less than 33,707 and greater than 15,366 |
| Dry | Equal to or less than 15,366 and greater than 4,550 |
| Critical | Equal to or less than 4,550 |

## 2F. MODEL ANALYSIS OF ALTERNATIVES 5B AND 5C

For the purpose of modeling the new Alternatives 5B and 5C, the following reservoir operating criteria had to be programmed in the SYRHM. Once the cumulative annual inflow into Cachuma Reservoir exceeds 33,707 acre-feet, then the proposed CalTrout Alternative 3A2 flows shown in Figure 1 would become the operating criteria for fish water releases. Figure 3 shows the SYRHM operating criteria for fish water releases from Cachuma Reservoir for the possible new Alternatives 5B and 5C. Please note that at the beginning of a water year, it is not known what type of water year it would be, so Alternative 3A2 flows would be triggered when the cumulative Cachuma inflow (from October 1) of 33,307 acre-feet is reached. For example, based on the SWRCB classification the water year 1991 would be classified as an above-normal year, but until the March "Miracle" storm, it was not known whether that year would be above normal. The March storm also occurred at the end of a long drought period in the late 80s and early 90s. Table 3 shows the months in which the runoff conditions for wet and above-normal year types are met. The probability of reaching the wet or above-normal year classification is highest in the month of February. According to Table 3, about 70% of these year classes (wet or above-normal) would be known by February or earlier.

**TABLE 3**
**NUMBER OF OCCURRENCES OF WHEN INFLOW INTO CACHUMA RESERVOIR REACHES WATER YEAR WET/ABOVE-NORMAL CLASSIFICATION (>33,707 AF)**

| Month | Occurrence (1918-1993) | Frequency Percentage |
|---|---|---|
| Dec | 2 | 6% |
| Jan | 7 | 23% |
| Feb | 13 | 42% |
| Mar | 4 | 13% |
| Apr | 4 | 13% |
| May | 1 | 3% |
| **Total** | **31** | **100%** |

At all other times when the cumulative inflow (from October 1) to Cachuma Reservoir has not reached the wet or above-normal year classification, the operating criteria for fish water releases in Alternatives 5B and 5C would be the same as the long-term BO/FMP. These criteria are based on meeting the Highway 154 Bridge target flows of 5.0 cfs when storage is greater than 120,000 acre-feet and 2.5 cfs when storage is less than 120,000 acre-feet. Releases would still be limited to 30 acre-feet per month when storage is less than 30,000 acre-feet. Also there would still be the minimum target flow of 2 cfs in Hilton Creek, the 1.5 cfs target flow at Alisal Bridge in the year after a spill year of 20,000 acre-feet or greater, and the passage and adaptive management accounts of 3,700 acre-feet. The new alternatives (Alternatives 5B and 5C) have the same criteria for releases for fish, except that under Alternatives 5B and 5C, Cachuma Reservoir would be surcharged to 1.8 feet and 3.0 feet, respectively (similar to the Draft EIR Alternatives 3B and 3C). Aside from the above changes in the criteria for releases of fish water from Cachuma Reservoir, all other modeling assumptions and limitations in the SYRHM are the same for these new Alternatives 5B and 5C. The model analysis for Alternatives 5B and 5C is consistent with the previous hydrologic analyses performed for the August 2003 SWRCB Draft EIR.

## 3. SYRHM RESULTS

### 3A. CACHUMA RESERVOIR OPERATIONS

Key hydrologic characteristics of Cachuma Reservoir operations for the new Alternatives 5B and 5C as well as the Draft EIR Alternatives 2, 3B, 3C, and 4B are shown in Table 4 for the hydrologic period 1918-1993. Table 4 shows that on average over the 76-year period, the total amount of water discharged from Cachuma Reservoir, as spills and leakage, water right releases, and releases for fish, is relatively the same (except for Alt. 4B) or with less than 2% variation. For example, the total discharge from Bradbury Dam on average ranges from 43,867 to 44,167 acre-feet per year in Alternatives 3B and 3C and ranges from 44,092 to 44,388 acre-feet per year in Alternatives 5B and 5C. Table 4 indicates that more low flow releases (fish water) would result in less spills or high flow releases. The reduction in spills is relatively small compared with the overall magnitude of spills. Table 4 also shows that the number of spill years slightly decreases for the Alternatives 5B and 5C to 23 years (30% of years) compared with the DEIR Alternatives 3B and 3C of 25 spill years (33% of years). Significant spill years with spills greater than 20,000 acre-feet are the same at 15 years (20% of years).

Figures 4a through 4b show the frequency of releases and spills from Cachuma Reservoir. Figures 4a-b indicate that comparative differences between the Alternative 3B-C series and Alternative 5B-C series are the same. The frequency of releases and spills for Alternatives 5B and 5C are basically the same as the DEIR Alternatives 3B and 3C during low flow periods because they operate under the same criteria for releases for fish. As shown on Figures 4a-b, the frequency of releases for the 7-20 cfs range would increase under Alternatives 5B and 5C compared to the long-term BO/FMP alternatives (Alternatives 3B and 3C). This is attributed to the higher flow requirements under Alternatives 5B and 5C. Project releases for fish (not including conjunctive use of spills, leakage, and water rights) would be increased on average from about 2,700 acre-feet per year in the DEIR Alternatives 3B and 3C to about 4,000 acre-feet per year in the new Alternatives 5B and 5C (Table 4).

Table 5 displays key frequencies for spills and downstream releases from Cachuma Reservoir. Frequency of occurrence of releases and spills at or above 10 cfs increases by about 10% in Alternatives 5B and 5C compared to Alternatives 3B and 3C. The frequency of releases and spills of 5 cfs or above is similar between Alternatives 3B and 3C and Alternatives 5B and 5C, which would be expected since Alternatives 5B and 5C would switch to the operating

**TABLE 4**
**(DEIR TABLE 4-7, AUGUST 2003)**
**KEY HYDROLOGIC CHARACTERISTICS OF CACHUMA RESERVOIR OPERATIONS**
**BASED ON SYRHM, 1918-1993**

| Parameter | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and with 3' surcharge |
|---|---|---|---|---|---|---|
| Average spills/leakage (AFY) | 36,693 | 35,784 | 35,415 | 35,288 | 34,916 | 34,537 |
| Average 89-18 releases (AFY) | 6,023 | 5,682 | 5,737 | 3,940 | 5,473 | 5,529 |
| Average fish releases (AFY) | 1,362 | 2,701 | 2,715 | 2,801 | 3,999 | 4,026 |
| Total discharges from the dam (AFY) | 44,078 | 44,167 | 43,867 | 42,029 | 44,388 | 44,092 |
| No. of spill months | 82 | 79 | 78 | 74 | 75 | 74 |
| No. of spill water years | 26 | 25 | 25 | 24 | 23 | 23 |
| No. of spill water years > 20,000 acre-feet | 16 | 15 | 15 | 15 | 15 | 15 |

**TABLE 5**
**(DEIR TABLE 4-8, AUG. 2003)**
**FLOWS FROM CACHUMA LAKE DUE TO SPILLS AND DOWNSTREAM RELEASES**

| cfs | Percentage of Time that Spills and Downstream Releases are at or Above the Indicated Flow (simulation, 1918-1993) | | | | | |
|---|---|---|---|---|---|---|
| | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
| 2 | 99 | 99 | 99 | 99 | 99 | 99 |
| 5 | 42 | 67 | 68 | 68 | 68 | 69 |
| 10 | 30 | 36 | 36 | 34 | 45 | 45 |
| 20 | 26 | 27 | 27 | 24 | 31 | 31 |
| 50 | 13 | 12 | 12 | 8 | 12 | 12 |

criteria under Alternatives 3B and 3C in years when the runoff conditions are below normal, dry, or critical.

### 3B. LAKE STORAGE AND ELEVATION

In the modeling analysis, the minimum storage level (minimum pool) in Cachuma Reservoir for all alternatives is 12,000 acre-feet. The minimum storage condition would occur during the critical drought period (1947-1951). Due to several concerns, including recreation, aesthetics, inundation of Lake Cachuma facilities, Hilton Creek siphon and Tecolote Tunnel intake valves, the reservoir water surface elevation and duration of the 3.0' surcharge were analyzed. Tables 6 and 7 summarize median Lake Cachuma storage and elevation for each alternative. Tables 8, 9, and 10 characterize the frequency of surcharging and the duration of inundation.

### 3C. SANTA YNEZ RIVER FLOWS

As indicated above (Section 3A), since the comparative differences between the Alternatives 3B-C series and the Alternatives 5B-C series are the same (Figures 4a-c), the flow frequency graphs for the downstream locations show Alternative 3C and Alternative 5C for the purpose of comparison. Figures 5a through 5f show the frequency of flows at six different locations downstream of Cachuma Reservoir for various alternatives based on the SYRHM results. Table 11 shows the frequency of flows in tabular format. Alternative 5C, when compared to Alternative 3C, would result in an increase in frequency of flows between 5 and 50 cfs by about 0 to 12 percent of the time in the reach from Bradbury Dam to Alisal Bridge. The increase in the frequency of flows between 5 and 50 cfs would be about 0 to 8 percent for the reach below Alisal Bridge to the Lompoc Narrows. Monthly flows for Alternatives 5B and 5C at various locations in the Santa Ynez River for the period 1918-1993 are included in Appendix A.

**TABLE 6**
**(DEIR TABLE 4-2, AUG. 2003)**
**MEDIAN MONTHLY STORAGE IN CACHUMA LAKE (SIMULATION, 1918-1993)**
**(ACRE-FEET)**

| Month | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| November | 130,484 | 132,602 | 136,080 | 135,135 | 126,831 | 130,324 |
| February | 152,394 | 150,918 | 154,607 | 154,660 | 149,466 | 152,943 |
| April | 165,533 | 165,018 | 167,877 | 169,135 | 162,685 | 166,287 |
| July | 146,851 | 149,528 | 153,067 | 154,840 | 144,258 | 147,788 |

| | Difference with Alt 3B | Difference with Alt 3C |
|---|---|---|
| November | -5,772 | -5,756 |
| February | -1,452 | -1,664 |
| April | -2,334 | -1,591 |
| July | -5,270 | -5,279 |

**TABLE 7**
**(DEIR TABLE 4-3, AUG. 2003)**
**MEDIAN LAKE LEVEL (SIMULATION, 1918-1993)**
**(FEET)**

| Month | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| Annual | 733.7 | 733.3 | 734.6 | 735.2 | 732.5 | 733.7 |
| Feb | 737.2 | 736.7 | 738.1 | 738.1 | 736.1 | 737.4 |
| Aug | 732.2 | 733.6 | 735.0 | 735.2 | 731.4 | 733.0 |

| | Difference with Alt 3B | Difference with Alt 3C |
|---|---|---|
| Annual | -0.8 | -0.9 |
| Feb | -0.6 | -0.6 |
| Aug | -2.1 | -2.0 |

**TABLE 8**
**(DEIR TABLE 4-4, AUG. 2003)**
**FREQUENCY OF SURCHARGING**
**NO. OF YEARS SURCHARGING PREDICTED TO OCCUR IN 76-YEAR PERIOD (SIMULATION, 1918-1993)**

| Elevation (feet) | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| 750-750.9 | 26 | 26 | 27 | 27 | 26 | 27 |
| 751-751.9 | | 25 | 26 | 26 | 26 | 26 |
| 752-752.9 | | | 26 | 26 | | 26 |
| = or > 753 | | | 25 | 24 | | 23 |

**TABLE 9**
**(DEIR TABLE 4-5, AUG. 2003)**
**PERCENTAGE OF TIME THAT LAKE ELEVATIONS ARE MET OR EXCEEDED (SIMULATION, 1918-1993)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 750 | 11% | 14% | 16% | 16% | 13% | 16% |
| 751 | | 11% | 14% | 14% | 11% | 13% |
| 752 | | | 11% | 11% | | 11% |
| 753 | | | 9% | 8% | | 8% |

**TABLE 10**
**(DEIR TABLE 4-6, AUG. 2003)**
**DURATION OF INUNDATION**
**MEDIAN NUMBER OF CONSECUTIVE MONTHS AT OR ABOVE LAKE ELEVATION (SIMULATION 1918-1993)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 750 | 4 | 5 | 5 | 5 | 5 | 5 |
| 751 | | 4 | 5 | 5 | 4 | 5 |
| 752 | | | 4 | 4 | | 4 |
| 753 | | | 3 | 3 | | 3 |

**TABLE 11**
**(DEIR TABLE 4-9, AUG. 2003)**
**STREAMFLOWS DOWNSTREAM OF CACHUMA LAKE**

| Location | cfs | Percentage of Time that Flows are at or above the Indicated Flow (simulation, 1918-1993) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
| **Below Hilton Creek** | 2 | 99 | 99 | 99 | 99 | 99 | 99 |
| | 5 | 47 | 74 | 75 | 75 | 74 | 75 |
| | 10 | 33 | 39 | 39 | 37 | 48 | 48 |
| | 20 | 26 | 28 | 28 | 24 | 32 | 32 |
| | 50 | 13 | 12 | 12 | 8 | 12 | 12 |
| **Highway 154** | 2 | 82 | 99 | 99 | 99 | 99 | 99 |
| | 5 | 48 | 77 | 78 | 78 | 76 | 77 |
| | 10 | 34 | 39 | 39 | 37 | 49 | 49 |
| | 20 | 27 | 28 | 28 | 25 | 33 | 33 |
| | 50 | 12 | 12 | 12 | 8 | 11 | 11 |
| **Above Alisal Road** | 2 | 53 | 69 | 69 | 69 | 70 | 71 |
| | 5 | 43 | 49 | 49 | 47 | 56 | 56 |
| | 10 | 34 | 36 | 36 | 34 | 48 | 48 |
| | 20 | 23 | 25 | 25 | 18 | 28 | 28 |
| | 50 | 12 | 12 | 12 | 10 | 11 | 12 |
| **Near Buellton** | 2 | 51 | 57 | 57 | 56 | 61 | 61 |
| | 5 | 41 | 44 | 44 | 42 | 52 | 52 |
| | 10 | 32 | 34 | 34 | 29 | 38 | 38 |
| | 20 | 24 | 26 | 26 | 18 | 28 | 28 |
| | 50 | 12 | 12 | 12 | 12 | 12 | 12 |
| **Above Salsipuedes Creek** | 2 | 39 | 42 | 43 | 36 | 48 | 48 |
| | 5 | 35 | 37 | 37 | 29 | 40 | 40 |
| | 10 | 30 | 32 | 32 | 25 | 35 | 35 |
| | 20 | 25 | 26 | 26 | 19 | 29 | 29 |
| | 50 | 12 | 13 | 13 | 12 | 12 | 12 |
| **Narrows** | 2 | 45 | 48 | 48 | 40 | 52 | 53 |
| | 5 | 38 | 41 | 41 | 33 | 44 | 44 |
| | 10 | 33 | 35 | 35 | 27 | 38 | 38 |
| | 20 | 28 | 29 | 29 | 21 | 31 | 31 |
| | 50 | 14 | 14 | 14 | 14 | 14 | 14 |

### 3D. GROUNDWATER STORAGE IN THE ABOVE NARROWS ALLUVIAL BASIN

Percolation into the above Narrows alluvial basin would tend to increase when there are more releases during low flow periods. The effect on the Santa Ynez sub-basin (Bradbury to Alisal Bridge) is more pronounced. Table 12 shows the dewatered storage in the above Narrows alluvial basin for each of the alternatives.

### 3E. WATER RIGHTS RELEASES (WR 89-18)

Table 13 shows the impacts to water rights releases for the various alternatives as determined by the Santa Ynez River Hydrology Model. The average annual reductions in water rights releases under various alternatives are compared to Alternative 2 (CEQA baseline). The reduction in the downstream water rights releases under Alternatives 3B and 3C would be about 5-6 percent. The reduction would be about 8-9 percent under Alternatives 5B and 5C.

**TABLE 13**
**SIMULATED IMPACTS TO AVERAGE WATER RIGHTS RELEASES FOR WATER YEARS 1918-1993 (ACRE-FEET/YEAR)**

| Water Rights Releases | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| WR 89-18 Releases | 6,023 | 5,682 | 5,737 | 5,711 | 5,473 | 5,529 |
| Difference in WR 89-18 Releases from Alt 2 | --- | -341 | -286 | -312 | -550 | -494 |
| Percent Reduction in WR 89-18 Releases from Alt 2 | --- | -5.7% | -4.7% | -5.2% | -9.1% | -8.2% |

**TABLE 12**
**(DEIR TABLE 4-27, AUG. 2003)**
**MONTHLY DEWATERED STORAGE IN THE ABOVE NARROWS ALLUVIAL GROUNDWATER BASIN**
**(ACRE-FEET)**

| | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| ***Entire Basin*** | | | | | | |
| Mean | 10,769 | 10,310 | 10,281 | 10,240 | 10,146 | 10,131 |
| Median | 10,517 | 10,099 | 10,081 | 10,031 | 9,852 | 9,840 |
| % Difference Relative to Alt 2 | --- | -4% | -4% | -5% | -6% | -6% |
| Minimum | 2,324 | 2,315 | 2,315 | 2,311 | 2,315 | 2,315 |
| ***Santa Ynez Subarea*** | | | | | | |
| Mean | 1,926 | 1,722 | 1,704 | 1,647 | 1,684 | 1,683 |
| Median | 1,769 | 1,606 | 1,584 | 1,510 | 1,553 | 1,547 |
| % Difference Relative to Alt 2 | --- | -9% | -10% | -15% | -12% | -13% |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 |
| ***Buellton Subarea*** | | | | | | |
| Mean | 5,634 | 5,482 | 5,471 | 5,438 | 5,435 | 5,432 |
| Median | 5,570 | 5,449 | 5,442 | 5,382 | 5,363 | 5,360 |
| % Difference Relative to Alt 2 | --- | -2% | -2% | -3% | -4% | -4% |
| Minimum | 2,166 | 2,167 | 2,153 | 2,144 | 2,168 | 2,169 |
| ***Santa Rita Subarea*** | | | | | | |
| Mean | 3,244 | 3,105 | 3,105 | 3,155 | 3,027 | 3,016 |
| Median | 3,080 | 2,981 | 2,978 | 3,105 | 2,870 | 2,867 |
| % Difference Relative to Alt 2 | --- | -3% | -3% | 1% | -7% | -7% |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 |

## 3F. CACHUMA PROJECT DELIVERIES

The results of SYRHM analysis indicate that Alternatives 5B and 5C would produce greater shortages in Cachuma Project water supply during drought periods in comparison with Alternative 2, CEQA baseline (Table 14). The results of modeling analysis also indicate that the new Alternatives 5B and 5C would produce greater shortages in the Cachuma Project water supply compared to DEIR Alternatives 3B and 3C, respectively. Impacts on Project deliveries to Member Units are shown in Table 14 for the various alternatives. Table 14 shows that in the critical drought year (1951) shortages in Cachuma Project water supply would be 9,810 acre-feet for Alternative 2. The shortages in the critical drought year would increase to 11,260 acre-feet and 9,890 acre-feet under the DEIR Alternatives 3B and 3C, respectively. Table 14 also indicates that shortages in the critical drought year would be further increased under the new Alternatives 5B and 5C to 12,510 acre-feet and 11,410 acre-feet, respectively.

During the last three years of the critical drought period (1949-1951), the cumulative shortages under the new Alternatives 5B and 5C would be increased to 26,660 acre-feet and 23,810 acre-feet, respectively, compared to the DEIR Alternatives 3B and 3C with the three-year cumulative shortages of 23,370 acre-feet, and 19,920 acre-feet, respectively. Table 14 also indicates that the frequency of years with shortages greater than 10% increases under Alternatives 5B and 5C.

Simulated monthly Cachuma Project deliveries for Alternative 5B and 5C for the period 1918-1993 are included in Appendix B. Simulated monthly Cachuma Project shortages for Alternative 5B and 5C for the period 1918-1993 are included in Appendix C.

**TABLE 14**
**(DEIR TABLE 4-16, AUG. 2003)**
**IMPACTS ON CACHUMA PROJECT DELIVERIES TO MEMBER UNITS**

| Water Supply Parameter | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| ***Average Annual Deliveries and Years of Shortages (1918-1993)*** | | | | | | |
| Average annual delivery (afy) | 25,115 | 24,986 | 25,122 | 25,169 | 24,855 | 24,988 |
| Difference compared to Alt 2 (afy) | --- | -129 | 7 | 54 | -260 | -127 |
| Number of years with 10% or more shortage | 6 | 7 | 6 | 6 | 8 | 7 |
| Number of years with 10% or more shortage – difference from Alt 2 | --- | 1 | 0 | 0 | 2 | 1 |
| ***Critical Drought Year (based on 1951 drought year)*** | | | | | | |
| Shortage (af) | 9,808 | 11,262 | 9,895 | 9,351 | 12,506 | 11,406 |
| % Shortage in Cachuma deliveries | 38% | 44% | 38% | 36% | 49% | 44% |
| % Shortage in Cachuma deliveries – difference from Alternative 2 | --- | 6% | 0% | -2% | 10% | 6% |
| ***Critical 3-Year Drought Period (based on 1949-51 drought)*** | | | | | | |
| Shortage (af) | 20,134 | 23,373 | 19,925 | 17,467 | 26,659 | 23,806 |
| % Shortage in Cachuma deliveries | 26% | 30% | 26% | 23% | 35% | 31% |
| % Shortage in Cachuma deliveries – difference from Alternative 2 | --- | 4% | 0% | -3% | 8% | 5% |

*Based on Project draft of 25,714 acre-feet per year.*
*Cumulative shortage in critical drought period based on 36 consecutive months starting in May 1949.*

## 3G. MEMBER UNITS WATER SUPPLY IN CRITICAL DROUGHT

Table 15 shows the Member Units' supply and demand in the critical drought year (1951) which include Member Units' demands and supplies from sources other than the Cachuma Project. The source of data for demand and water supplies other than the Cachuma Project is from the water supply managers. Tables 16, 17, and 18a-e are the updates to the Draft EIR Tables 4-18, 4-19, 4-20, 4-21, 4-22, 4-23, and 4-24 which provide the source data for Table 15 (EIR Table 4-17). The Member Units' water supply from the Cachuma Project in the critical

drought year (1951) as shown in Tables 18a-e is based on Alternative 5B, because the water supply impacts were greatest under this alternative. The total supply from other sources for the Member Units includes groundwater pumping which would not be sustainable on a long term basis, the maximum capacity of the desalinization plant, and 50 percent delivery of State Project water (Table A and CCWA drought buffer). Table 15 shows that Alternatives 5B and 5C will increase the water supply impacts in the critical drought year (1951) and the shortages already associated with the steelhead fish water releases under the Biological Opinion.

Tables 19a-b (EIR Table 4-25) show the Member Units' supply and demand during the critical three-year drought period (1949-1951) for DEIR Alternatives 3B and 3C and the new Alternatives 5B and 5C. Local groundwater is based on the critical drought year supply with a 0.8 reduction factor, except for ID No. 1 river wells which are based on simulated water levels (dewatered storage). State Water Project import supply is based on 50 percent delivery (Table A and CCWA drought buffers). Based on data provided by the water supply managers, the desalinization plant for the City of Santa Barbara would operate only in the critical drought year of 1951 in the three-year drought period (1949-1951). The comparisons in Tables 19a-b indicate that the additional releases for fish under Alternatives 5B and 5C would further increase water shortages for both current demand and planned growth future water demands.

**TABLE 15**
**(DEIR TABLE 4-17, AUG. 2003)**
**MEMBER UNITS' SUPPLY AND DEMAND IN CRITICAL DROUGHT YEAR (1951)**
**(ACRE-FEET)**

| Parameter | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3C: BO with 3' surcharge | Alt 4B: BO with SWP delivery to Lompoc | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| Cachuma Project Yield | 15,906 | 14,452 | 15,819 | 16,363 | 13,208 | 14,308 |
| Total Supply From Other Sources (includes CCWA drought buffer) | 31,312 | 31,312 | 31,312 | 31,312 | 31,312 | 31,312 |
| Total Supply | 47,218 | 45,764 | 47,131 | 47,675 | 44,520 | 45,620 |
| Year 2000 demand | 46,007 | 46,007 | 46,007 | 46,007 | 46,007 | 46,007 |
| Surplus or shortage | 1,211 | -243 | 1,124 | 1,668 | -1,487 | -387 |
| Year 2020 demand | 56,287 | 56,287 | 56,287 | 56,287 | 56,287 | 56,287 |
| Surplus or shortage | -9,069 | -10,523 | -9,156 | -8,612 | -11,767 | -10,667 |

**TABLE 16**
**(DEIR TABLE 4-18, AUG. 2003)**
**MEMBER UNITS' SUPPLY FROM SOURCES OTHER THAN CACHUMA PROJECT**
**IN CRITICAL DROUGHT YEAR (1951)**
**(ACRE-FEET)**

| | |
|---|---|
| **CVWD** | |
| 1. Local groundwater supply (Table 18a) | 4,650 |
| **MWD** | |
| 2. Jameson Lake and Alder Creek diversions (SYRHM simulation, DEIR Appendix E) | 312 |
| 3. Doulton Tunnel infiltration and Fox Creek diversion (SYRHM simulation, DEIR Appendix E) | 130 |
| 4. Local groundwater supply (Table 18b) | 400 |
| 5. MWD subtotal | 842 |
| **City of Santa Barbara** | |
| 6. Gibraltar Reservoir (SYRHM simulation, DEIR Appendix E) | 0 |
| 7. Mission Tunnel infiltration and Devil Canyon diversions (SYRHM simulation, DEIR Appendix E) | 500 |
| 8. Jameson Reservoir (Table 18c) | 300 |
| 9. Local groundwater supply (Table 18c) | 4,150 |
| 10. Reclaimed water (Table 18c) | 900 |
| 11. Desalinization (Table 18c) | 3,125 |
| 12. City of SB subtotal | 8,975 |
| **GWD** | |
| 13. Local groundwater supply (Table 18d) | 2,350 |
| 14. Reclaimed water (Table 18d) | 1,500 |
| 15. GWD (subtotal) | 3,850 |
| **SYRWCD, ID No. 1** | |
| 16. Local groundwater supply (Table 18e) | 2,320 |
| 17. Santa Ynez River Diversion (Table 18e) | 1,450 |
| 18. SYRWCD, ID No. 1 subtotal | 3,770 |
| 19. State Water Project delivery (assume 50% of Table A + buffer) | 9,225[1)] |
| **20. Total Supply for sources other than Cachuma Project** | **31,312** |

1) Includes SWP delivery to Solvang under a water supply contract with ID No. 1.

**TABLE 17**
**(DEIR TABLE 4-19, AUG. 2003)**
**MEMBER UNITS' DEMAND IN ACRE-FEET**

| Member Unit | Year 2002 | Year 2020 |
|---|---|---|
| Carpinteria Valley Water District | 4,300[1] | 5,833 |
| Montecito Water District | 6,073[2] | 6,835 |
| City of Santa Barbara | 14,342 | 18,200[3] |
| Goleta Water District | 14,000 | 17,300 |
| Santa Ynez River Water Conservation District, ID No. 1 | 7,292[4] | 8,119[4] |
| **Total** | **46,007** | **56,287** |

[1]*Represents year 2001*

[2]*Represents year 2000*

[3]*Represents year 2009*

[4]*Includes 1,500 AFY of SWP allocated to City of Solvang under a water supply contract.*

**TABLE 18A**
**(DEIR TABLE 4-10, AUG. 2003)**
**WATER SUPPLY AND DEMAND - CARPINTERIA VALLEY WATER DISTRICT [1)]**

| | Normal Year | Critical Drought Year [2)] | Comment |
|---|---|---|---|
| | (acre-feet per year) | | |
| ***Supplies*** | | | |
| Cachuma Project | 2,813 | 1,445 | Fixed percentage of Cachuma Project yield. Cachuma represents 38% of total supply |
| State Water Project | 1,650 | 1,100 | SWP Table A amount is 2,000 AFY plus 200 AFY of CCWA drought buffer; CVWD assumes 75% average annual delivery and 50% during droughts |
| Local groundwater | 3,000 | 4,650 | Share of local groundwater basin |
| **Total** | **7,463** | **7,195** | |
| ***Demand*** | | | |
| Current (2001) | 4,300 | | Approx. 50% for agricultural use |
| Planned Future (2020) | 5,833 | 6,819 | Because of agricultural needs, assumes higher demand in drought |

*1) Sources: CVWD (2001 and C. Hamilton, Gen. Manager, 2003)*

*2) Based on simulation of Alternative 5B from the Santa Ynez River Hydrology Model (SYRHM).*

**TABLE 18B**
**(DEIR TABLE 4-11, AUG. 2003)**
**WATER SUPPLY AND DEMAND – MONTECITO WATER DISTRICT [1)]**

| | Normal Year | Critical Drought Year [2)] | Comment |
|---|---|---|---|
| | (acre-feet per year) | | |
| ***Supplies*** | | | |
| Cachuma Project | 2,651 | 1,362 | Fixed percentage of Cachuma Project yield. Cachuma represents 35% of total supply |
| Jameson Lake, Fox and Alder creeks | 2,000 | 312 | Diversions on the upper Santa Ynez River. Drought year values are from SYRHM. |
| Doulton Tunnel | 375 | 130 | Drought year values are from SYRHM. |
| State Water Project | 2,280 | 1650 | SWP Table A amount is 3,000 AFY plus 300 AFY of CCWA drought buffer; MWD assumes 76% average annual delivery of Table A amount |
| Local groundwater | 200 | 400 | District's portion of Montecito Groundwater Basin's safe yield of 1,650 AFY. Maximum pumping is 400 AFY. |
| **Total** | **7,506** | **3,854** | |
| ***Demand*** | | | |
| Current (2000) | 6,073 | | 12% is losses and transfers to City of S.B (300 AF). |
| Planned Future (2020) | 6,835 | | Slight increase in all uses, allows for reserve |

*1) Sources: MWD (2001 and T. Mosby, Operations Manager, 2003).*

*2) Based on simulation of Alternative 5B from the Santa Ynez River Hydrology Model (SYRHM).*

**TABLE 18C**
**(DEIR TABLE 4-12, AUG. 2003)**
**WATER SUPPLY AND DEMAND – CITY OF SANTA BARBARA [1)]**

| | Normal | Critical Drought Year [2)] | Comment |
|---|---|---|---|
| | (acre-feet per year) | | |
| ***Supplies*** | | | |
| Cachuma Project | 8,277 | 4,251 | Fixed percentage of Cachuma Project yield. Cachuma represents 45% of total supply |
| Gibraltar Reservoir and Devils Canyon | 4,310 | 0 | |
| Mission Tunnel | 1,109 | 500 | Infiltration; tunnel from Gibraltar Reservoir |
| Juncal Reservoir | 300 | 300 | Water from Montecito Water District per prior agreement |
| State Water Project | 2,200 | 1,650 | SWP Table A amount is 3,000 AFY plus 300 AFY of CCWA drought buffer. The City assumes 75% average annual delivery of Table A amount. |
| Local groundwater | 1,104 | 4,150 | City's portion of the Santa Barbara Groundwater Basin's safe yield of about 1,850 AFY; used for seasonal peaking and to replace surface water shortages due to drought |
| Reclaimed water | 900 | 900 | |
| Desalinization | 0 | 3,125 | For use only during emergency. Currently in storage mode. Max. capacity = 3,125 AFY |
| **Total** | **18,200** | **14,876** | |
| ***Demand*** | | | |
| Current (2002) | 14,342 | | |
| Planned Future (2009 per LTWSP) | 18,200 | | |

*1) Source: City of Santa Barbara (2000; 1994 adopted Long Term Water Supply Program; and S. Mack, City Water Supply Manager, 2003)*

*2) Based on simulation of Alternative 5B from the Santa Ynez River Hydrology Model (SYRHM).*

**TABLE 18D**
**(DEIR TABLE 4-13, AUG. 2003)**
**WATER SUPPLY AND DEMAND – GOLETA WATER DISTRICT [1)]**

| | Normal | Critical Drought Year [2)] | Comment |
|---|---|---|---|
| | (acre-feet per year) | | |
| ***Supplies*** | | | |
| Cachuma Project | 9,321 | 4,788 | Fixed percentage of Cachuma Project yield; Cachuma represents about 53% of total supply |
| State Water Project | 4,500 | 3,725 | SWP Table A amount is 7,000 AFY plus 450 AFY of CCWA drought buffer. The District assumes 60 percent average annual delivery of Table A amount and drought buffer and 50 percent during drought. The District's right to CCWA facility capacity is 4,500 AFY. |
| Local groundwater | 2,350 | 2,350 | District's portion of the Goleta Basin. Safe yield estimated at 3,410 AFY. |
| Reclaimed water project | 1,500 | 1,500 | Approximate capacity of built out project. Current production is approximately 1,000 AFY. |
| **Total** | **17,671** | **12,363** | |
| ***Demand*** | | | |
| Current (2000) | 14,000 | | Includes approximately 1,000 AFY of recycled water |
| Planned Future (2020) | 17,300 | | Includes approximately 1,500 AFY of recycled water |

*1) Sources: GWD (2001 and K Walsh, GWD General Mgr, 2003)*

*2) Based on simulation of Alternative 5B from the Santa Ynez River Hydrology Model (SYRHM).*

**TABLE 18E**
**(DEIR TABLE 4-14, AUG. 2003)**
**WATER SUPPLY AND DEMAND – SANTA YNEZ RIVER WATER CONSERVATION DISTRICT, ID NO. 1 [1)]**

| | Normal | Critical Drought Year [2)] | Comment |
|---|---|---|---|
| | (acre-feet per year) | | |
| ***Supplies*** | | | |
| Cachuma Project | 2,651 | 1,362 | Fixed percentage of Cachuma Project. Cachuma Project represents approximately 44% of total supply. |
| Santa Ynez Uplands Groundwater Basin | 1,430 | 2,320 | Production for normal year is based on an average of the last five years (1998-2002) which reflects Well Nos. 3, 4, and 5A remaining out of production (destroyed or water quality problems) and Well No. 7 producing at a reduced rate due to lower water levels. Drought supply is based upon average annual production during the 1987-1991 drought adjusted for Well Nos. 3, 4, and 5A and reduced production from Well No. 7. |
| Gallery Well | 0 | 0 | Currently inactive due to proximity of the river. Maximum permitted diversion is 515 AFY |
| Santa Ynez River Underflow | 1,480 | 1,450 | This is estimate of future maximum production from two permitted well fields |
| State Water Project | 1,650 | 1,100 | SWP Table A amount is 2,000 AFY plus 200 AFY of CCWA drought buffer. District's Table A amount is 500 AFY plus 200 AFY of drought buffer. The remaining 1500 AFY is allocated to the City of Solvang under a water supply contract. District assumes 75% delivery of its 2,200 AFY allocation in normal year and 50% during drought. |
| **Total** | **7,211** | **6,232** | |
| ***Demand*** | | | |
| Current (2002) | 7,292 | | Includes 1,500 AFY of SWP under contract to City of Solvang |
| Planned Future (2020) | 8,119 | | Includes 1,500 AFY of SWP under contract to City of Solvang |

*1) Source: ID No. 1 (Chris Dahlstrom, ID No. 1 General Mgr, 2003).*

2) *Based on simulation of Alternative 5B from the Santa Ynez River Hydrology Model (SYRHM).*

**TABLE 19A**
**(DEIR TABLE 4-25, AUG. 2003)**
**MEMBER UNITS' SUPPLY AND DEMAND DURING CRITICAL THREE-YEAR DROUGHT PERIOD (1949-1951)**
**DRAFT EIR ALTERNATIVE 3B AND NEW ALTERNATIVE 5B**
**(ACRE-FEET)**

| | Alt. 3B | Alt. 5B |
|---|---|---|
| **CVWD** | | |
| 1. Local groundwater | 11,160 | 11,160 |
| **MWD** | | |
| 2. Jameson Lake and Alder Creek diversions | 2,194 | 2,194 |
| 3. Doulton Tunnel infiltration and Fox Creek diversions | 432 | 432 |
| 4. Local groundwater | 960 | 960 |
| 5. MWD subtotal | 3,586 | 3,586 |
| **City of Santa Barbara** | | |
| 6. Gibraltar Reservoir | 4,055 | 4,055 |
| 7. Mission Tunnel infiltration and Devil's Canyon diversion | 1,577 | 1,577 |
| 8. Local groundwater | 9,960 | 9,960 |
| 9. Reclaimed water | 2,700 | 2,700 |
| 10. Desalinization | 3,125 | 3,125 |
| 11. City of SB subtotal | 21,417 | 21,417 |
| **GWD** | | |
| 12. Local groundwater and reclaimed water | 10,140 | 10,140 |
| **SYRWCD, ID No. 1** | | |
| 13. Local groundwater and Santa Ynez River diversion | 11,823 | 11,823 |
| 14. State Water Project Delivery (assumed 50% of Table A + buffer) | 27,675 | 27,675 |
| 15. Cachuma Project yield | 53,769 | 50,483 |
| **16. Total Supply in Critical 3-year Period** | **139,570** | **136,284** |
| 17. Demand for three-year period based on current demand level | 138,021 | 138,021 |
| 18. Difference between 3-year drought supply and current demand | 1,549 | -1,737 |
| 19. Demand for three-year period based on planned future growth | 168,861 | 168,861 |
| 20. Difference between 3-year drought supply and planned future growth | -29,291 | -32,577 |

**TABLE 19B**
**(DEIR TABLE 4-25, AUG. 2003)**
**MEMBER UNITS' SUPPLY AND DEMAND DURING CRITICAL THREE-YEAR DROUGHT PERIOD (1949-1951)**
**DRAFT EIR ALTERNATIVE 3C AND NEW ALTERNATIVE 5C**
**(ACRE-FEET)**

| | Alt. 3C | Alt. 5C |
|---|---|---|
| **CVWD** | | |
| 1. Local groundwater | 11,160 | 11,160 |
| **MWD** | | |
| 2. Jameson Lake and Alder Creek diversions | 2,194 | 2,194 |
| 3. Doulton Tunnel infiltration and Fox Creek diversions | 432 | 432 |
| 4. Local groundwater | 960 | 960 |
| 5. MWD subtotal | 3,586 | 3,586 |
| **City of Santa Barbara** | | |
| 6. Gibraltar Reservoir | 4,055 | 4,055 |
| 7. Mission Tunnel infiltration and Devil's Canyon diversion | 1,577 | 1,577 |
| 8. Local groundwater | 9,960 | 9,960 |
| 9. Reclaimed water | 2,700 | 2,700 |
| 10. Desalinization | 3,125 | 3,125 |
| 10. City of SB subtotal | 21,417 | 21,417 |
| **GWD** | | |
| 11. Local groundwater and reclaimed water | 10,140 | 10,140 |
| **SYRWCD, ID No. 1** | | |
| 12. Local groundwater and Santa Ynez River diversion | 11,823 | 11,823 |
| 13. State Water Project Delivery (assumed 50% of Table A + buffer) | 27,675 | 27,675 |
| 14. Cachuma Project yield | 57,217 | 53,336 |
| **15. Total Supply in Critical 3-year Period** | **143,018** | **139,137** |
| 16. Demand for three-year period based on current demand level | 138,021 | 138,021 |
| 17. Difference between 3-year drought supply and current demand | 4,997 | 1,116 |
| 18. Demand for three-year period based on planned future growth | 168,861 | 168,861 |
| 19. Difference between 3-year drought supply and planned future growth | -25,843 | -29,724 |

## 3H. IMPACTS ON STATE WATER PROJECT DELIVERIES

Impacts on State Water Project deliveries for each of the alternatives are based upon entitlements and modeling results, which take into consideration the limitations due to shortages in SWP supply during state-wide droughts, pipeline capacity, and Cachuma Reservoir operations. The South Coast entitlement (Table A) amount of SWP water is 13,750 acre-feet per year, not including drought buffer and additional water (4,500 afy) contracted by Goleta Water District. The modeling results actually uses two hydrologic models, the Santa Ynez River Hydrology Model (used for Cachuma Reservoir) and the Department of Water Resources' DWRSIM model (used for shortages in SWP deliveries). Table 20 shows the SWP deliveries for the period 1942-1993. The period 1942-1993 was chosen because this period coincides with Lompoc groundwater models, which was used to determine impacts on salinity in Lompoc under the draft EIR alternatives.

**TABLE 20**
**SUMMARY OF STATE WATER PROJECT DELIVERIES**
**AVERAGE FOR PERIOD 1942-1993 (ACRE-FEET/YEAR)**

| Alternative | Total Imports under South Coast Contracts | Delivery as Percentage of 13,750 AF |
|---|---|---|
| 2 | 10,135 | 74% |
| 3B | 10,167 | 74% |
| 3C | 10,199 | 74% |
| 4B | 10,369 | 75% |
| 5B | 10,038 | 73% |
| 5C | 10,068 | 73% |

Table 20 shows the impacts to SWP imports to the South Coast. The total amount of imported water shown includes the ID No. 1 exchange with the South Coast Member Units. The detailed analysis for Alternatives 5B and 5C is shown in Appendix D. As indicated in Table 20, the total amount of SWP water delivery to the South Coast would be reduced slightly under Alternatives 5B and 5C.

## 4. SENSITIVITY ANALYSIS FOR 2.47 FEET OF SURCHARGE

Section 15126.2 of the *CEQA Guidelines* states that the impacts of the proposed project on the environment should be assessed against changes in the physical conditions in the affected area as they exist at the time the notice of preparation (NOP) is published. For the alternatives analyzed in the DEIR on the "Consideration of Modifications to the U.S. Bureau of Reclamation's Water Right Permits 11308 and 11310 (Applications 11331 and 11332) To Protect Public Trust Values and Downstream Water Rights on the Santa Ynez River below Bradbury Dam (Cachuma Reservoir)" dated August 2003, the existing conditions are represented as Alternative 2. As discussed above in Section 2B of this memorandum, physical conditions in the affected area have changed since publication of the NOP. Cachuma Reservoir has been surcharged to 2.47 feet (actual surcharge was 2.32 feet) in 2005, and USBR and Cachuma Member Unites (CCRB and ID No. 1) have initiated releases to meet the long-term flow requirements under the Biological Opinion, which are set for 3.0-foot surcharge.

In order to determine if this change in physical conditions is captured within the parameters of the impact analysis of alternatives in the DEIR a sensitivity analysis was performed using the SYRHM. The sensitivity analysis was undertaken to evaluate the water supply impacts of 2.47 feet of surcharge in relation to 1.8 feet and 3.0 feet of surcharge. For the purposes of sensitivity analysis, two new alternatives were analyzed: Alternative 3D and Alternative 5D. Alternative 3D is the same as Alternative 3B and 3C, except that Cachuma Reservoir is surcharged to 2.47 feet. Likewise, Alternative 5D is the same as Alternative 5B and 5C, except that Cachuma Reservoir is surcharged to 2.47 feet.

As expected, simulation results for Alternative 3D with a surcharge of 2.47 feet are in between simulation results for surcharges of 1.8 feet (Alternative 3B) and 3.0 feet (Alternative 3C). Similarly, simulation results for Alternative 5D are in between Alternatives 5B and 5C. For example, Table 21 compares the median lake levels. Simulated lake levels for Alternative 3D (2.47') falls in between the lake levels under Alternative 3B (1.8') and Alternative 3C (3.0'). Similarly, Alternative 5D (2.47') falls in between the lake levels under Alternative 5B (1.8') and Alternative 5C (3.0') as shown in Table 21.

**TABLE 21**
**(DEIR TABLE 4-3, AUG. 2003)**
**MEDIAN LAKE LEVEL (SIMULATION, 1918-1993)**
**(FEET)**

| Month | Alt 3B: BO and 1.8' surcharge | Alt 3D: BO with 2.47' surcharge | Alt 3C: BO with 3' surcharge | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5D 3A2"/BO and 2.47' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|
| Annual | 733.3 | 734.0 | 734.6 | 732.5 | 733.1 | 733.7 |
| Feb | 736.7 | 737.5 | 738.1 | 736.1 | 736.9 | 737.4 |
| Aug | 733.6 | 734.4 | 735.0 | 731.4 | 732.3 | 733.0 |

Water supply impacts for the 2.47-foot surcharge similarly fall within water supply impacts for surcharges of 1.8 and 3.0 feet. As shown in Table 22, shortages of 10,382 acre-feet, in the critical drought year (1951), under Alternative 3D fall in between shortages of 11,262 and 9,895 acre-feet for Alternatives 3B and 3C, respectively. Similarly, shortages of 11,889 acre-feet, in critical drought year, under Alternative 5D fall in between 12,506 and 11,406 acre-feet for Alternatives 5B and 5C, respectively.

With respect to water supply impacts, relative comparisons of the 2.47-foot surcharge with the 1.8-foot and 3.0-foot surcharges are varied. For example, in terms of number of years with greater than 10% shortages, the 2.47-foot surcharge is more similar to the 1.8-foot surcharge than the 3.0-foot surcharge. However, in terms of the critical drought year supply (1951), Cachuma Project deliveries to the Member Units under the 2.47-foot surcharge are closer to the 3.0-foot surcharge than the 1.8-foot surcharge.

**TABLE 22**
**(DEIR TABLE 4-16, AUG. 2003)**
**IMPACTS ON CACHUMA PROJECT DELIVERIES TO MEMBER UNITS**

| Water Supply Parameter | Alt 2: CEQA Baseline | Alt 3B: BO and 1.8' surcharge | Alt 3D: BO and 2.47' surcharge | Alt 3C: BO with 3' surcharge | Alt 5B: "3A2"/BO and 1.8' surcharge | Alt 5D: "3A2"/BO and 2.47' surcharge | Alt 5C: "3A2"/BO and 3' surcharge |
|---|---|---|---|---|---|---|---|
| ***Average Annual Deliveries and Years of Shortages (1918-1993)*** | | | | | | | |
| Average annual delivery (afy) | 25,115 | 24,986 | 25,069 | 25,122 | 24,855 | 24,927 | 24,988 |
| Reduction compared to Alt 2 (afy) | --- | -129 | -46 | 7 | -260 | -188 | -127 |
| Number of years with 10% or more shortage | 6 | 7 | 7 | 6 | 8 | 8 | 7 |
| Number of years with 10% or more shortage – difference from Alt 2 | --- | 1 | 1 | 0 | 2 | 2 | 1 |
| ***Critical Drought Year (based on 1951 drought year)*** | | | | | | | |
| Shortage (af) | 9,808 | 11,262 | 10,382 | 9,895 | 12,506 | 11,889 | 11,406 |
| % Shortage in Cachuma deliveries | 38% | 44% | 40% | 38% | 49% | 46% | 44% |
| % Shortage in Cachuma deliveries – difference from Alternative 2 | --- | 6% | 2% | 0% | 10% | 8% | 6% |
| ***Critical 3-Year Drought Period (based on 1949-51 drought)*** | | | | | | | |
| Shortage (af) | 20,134 | 23,373 | 21,114 | 19,925 | 26,659 | 25,047 | 23,806 |
| % Shortage in Cachuma deliveries | 26% | 30% | 27% | 26% | 35% | 32% | 31% |
| % Shortage in Cachuma deliveries – difference from Alternative 2 | --- | 4% | 1% | 0% | 8% | 6% | 5% |

*Based on Project draft of 25,714 acre-feet per year.*
*Cumulative shortage in critical drought period based on 36 consecutive months starting in May 1949.*

# Figures

**Cachuma Contract Renewal Alternative 3A2**
**Flow Requirements at Highway 154 and Alisal Bridges**

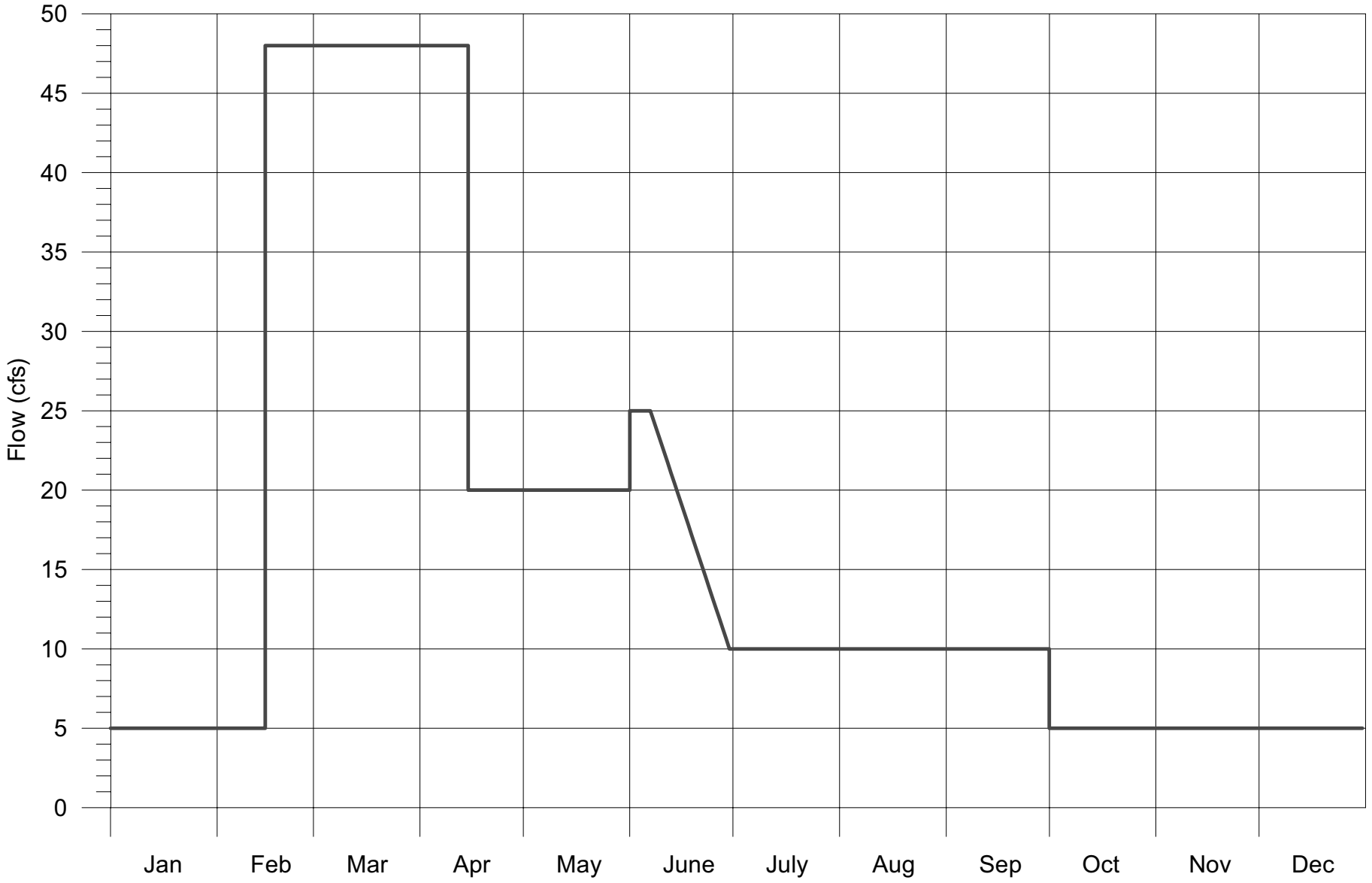



Figure 1

**Figure 2**

# Frequency of Cachuma Reservoir Inflow
## EIR Alternatives
## Water Years 1918 through 1993

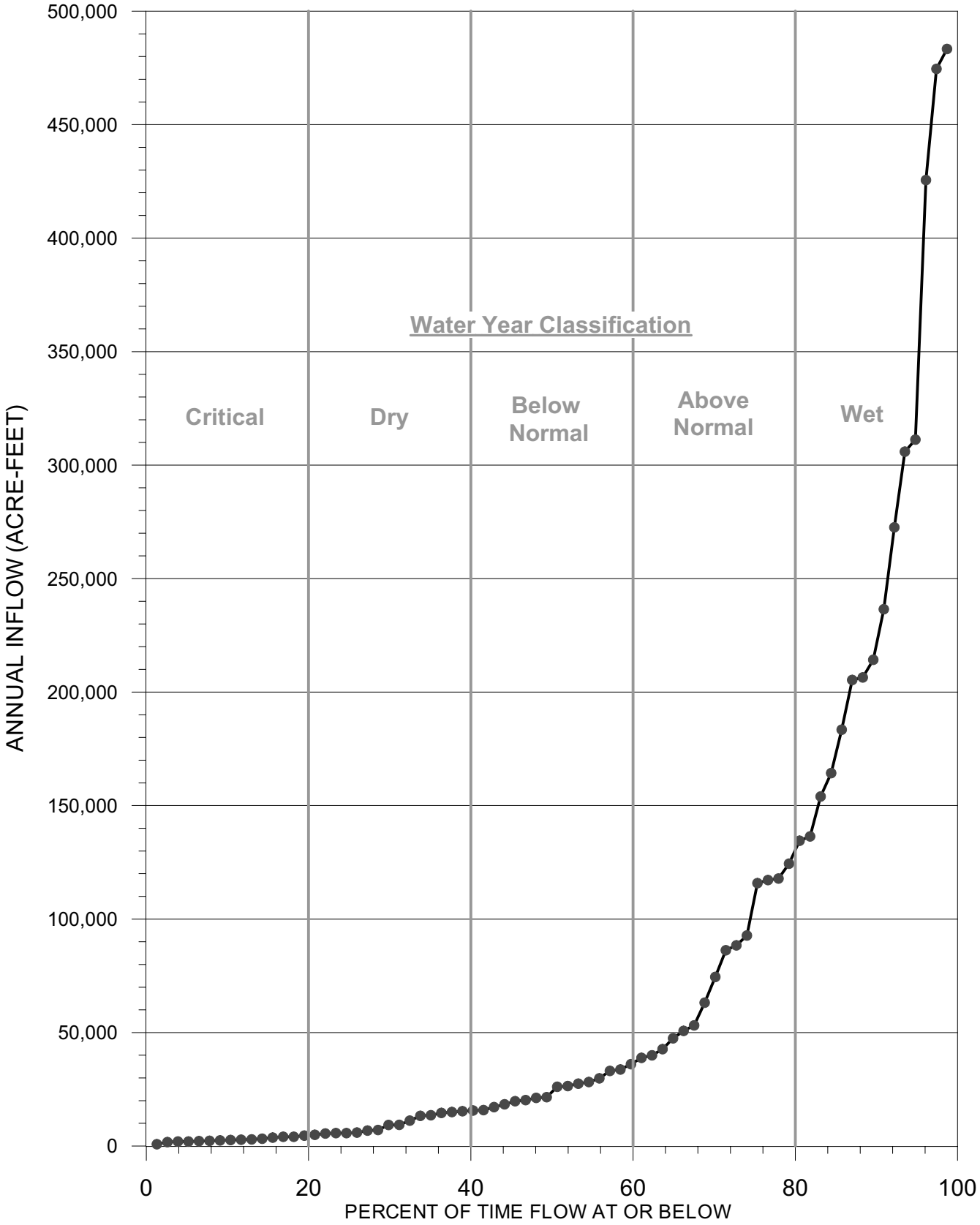
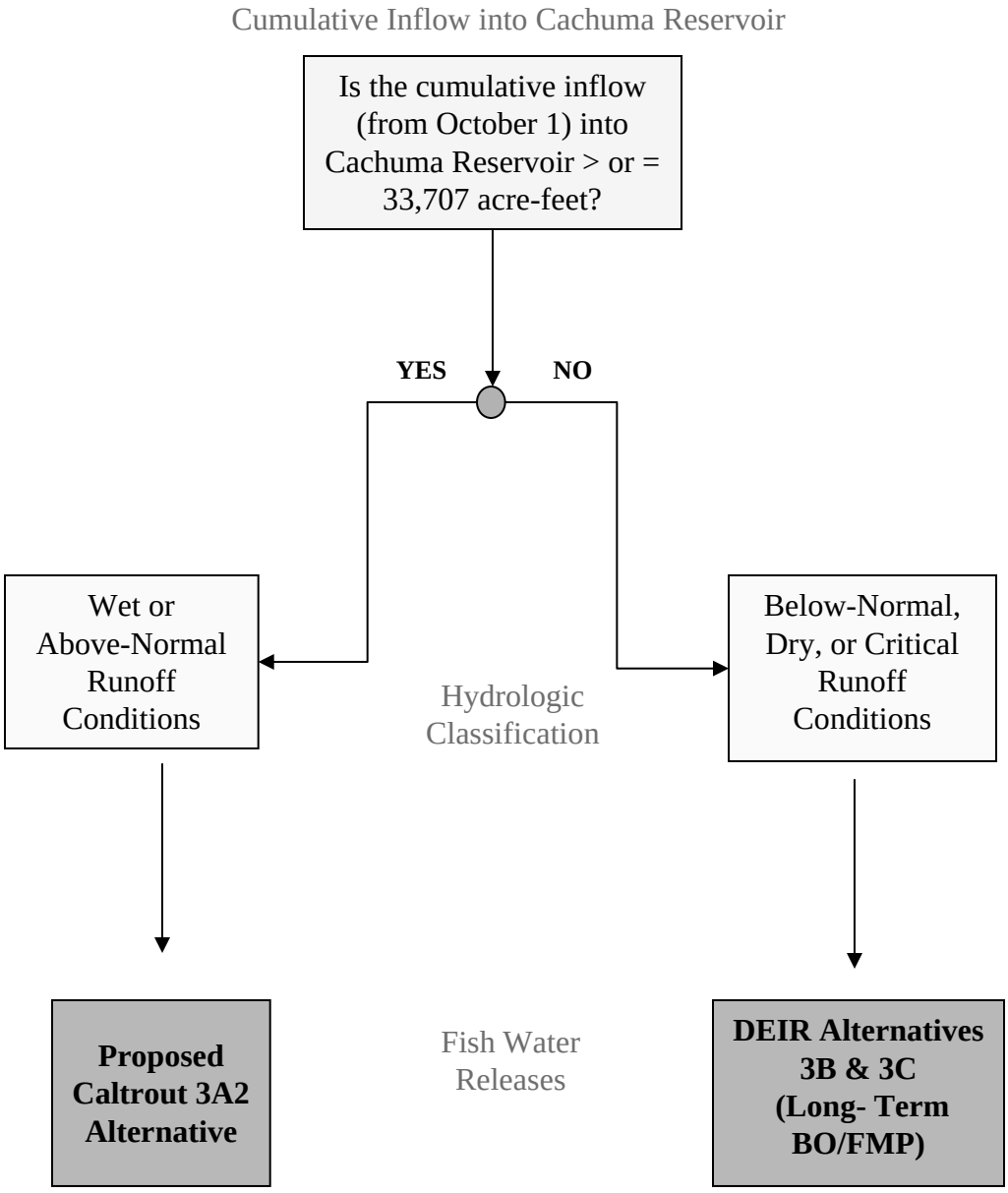


**Figure 3**

# SYRHM Operations Criteria for Fish Water Releases from Cachuma Reservoir for Alternatives 5B & 5C




F:\Data\1893

March 31, 2005

**Figure 4a**

**Frequency of Spills and Downstream Releases from Cachuma Reservoir (WY 1918-1993)**

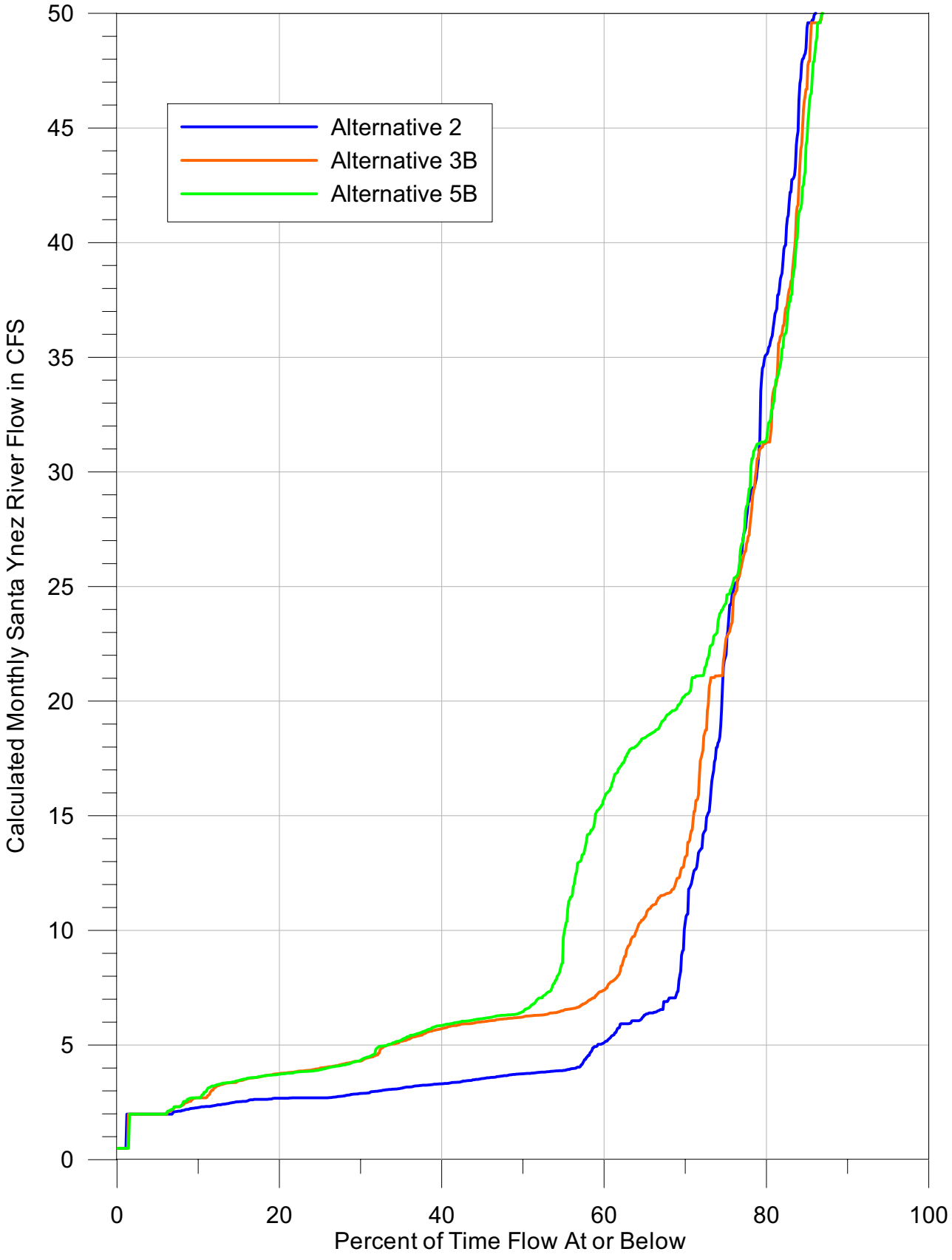


**Figure 4b**

**Frequency of Spills and Downstream Releases from Cachuma Reservoir (WY 1918-1993)**

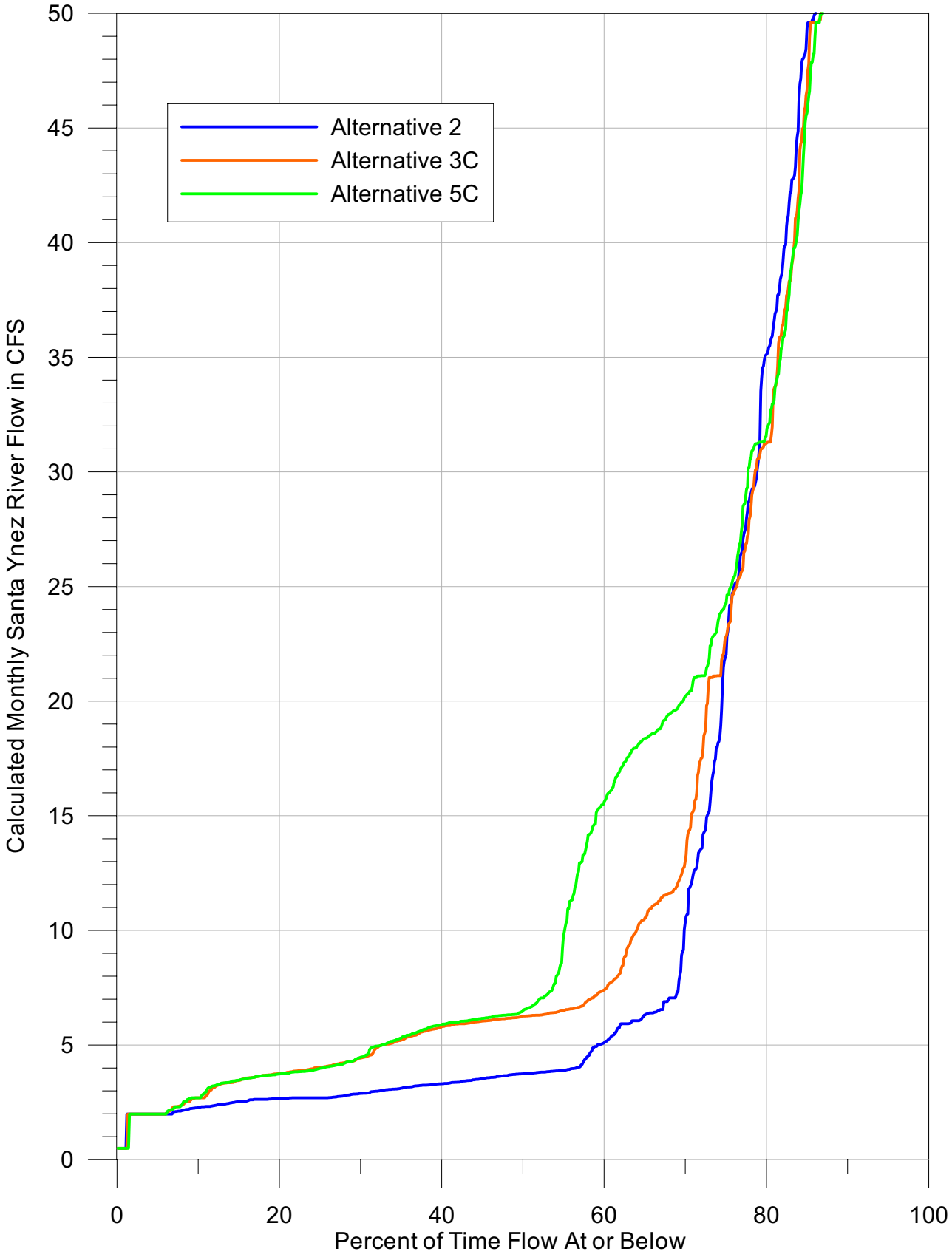


**Figure 5a**

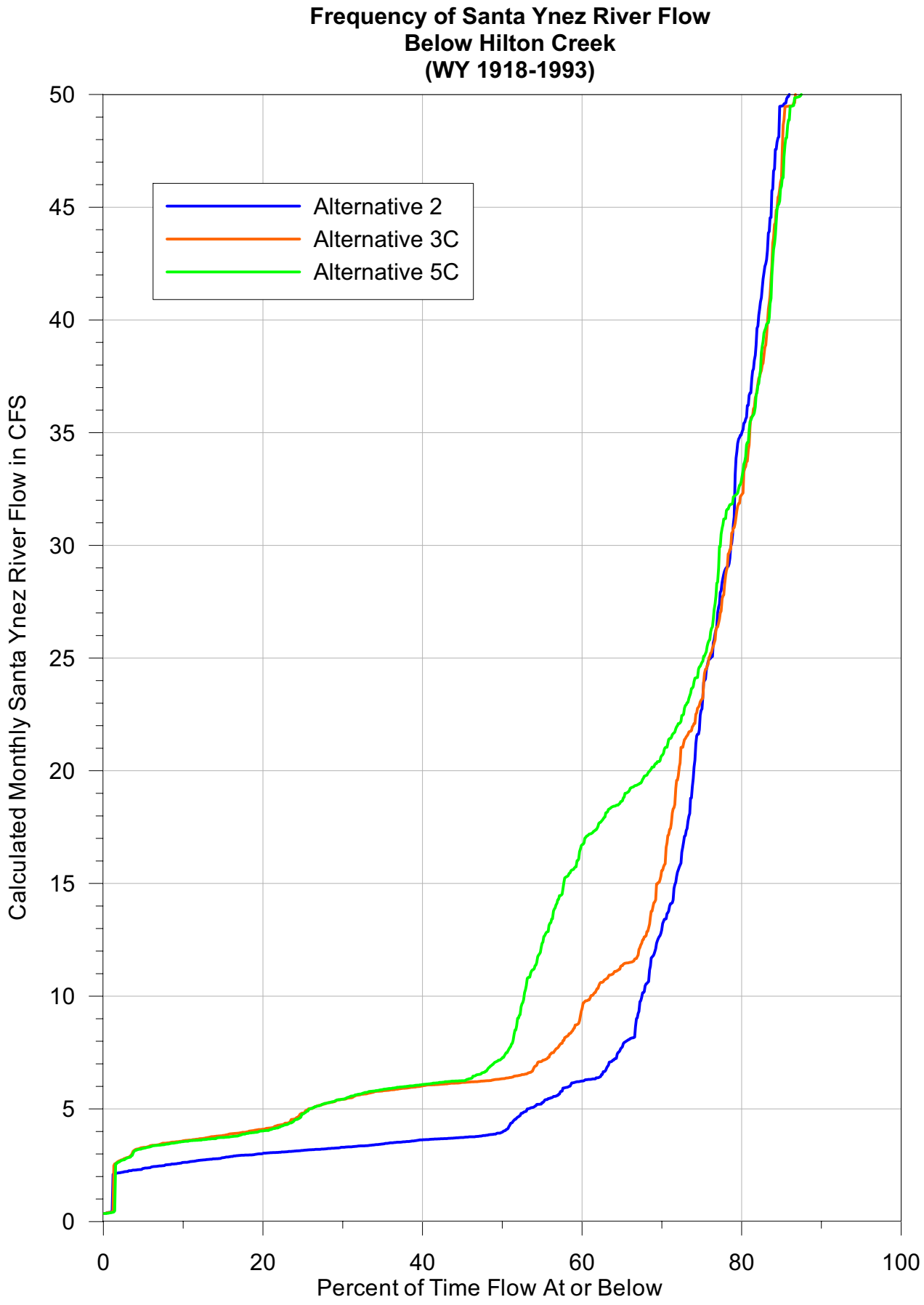

Frequency of Santa Ynez River Flow
Below Hilton Creek
(WY 1918-1993)
Alternative 2
Alternative 3C
Alternative 5C
Calculated Monthly Santa Ynez River Flow in CFS
Percent of Time Flow At or Below
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100

**Figure 5b**

**Frequency of Santa Ynez River Flow**
**At Highway 154 Bridge**
**(WY 1918-1993)**

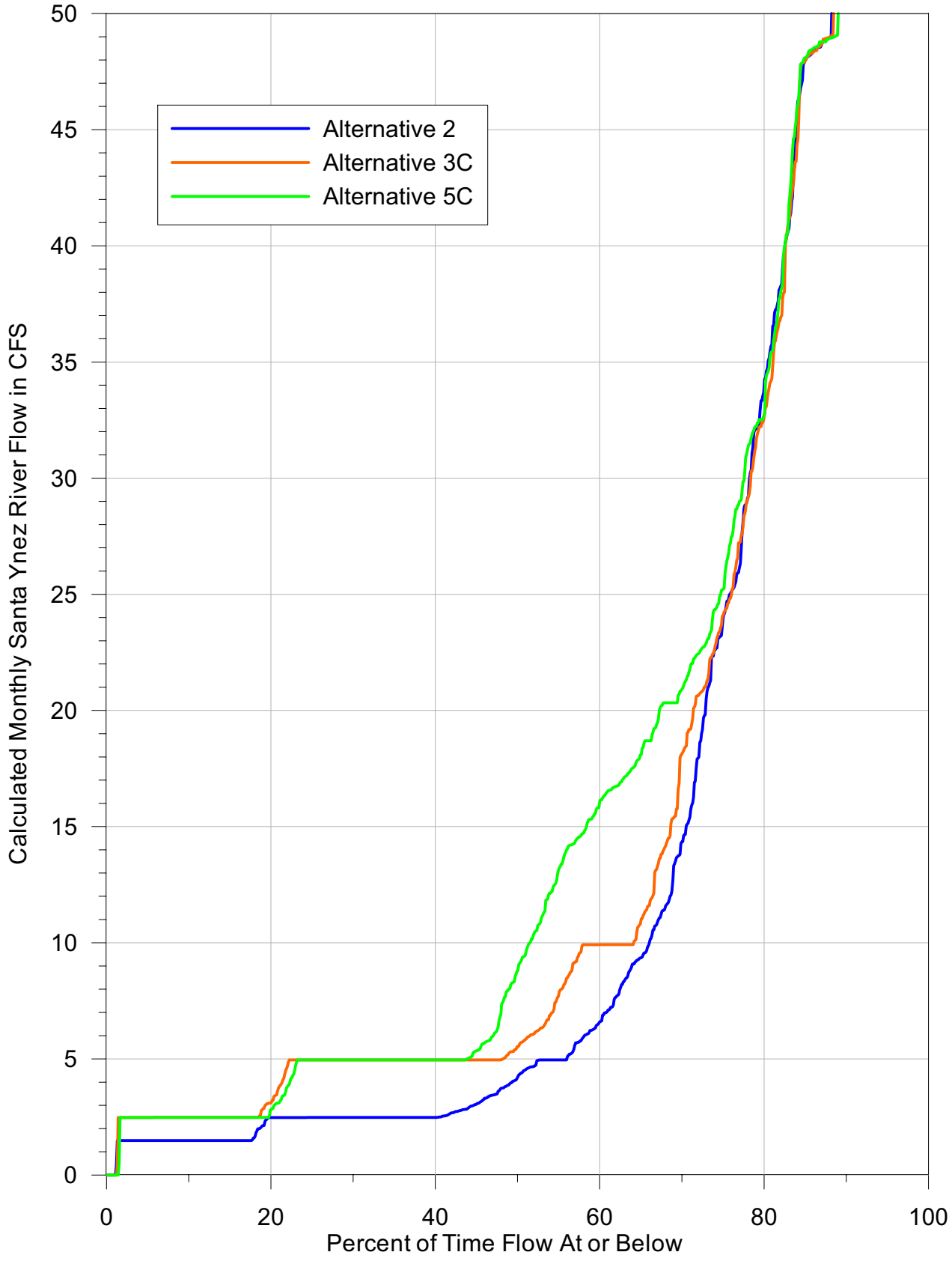


**Figure 5c**

**Frequency of Santa Ynez River Flow**
**Above Alisal Bridge**
**(WY 1918-1993)**

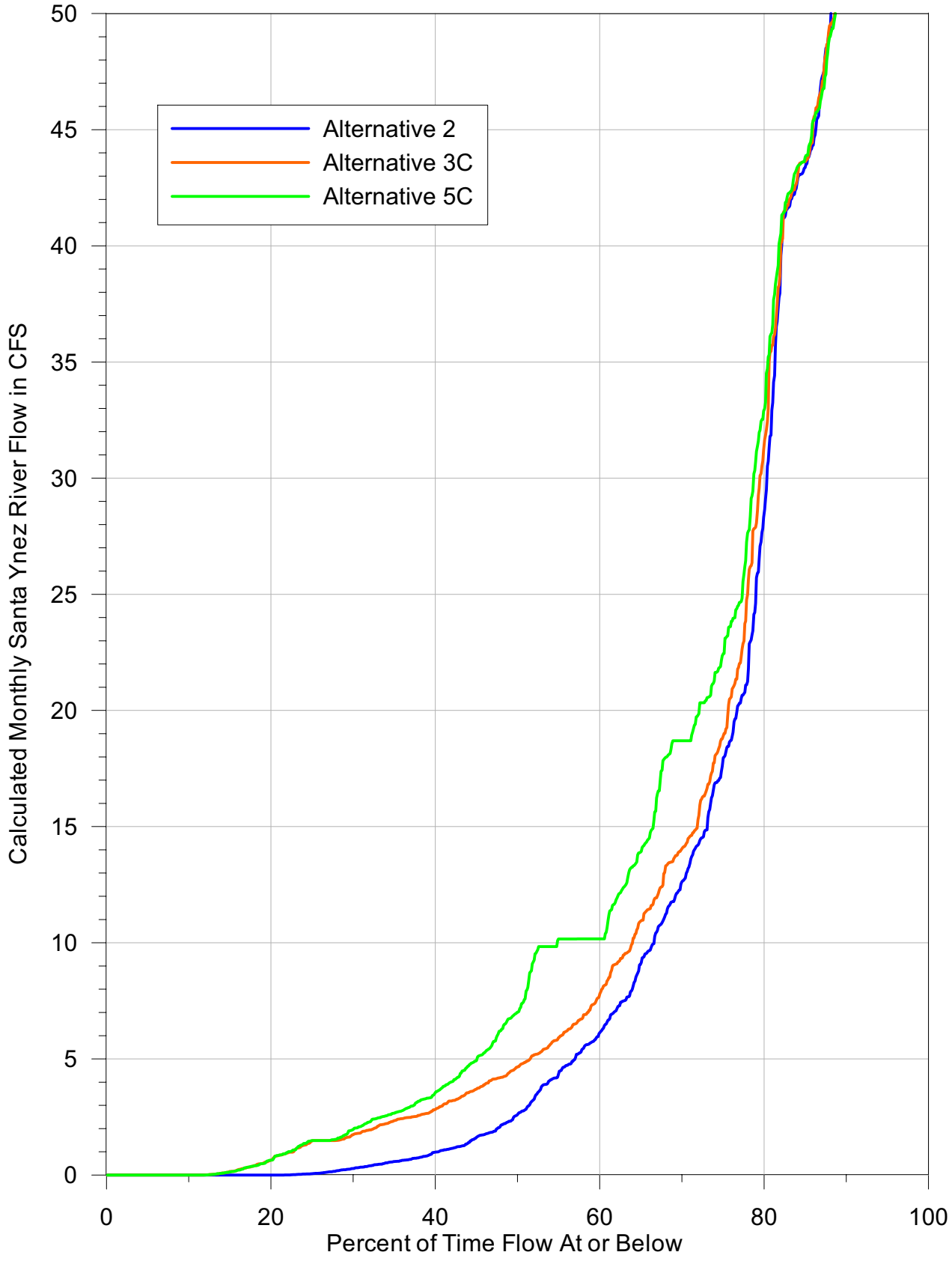


**Figure 5d**

**Frequency of Santa Ynez River Flow**
**Near Buellton**
**(WY 1918-1993)**

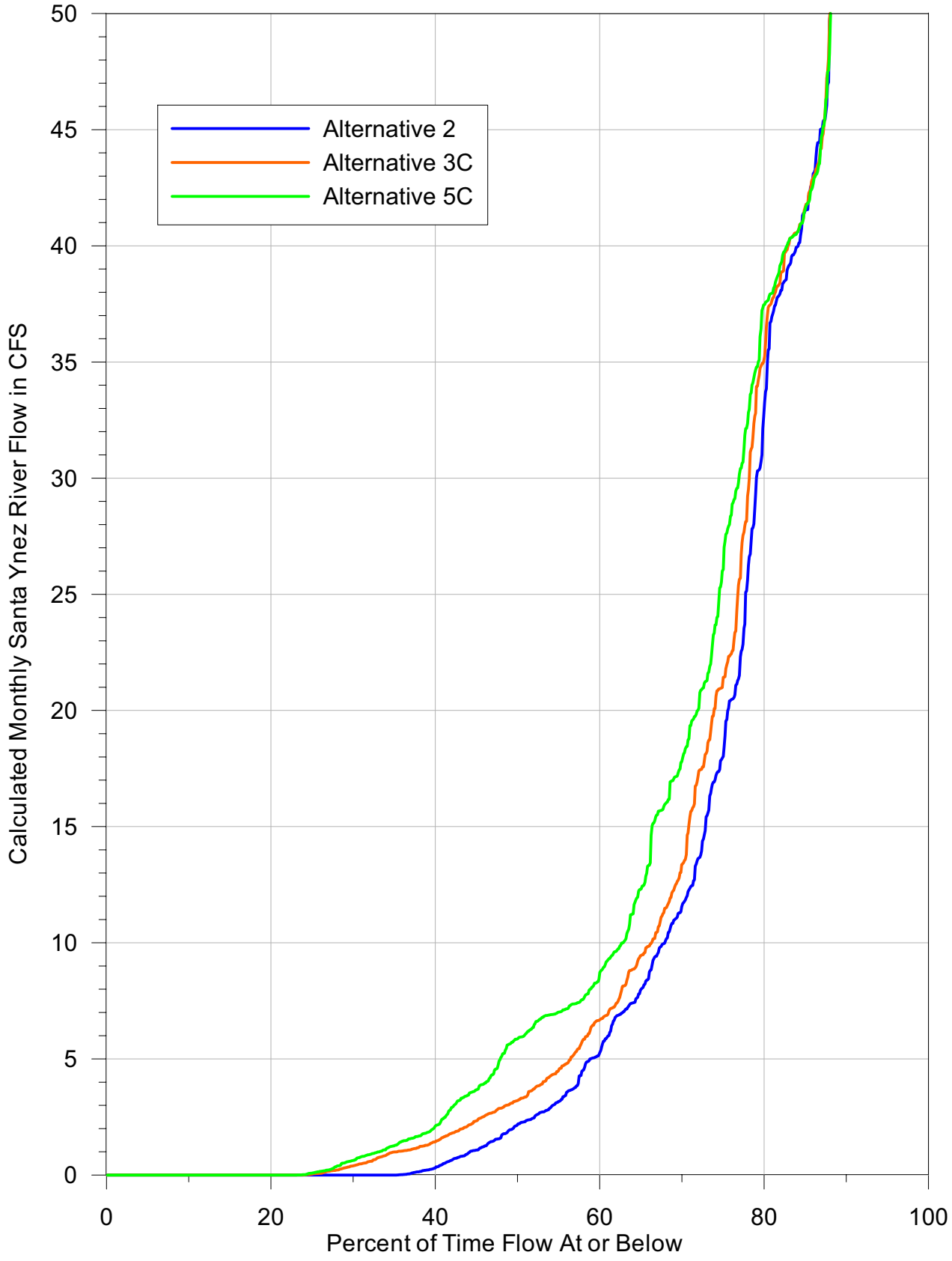


**Figure 5e**

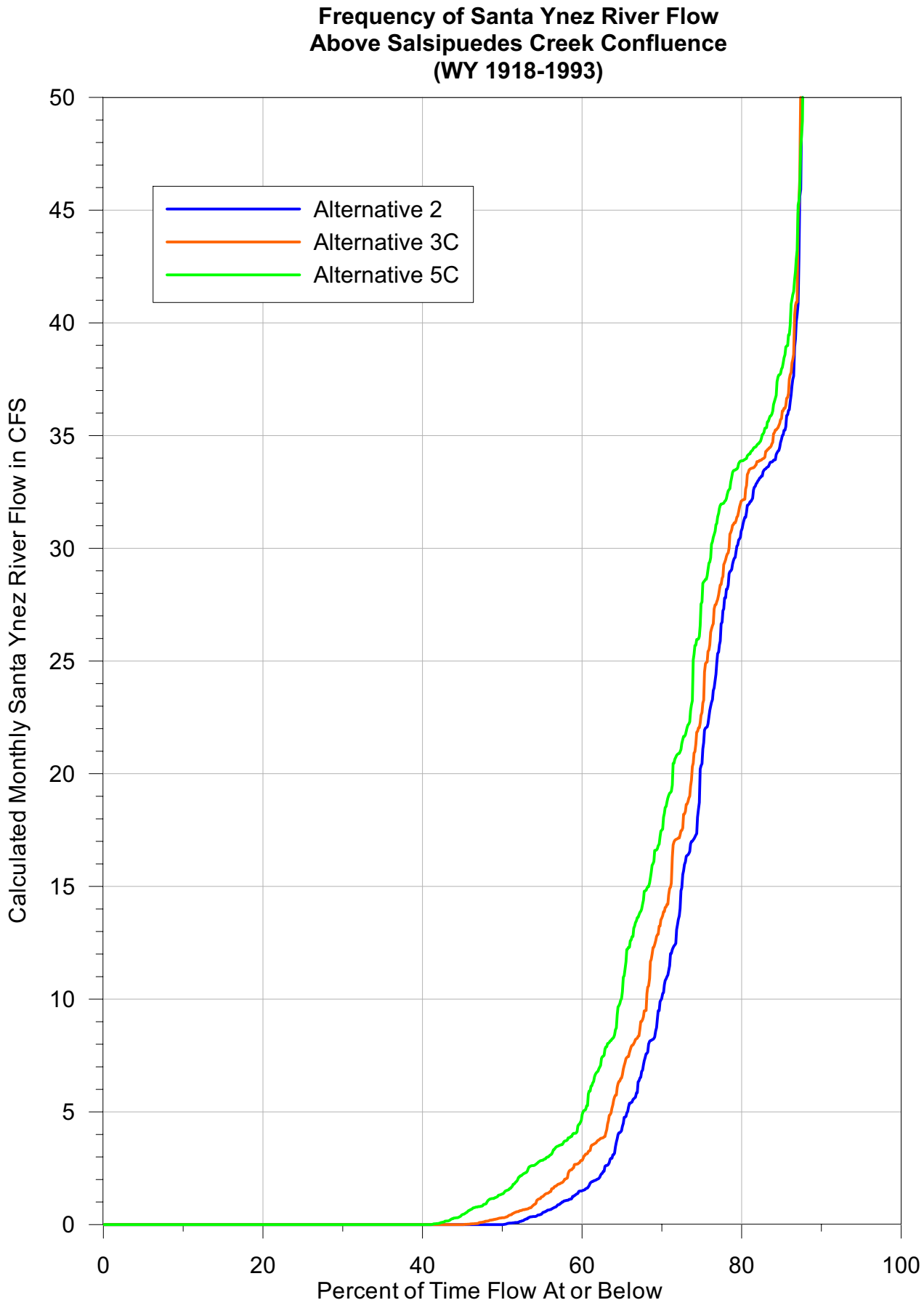
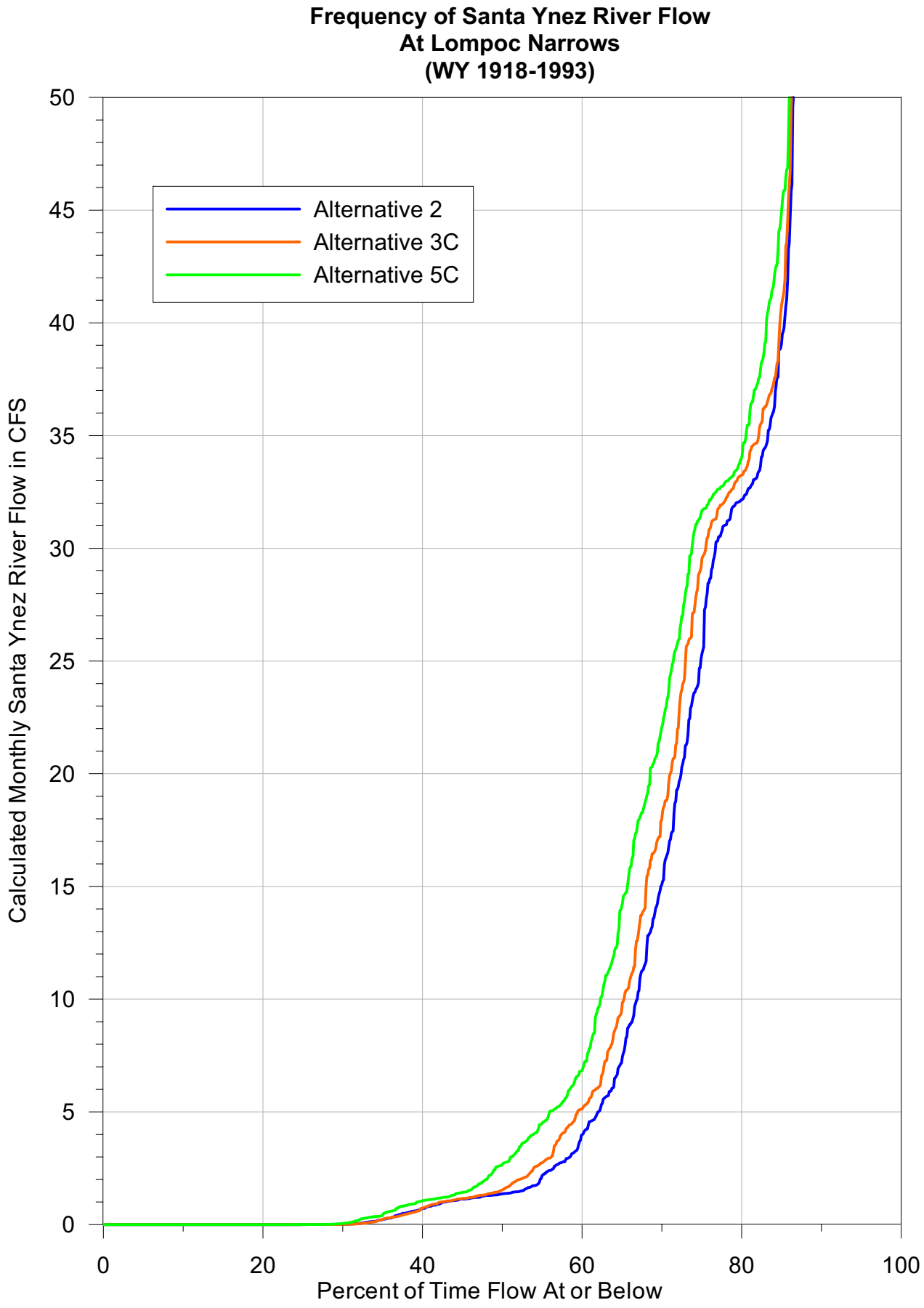

Frequency of Santa Ynez River Flow
Above Salsipuedes Creek Confluence
(WY 1918-1993)
Alternative 2
Alternative 3C
Alternative 5C
Calculated Monthly Santa Ynez River Flow in CFS
Percent of Time Flow At or Below
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100

**Figure 5f**


Frequency of Santa Ynez River Flow
At Lompoc Narrows
(WY 1918-1993)
Alternative 2
Alternative 3C
Alternative 5C
Calculated Monthly Santa Ynez River Flow in CFS
0
5
10
15
20
25
30
35
40
45
50
0
20
40
60
80
100
Percent of Time Flow At or Below

# Appendix A

Monthly Flows Downstream of
Bradbury Dam (simulation, 1918-1993)

New Alternatives 5B and 5C

| Alternative 5B | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER BELOW HILTON CREEK (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 476 | 453 | 433 | 414 | 51,309 | 127,900 | 17,791 | 5,025 | 1,061 | 839 | 1,086 | 1,108 | 207,895 |
| 1919 | 427 | 378 | 365 | 1,273 | 1,296 | 1,294 | 351 | 361 | 374 | 3,789 | 441 | 2,162 | 12,512 |
| 1920 | 1,460 | 515 | 342 | 356 | 273 | 329 | 239 | 352 | 378 | 3,857 | 375 | 2,717 | 11,193 |
| 1921 | 1,642 | 911 | 197 | 163 | 162 | 183 | 196 | 206 | 229 | 235 | 4,837 | 2,173 | 11,135 |
| 1922 | 2,575 | 736 | 615 | 395 | 1,048 | 2,427 | 7,462 | 1,186 | 1,308 | 934 | 1,112 | 1,166 | 20,963 |
| 1923 | 382 | 390 | 302 | 1,299 | 1,307 | 1,283 | 314 | 346 | 364 | 378 | 4,271 | 3,037 | 13,674 |
| 1924 | 2,938 | 685 | 382 | 378 | 372 | 309 | 369 | 376 | 384 | 227 | 2,054 | 2,082 | 10,554 |
| 1925 | 1,411 | 436 | 201 | 212 | 220 | 206 | 171 | 221 | 229 | 1,318 | 2,797 | 469 | 7,892 |
| 1926 | 212 | 223 | 223 | 222 | 270 | 166 | 927 | 1,235 | 1,492 | 1,030 | 1,203 | 1,931 | 9,133 |
| 1927 | 4,466 | 225 | 171 | 169 | 1,581 | 10,682 | 4,178 | 1,219 | 1,358 | 951 | 1,139 | 1,198 | 27,334 |
| 1928 | 383 | 386 | 378 | 1,272 | 1,385 | 1,336 | 332 | 354 | 364 | 3,804 | 3,038 | 3,026 | 16,058 |
| 1929 | 3,017 | 401 | 394 | 380 | 343 | 310 | 326 | 372 | 3,546 | 2,853 | 1,489 | 2,411 | 15,843 |
| 1930 | 1,617 | 503 | 200 | 210 | 216 | 220 | 205 | 219 | 229 | 1,339 | 1,861 | 205 | 7,021 |
| 1931 | 223 | 233 | 237 | 238 | 219 | 231 | 229 | 1,518 | 266 | 226 | 246 | 259 | 4,125 |
| 1932 | 265 | 264 | 438 | 250 | 957 | 2,728 | 1,945 | 1,343 | 1,458 | 1,048 | 1,195 | 1,937 | 13,829 |
| 1933 | 687 | 208 | 217 | 294 | 277 | 189 | 198 | 219 | 3,560 | 2,994 | 2,601 | 2,065 | 13,509 |
| 1934 | 204 | 219 | 226 | 292 | 193 | 165 | 220 | 227 | 3,829 | 2,275 | 2,491 | 2,488 | 12,830 |
| 1935 | 191 | 208 | 218 | 308 | 188 | 327 | 450 | 1,268 | 1,489 | 1,055 | 4,097 | 2,561 | 12,360 |
| 1936 | 1,208 | 866 | 205 | 212 | 633 | 215 | 201 | 198 | 223 | 235 | 2,479 | 399 | 7,073 |
| 1937 | 221 | 231 | 235 | 205 | 1,220 | 9,761 | 16,948 | 1,174 | 1,236 | 923 | 1,127 | 1,176 | 34,459 |
| 1938 | 458 | 861 | 367 | 1,273 | 31,827 | 187,357 | 15,936 | 2,270 | 1,137 | 795 | 1,075 | 1,106 | 244,462 |
| 1939 | 417 | 425 | 347 | 1,314 | 1,331 | 1,378 | 274 | 345 | 367 | 3,560 | 3,037 | 3,035 | 15,831 |
| 1940 | 403 | 406 | 403 | 350 | 239 | 265 | 326 | 375 | 390 | 3,940 | 3,019 | 1,986 | 12,103 |
| 1941 | 1,525 | 191 | 253 | 588 | 56,612 | 193,797 | 120,506 | 18,381 | 2,979 | 555 | 722 | 879 | 396,987 |
| 1942 | 322 | 324 | 525 | 413 | 400 | 654 | 6,350 | 486 | 383 | 350 | 372 | 1,069 | 11,648 |
| 1943 | 370 | 361 | 361 | 46,094 | 28,923 | 66,500 | 10,315 | 1,171 | 1,190 | 849 | 1,081 | 1,109 | 158,324 |
| 1944 | 391 | 384 | 329 | 288 | 17,474 | 36,001 | 4,724 | 1,158 | 1,207 | 936 | 1,098 | 1,149 | 65,138 |
| 1945 | 446 | 325 | 349 | 344 | 470 | 4,433 | 2,641 | 1,250 | 1,459 | 1,016 | 1,180 | 1,226 | 15,139 |
| 1946 | 1,295 | 718 | 239 | 347 | 328 | 274 | 410 | 1,459 | 1,518 | 3,455 | 3,038 | 3,035 | 16,116 |
| 1947 | 3,036 | 342 | 338 | 374 | 347 | 358 | 372 | 3,430 | 3,037 | 3,028 | 3,017 | 3,011 | 20,689 |
| 1948 | 2,802 | 1,443 | 206 | 216 | 222 | 228 | 232 | 238 | 778 | 1,240 | 222 | 240 | 8,068 |
| 1949 | 250 | 253 | 252 | 245 | 244 | 1,956 | 211 | 1,812 | 291 | 218 | 240 | 254 | 6,225 |
| 1950 | 260 | 261 | 244 | 250 | 1,908 | 200 | 215 | 3,174 | 194 | 213 | 236 | 251 | 7,408 |
| 1951 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 842 | 24 | 23 | 22 | 213 | 1,291 |
| 1952 | 22 | 22 | 29 | 1,561 | 2,147 | 1,619 | 10,557 | 1,156 | 1,372 | 922 | 1,052 | 1,525 | 21,983 |
| 1953 | 887 | 319 | 359 | 2,041 | 279 | 317 | 327 | 369 | 378 | 3,889 | 3,038 | 2,467 | 14,670 |
| 1954 | 2,170 | 357 | 369 | 676 | 1,323 | 337 | 268 | 370 | 374 | 4,138 | 2,791 | 3,013 | 16,186 |
| 1955 | 1,886 | 802 | 194 | 155 | 177 | 197 | 204 | 194 | 230 | 2,091 | 3,112 | 514 | 9,757 |
| 1956 | 207 | 220 | 765 | 952 | 243 | 177 | 213 | 165 | 210 | 218 | 1,885 | 1,111 | 6,366 |
| 1957 | 228 | 214 | 217 | 205 | 160 | 155 | 190 | 203 | 4,189 | 778 | 2,943 | 800 | 10,283 |
| 1958 | 255 | 303 | 218 | 166 | 833 | 1,234 | 35,698 | 9,161 | 1,043 | 776 | 1,040 | 1,113 | 51,841 |
| 1959 | 422 | 421 | 378 | 330 | 2,085 | 274 | 322 | 356 | 369 | 3,849 | 3,038 | 2,123 | 13,967 |
| 1960 | 1,713 | 944 | 359 | 350 | 1,912 | 351 | 321 | 367 | 377 | 228 | 2,737 | 203 | 9,862 |
| 1961 | 221 | 216 | 215 | 230 | 228 | 226 | 227 | 1,754 | 315 | 222 | 243 | 256 | 4,354 |
| 1962 | 262 | 303 | 172 | 168 | 2,771 | 2,225 | 1,870 | 1,230 | 1,451 | 1,013 | 1,175 | 1,699 | 14,339 |
| 1963 | 362 | 377 | 376 | 363 | 321 | 303 | 238 | 327 | 366 | 395 | 2,364 | 204 | 5,994 |
| 1964 | 222 | 227 | 227 | 226 | 225 | 225 | 225 | 1,912 | 350 | 215 | 237 | 251 | 4,542 |
| 1965 | 258 | 260 | 257 | 173 | 229 | 211 | 378 | 199 | 3,976 | 2,912 | 1,126 | 377 | 10,356 |
| 1966 | 212 | 377 | 368 | 431 | 1,336 | 2,956 | 2,151 | 1,394 | 1,431 | 1,031 | 4,151 | 2,995 | 18,832 |
| 1967 | 2,994 | 2,993 | 306 | 747 | 1,197 | 18,846 | 53,303 | 20,350 | 1,115 | 925 | 3,643 | 2,672 | 109,091 |
| 1968 | 430 | 436 | 368 | 363 | 342 | 1,928 | 322 | 366 | 3,429 | 370 | 1,034 | 2,158 | 11,544 |
| 1969 | 1,482 | 715 | 358 | 128,084 | 188,359 | 78,226 | 17,932 | 5,643 | 1,051 | 812 | 1,009 | 1,077 | 424,749 |
| 1970 | 395 | 356 | 352 | 309 | 297 | 2,186 | 338 | 362 | 378 | 3,589 | 3,037 | 1,085 | 12,684 |
| 1971 | 1,529 | 864 | 247 | 301 | 328 | 342 | 359 | 376 | 3,428 | 3,038 | 3,036 | 1,926 | 15,774 |
| 1972 | 1,504 | 812 | 244 | 334 | 345 | 370 | 372 | 3,413 | 3,020 | 212 | 1,523 | 2,341 | 14,491 |
| 1973 | 1,596 | 158 | 198 | 667 | 1,328 | 15,660 | 7,670 | 1,167 | 1,253 | 968 | 1,118 | 1,152 | 32,935 |
| 1974 | 453 | 778 | 364 | 546 | 280 | 441 | 463 | 1,404 | 1,501 | 1,040 | 1,177 | 1,480 | 9,928 |
| 1975 | 1,313 | 349 | 316 | 326 | 2,285 | 5,367 | 4,966 | 1,161 | 1,252 | 926 | 1,115 | 1,148 | 20,524 |
| 1976 | 372 | 377 | 377 | 375 | 1,946 | 318 | 335 | 361 | 3,430 | 3,038 | 3,027 | 2,306 | 16,263 |
| 1977 | 1,351 | 355 | 362 | 365 | 367 | 203 | 211 | 220 | 228 | 2,667 | 215 | 227 | 6,769 |
| 1978 | 240 | 245 | 245 | 687 | 10,330 | 145,578 | 35,267 | 7,452 | 1,041 | 622 | 941 | 1,071 | 203,718 |
| 1979 | 357 | 362 | 349 | 312 | 670 | 21,177 | 11,033 | 1,150 | 1,170 | 923 | 1,129 | 1,163 | 39,794 |
| 1980 | 854 | 655 | 354 | 276 | 67,729 | 40,858 | 7,000 | 1,117 | 1,115 | 865 | 1,122 | 1,153 | 123,099 |
| 1981 | 433 | 428 | 377 | 319 | 290 | 2,408 | 237 | 319 | 354 | 419 | 1,212 | 2,269 | 9,065 |
| 1982 | 1,544 | 750 | 353 | 340 | 348 | 1,953 | 340 | 313 | 372 | 3,656 | 3,038 | 3,035 | 16,042 |
| 1983 | 400 | 374 | 364 | 14,059 | 57,338 | 196,356 | 56,416 | 29,397 | 5,124 | 546 | 653 | 893 | 361,920 |
| 1984 | 288 | 337 | 13,141 | 4,828 | 1,686 | 467 | 2,001 | 1,392 | 1,436 | 993 | 1,166 | 1,209 | 28,944 |
| 1985 | 1,051 | 675 | 306 | 356 | 334 | 338 | 362 | 377 | 3,428 | 3,029 | 688 | 2,244 | 13,187 |
| 1986 | 1,104 | 196 | 199 | 175 | 767 | 2,035 | 1,952 | 1,235 | 1,389 | 1,014 | 1,171 | 1,216 | 12,453 |
| 1987 | 1,115 | 361 | 364 | 352 | 368 | 1,949 | 351 | 363 | 373 | 392 | 2,014 | 1,076 | 9,080 |
| 1988 | 366 | 380 | 378 | 343 | 366 | 1,924 | 319 | 191 | 3,594 | 2,239 | 1,654 | 2,048 | 13,800 |
| 1989 | 195 | 211 | 220 | 221 | 211 | 219 | 223 | 227 | 1,135 | 2,210 | 594 | 218 | 5,886 |
| 1990 | 233 | 240 | 242 | 243 | 243 | 238 | 240 | 1,361 | 212 | 478 | 310 | 296 | 4,338 |
| 1991 | 434 | 319 | 249 | 248 | 247 | 711 | 1,975 | 1,590 | 1,966 | 1,610 | 2,416 | 1,096 | 12,862 |
| 1992 | 330 | 217 | 208 | 159 | 1,036 | 2,608 | 1,845 | 1,220 | 1,311 | 969 | 4,032 | 3,037 | 16,972 |
| 1993 | 1,010 | 780 | 360 | 26,050 | 113,851 | 65,385 | 28,710 | 6,367 | 1,038 | 656 | 973 | 1,121 | 246,300 |
| AVG | 904 | 459 | 473 | 3,290 | 8,829 | 16,744 | 6,623 | 2,130 | 1,315 | 1,465 | 1,740 | 1,480 | 45,452 |
| MEDIAN | 429 | 361 | 322 | 342 | 370 | 560 | 355 | 1,134 | 1,115 | 960 | 1,178 | 1,171 | 13,737 |

| Alternative 5B | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER AT 154 BRIDGE (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 300 | 300 | 300 | 300 | 52,797 | 129,234 | 18,272 | 5,180 | 1,131 | 794 | 988 | 1,005 | 210,601 |
| 1919 | 351 | 308 | 300 | 1,163 | 1,252 | 1,249 | 300 | 300 | 300 | 3,581 | 360 | 1,919 | 11,383 |
| 1920 | 1,329 | 464 | 300 | 300 | 300 | 567 | 300 | 300 | 300 | 3,646 | 300 | 2,449 | 10,556 |
| 1921 | 1,509 | 840 | 150 | 150 | 181 | 234 | 150 | 150 | 150 | 150 | 4,541 | 2,102 | 10,307 |
| 1922 | 2,321 | 670 | 1,397 | 810 | 2,529 | 2,966 | 7,611 | 1,230 | 1,260 | 861 | 1,008 | 1,045 | 23,708 |
| 1923 | 300 | 300 | 463 | 1,223 | 1,275 | 1,217 | 300 | 300 | 300 | 300 | 4,040 | 2,961 | 12,979 |
| 1924 | 2,849 | 571 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 150 | 1,765 | 1,896 | 9,330 |
| 1925 | 1,286 | 381 | 150 | 150 | 150 | 150 | 195 | 150 | 150 | 1,077 | 2,550 | 406 | 6,794 |
| 1926 | 150 | 150 | 150 | 150 | 449 | 186 | 2,172 | 1,230 | 1,394 | 936 | 1,083 | 1,717 | 9,766 |
| 1927 | 4,318 | 365 | 218 | 207 | 3,831 | 10,886 | 4,331 | 1,230 | 1,299 | 876 | 1,031 | 1,073 | 29,664 |
| 1928 | 300 | 300 | 300 | 1,153 | 1,486 | 1,362 | 300 | 300 | 300 | 3,610 | 2,961 | 2,930 | 15,302 |
| 1929 | 2,914 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 3,353 | 2,780 | 1,276 | 2,208 | 14,630 |
| 1930 | 1,488 | 446 | 150 | 150 | 150 | 326 | 150 | 150 | 150 | 1,095 | 1,646 | 150 | 6,051 |
| 1931 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,290 | 205 | 150 | 150 | 150 | 2,994 |
| 1932 | 150 | 150 | 847 | 386 | 2,222 | 2,951 | 1,968 | 1,310 | 1,380 | 956 | 1,081 | 1,726 | 15,126 |
| 1933 | 610 | 150 | 150 | 501 | 300 | 150 | 150 | 150 | 3,346 | 2,917 | 2,507 | 1,789 | 12,720 |
| 1934 | 150 | 150 | 150 | 503 | 254 | 150 | 150 | 150 | 3,601 | 2,203 | 2,221 | 2,310 | 11,992 |
| 1935 | 150 | 150 | 150 | 549 | 244 | 605 | 932 | 1,230 | 1,385 | 952 | 3,912 | 2,495 | 12,754 |
| 1936 | 1,031 | 776 | 150 | 150 | 1,419 | 323 | 285 | 150 | 150 | 150 | 2,146 | 326 | 7,057 |
| 1937 | 150 | 150 | 150 | 272 | 2,927 | 11,123 | 17,253 | 1,230 | 1,209 | 857 | 1,023 | 1,057 | 37,402 |
| 1938 | 373 | 746 | 300 | 1,162 | 33,200 | 190,967 | 16,284 | 2,246 | 1,131 | 754 | 977 | 1,001 | 249,141 |
| 1939 | 342 | 341 | 300 | 1,268 | 1,344 | 1,475 | 300 | 300 | 300 | 3,372 | 2,958 | 2,936 | 15,237 |
| 1940 | 300 | 300 | 300 | 300 | 305 | 300 | 300 | 300 | 300 | 3,715 | 2,937 | 1,745 | 11,101 |
| 1941 | 1,376 | 150 | 411 | 1,264 | 60,794 | 199,689 | 123,216 | 18,828 | 3,073 | 615 | 717 | 829 | 410,963 |
| 1942 | 300 | 300 | 1,065 | 654 | 485 | 893 | 6,421 | 552 | 378 | 300 | 304 | 878 | 12,530 |
| 1943 | 300 | 300 | 300 | 47,254 | 29,574 | 68,069 | 10,575 | 1,230 | 1,173 | 800 | 982 | 1,002 | 161,558 |
| 1944 | 320 | 310 | 300 | 300 | 18,614 | 36,716 | 4,871 | 1,230 | 1,185 | 863 | 997 | 1,036 | 66,742 |
| 1945 | 361 | 300 | 300 | 300 | 860 | 4,520 | 2,684 | 1,230 | 1,375 | 926 | 1,061 | 1,094 | 15,012 |
| 1946 | 1,110 | 636 | 300 | 300 | 300 | 336 | 481 | 1,367 | 1,409 | 3,301 | 2,964 | 2,940 | 15,444 |
| 1947 | 2,931 | 300 | 300 | 300 | 300 | 300 | 300 | 3,252 | 2,969 | 2,938 | 2,908 | 2,891 | 19,688 |
| 1948 | 2,683 | 1,188 | 150 | 150 | 150 | 150 | 150 | 150 | 630 | 1,003 | 150 | 150 | 6,703 |
| 1949 | 150 | 150 | 150 | 150 | 150 | 1,959 | 150 | 1,608 | 236 | 150 | 150 | 150 | 5,153 |
| 1950 | 150 | 150 | 150 | 150 | 1,834 | 150 | 150 | 2,911 | 155 | 150 | 150 | 150 | 6,250 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 496 | 0 | 0 | 0 | 29 | 525 |
| 1952 | 0 | 0 | 0 | 3,570 | 1,940 | 3,764 | 10,610 | 1,230 | 1,335 | 869 | 977 | 1,353 | 25,648 |
| 1953 | 817 | 300 | 633 | 2,188 | 300 | 300 | 300 | 300 | 300 | 3,686 | 2,964 | 2,378 | 14,465 |
| 1954 | 1,908 | 300 | 300 | 680 | 1,299 | 582 | 300 | 300 | 300 | 3,915 | 2,715 | 2,743 | 15,342 |
| 1955 | 1,757 | 738 | 150 | 169 | 150 | 150 | 150 | 150 | 150 | 1,806 | 2,893 | 455 | 8,719 |
| 1956 | 150 | 150 | 1,756 | 2,283 | 404 | 227 | 317 | 189 | 150 | 150 | 1,600 | 957 | 8,333 |
| 1957 | 174 | 150 | 150 | 150 | 170 | 150 | 150 | 150 | 3,952 | 688 | 2,699 | 730 | 9,313 |
| 1958 | 194 | 230 | 150 | 187 | 1,949 | 2,951 | 38,280 | 9,542 | 1,131 | 749 | 956 | 1,010 | 57,330 |
| 1959 | 347 | 342 | 303 | 300 | 2,302 | 300 | 300 | 300 | 300 | 3,647 | 2,960 | 1,889 | 13,290 |
| 1960 | 1,566 | 871 | 300 | 300 | 1,876 | 300 | 300 | 300 | 300 | 150 | 2,410 | 150 | 8,823 |
| 1961 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,510 | 252 | 150 | 150 | 150 | 3,261 |
| 1962 | 150 | 187 | 150 | 173 | 7,085 | 2,951 | 1,968 | 1,230 | 1,376 | 928 | 1,064 | 1,507 | 18,769 |
| 1963 | 300 | 300 | 300 | 300 | 531 | 480 | 300 | 300 | 300 | 300 | 2,083 | 150 | 5,644 |
| 1964 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,677 | 294 | 150 | 150 | 150 | 3,471 |
| 1965 | 150 | 150 | 150 | 183 | 150 | 150 | 719 | 150 | 3,649 | 2,785 | 1,029 | 321 | 9,585 |
| 1966 | 150 | 734 | 716 | 865 | 1,472 | 2,951 | 2,089 | 1,346 | 1,356 | 940 | 3,975 | 2,927 | 19,521 |
| 1967 | 2,910 | 2,901 | 524 | 1,663 | 1,472 | 18,873 | 53,533 | 20,719 | 1,131 | 859 | 3,492 | 2,611 | 110,688 |
| 1968 | 351 | 349 | 300 | 300 | 300 | 1,868 | 300 | 300 | 3,252 | 300 | 848 | 1,960 | 10,428 |
| 1969 | 1,358 | 652 | 300 | 131,128 | 192,576 | 79,723 | 18,445 | 5,828 | 1,131 | 768 | 926 | 977 | 433,812 |
| 1970 | 324 | 300 | 300 | 300 | 300 | 2,395 | 306 | 300 | 300 | 3,380 | 2,958 | 897 | 12,061 |
| 1971 | 1,357 | 804 | 344 | 300 | 300 | 300 | 300 | 300 | 3,236 | 2,961 | 2,939 | 1,664 | 14,805 |
| 1972 | 1,348 | 738 | 349 | 300 | 300 | 300 | 300 | 3,246 | 2,959 | 150 | 1,293 | 2,136 | 13,419 |
| 1973 | 1,467 | 150 | 150 | 1,526 | 3,279 | 16,162 | 7,880 | 1,230 | 1,222 | 889 | 1,014 | 1,041 | 36,009 |
| 1974 | 369 | 674 | 300 | 1,124 | 300 | 555 | 476 | 1,332 | 1,397 | 941 | 1,060 | 1,300 | 9,828 |
| 1975 | 1,172 | 300 | 528 | 300 | 2,859 | 6,620 | 5,111 | 1,230 | 1,225 | 857 | 1,010 | 1,036 | 22,248 |
| 1976 | 300 | 300 | 300 | 300 | 1,927 | 300 | 300 | 300 | 3,260 | 2,967 | 2,932 | 2,030 | 15,217 |
| 1977 | 1,213 | 300 | 300 | 300 | 300 | 150 | 150 | 150 | 150 | 2,354 | 159 | 150 | 5,675 |
| 1978 | 150 | 150 | 150 | 1,522 | 13,768 | 149,276 | 36,421 | 7,678 | 1,131 | 630 | 880 | 976 | 212,731 |
| 1979 | 300 | 300 | 300 | 500 | 1,083 | 21,529 | 11,365 | 1,230 | 1,165 | 857 | 1,024 | 1,050 | 40,703 |
| 1980 | 755 | 569 | 300 | 411 | 69,887 | 42,110 | 7,167 | 1,230 | 1,131 | 810 | 1,015 | 1,039 | 126,424 |
| 1981 | 356 | 347 | 301 | 300 | 300 | 3,167 | 324 | 300 | 300 | 328 | 1,002 | 2,068 | 9,092 |
| 1982 | 1,414 | 684 | 300 | 300 | 300 | 1,950 | 596 | 300 | 300 | 3,466 | 2,964 | 2,941 | 15,515 |
| 1983 | 300 | 300 | 637 | 15,687 | 59,567 | 198,927 | 57,864 | 30,208 | 5,357 | 615 | 658 | 836 | 370,956 |
| 1984 | 300 | 300 | 13,186 | 4,932 | 1,742 | 503 | 1,968 | 1,333 | 1,353 | 906 | 1,047 | 1,078 | 28,648 |
| 1985 | 881 | 591 | 300 | 300 | 300 | 300 | 300 | 300 | 3,235 | 2,951 | 571 | 1,976 | 12,005 |
| 1986 | 975 | 150 | 150 | 150 | 1,751 | 2,951 | 1,968 | 1,230 | 1,320 | 923 | 1,053 | 1,085 | 13,707 |
| 1987 | 942 | 300 | 300 | 300 | 300 | 1,935 | 300 | 300 | 300 | 300 | 1,743 | 932 | 7,951 |
| 1988 | 300 | 300 | 300 | 300 | 300 | 1,898 | 300 | 150 | 3,417 | 2,173 | 1,431 | 1,862 | 12,731 |
| 1989 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 920 | 1,992 | 517 | 150 | 4,779 |
| 1990 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,114 | 150 | 372 | 209 | 187 | 3,080 |
| 1991 | 302 | 207 | 150 | 150 | 150 | 1,583 | 1,980 | 1,527 | 1,806 | 1,473 | 2,244 | 1,013 | 12,583 |
| 1992 | 263 | 150 | 150 | 150 | 2,461 | 2,951 | 1,968 | 1,230 | 1,260 | 890 | 3,858 | 2,967 | 18,297 |
| 1993 | 892 | 676 | 300 | 27,036 | 116,182 | 66,737 | 29,303 | 6,577 | 1,131 | 650 | 900 | 1,012 | 251,396 |
| AVG | 803 | 392 | 483 | 3,473 | 9,377 | 17,222 | 6,799 | 2,116 | 1,246 | 1,363 | 1,608 | 1,347 | 46,230 |
| MEDIAN | 345 | 300 | 300 | 300 | 467 | 749 | 300 | 1,172 | 1,131 | 883 | 1,060 | 1,054 | 13,135 |

## Alternative 5B

### SANTA YNEZ RIVER ABOVE ALISAL BRIDGE (acre-feet/month)

| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 | 9 | 13 | 29 | 61 | 59,197 | 134,099 | 20,067 | 5,796 | 1,358 | 615 | 615 | 595 | 222,455 |
| 1919 | 90 | 90 | 119 | 858 | 1,163 | 1,173 | 197 | 181 | 126 | 2,919 | 90 | 1,000 | 8,005 |
| 1920 | 750 | 258 | 166 | 157 | 411 | 1,358 | 550 | 231 | 134 | 2,976 | 52 | 1,399 | 8,443 |
| 1921 | 898 | 560 | 29 | 127 | 255 | 418 | 96 | 70 | 9 | 3 | 3,456 | 1,776 | 7,698 |
| 1922 | 1,340 | 397 | 3,544 | 2,190 | 7,908 | 5,016 | 8,337 | 1,452 | 1,131 | 615 | 615 | 595 | 33,140 |
| 1923 | 51 | 49 | 801 | 1,052 | 1,243 | 1,108 | 312 | 222 | 158 | 97 | 3,179 | 2,633 | 10,906 |
| 1924 | 2,495 | 228 | 93 | 116 | 147 | 311 | 176 | 149 | 106 | 0 | 802 | 1,076 | 5,700 |
| 1925 | 729 | 174 | 21 | 20 | 20 | 63 | 283 | 37 | 11 | 402 | 1,553 | 127 | 3,441 |
| 1926 | 0 | 0 | 2 | 2 | 838 | 217 | 6,210 | 1,308 | 1,131 | 615 | 615 | 876 | 11,814 |
| 1927 | 3,629 | 689 | 325 | 348 | 12,610 | 11,974 | 4,931 | 1,311 | 1,131 | 615 | 615 | 595 | 38,774 |
| 1928 | 41 | 52 | 84 | 799 | 1,835 | 1,492 | 249 | 192 | 149 | 2,962 | 2,638 | 2,534 | 13,025 |
| 1929 | 2,506 | 30 | 59 | 99 | 214 | 313 | 273 | 155 | 2,807 | 2,502 | 529 | 1,320 | 10,805 |
| 1930 | 903 | 232 | 25 | 23 | 28 | 691 | 71 | 37 | 5 | 420 | 812 | 0 | 3,246 |
| 1931 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 555 | 10 | 0 | 0 | 0 | 571 |
| 1932 | 0 | 0 | 1,584 | 577 | 7,057 | 3,862 | 2,088 | 1,230 | 1,131 | 615 | 615 | 882 | 19,642 |
| 1933 | 285 | 0 | 0 | 1,097 | 390 | 104 | 84 | 36 | 2,780 | 2,628 | 2,133 | 800 | 10,337 |
| 1934 | 0 | 0 | 0 | 1,023 | 414 | 145 | 33 | 13 | 2,954 | 1,924 | 1,206 | 1,453 | 9,163 |
| 1935 | 5 | 0 | 0 | 1,236 | 426 | 1,566 | 2,651 | 1,287 | 1,131 | 615 | 3,165 | 2,199 | 14,281 |
| 1936 | 408 | 444 | 15 | 19 | 4,134 | 741 | 631 | 92 | 20 | 0 | 1,055 | 49 | 7,608 |
| 1937 | 0 | 0 | 0 | 380 | 8,924 | 16,341 | 18,372 | 1,444 | 1,131 | 615 | 615 | 595 | 48,417 |
| 1938 | 90 | 365 | 122 | 864 | 38,524 | 205,659 | 17,613 | 2,204 | 1,154 | 615 | 615 | 595 | 268,421 |
| 1939 | 90 | 90 | 166 | 1,172 | 1,450 | 1,898 | 421 | 228 | 151 | 2,771 | 2,639 | 2,546 | 13,622 |
| 1940 | 19 | 21 | 38 | 172 | 505 | 437 | 292 | 161 | 96 | 2,986 | 2,592 | 853 | 8,174 |
| 1941 | 744 | 19 | 789 | 3,387 | 74,521 | 222,371 | 133,834 | 20,156 | 3,309 | 734 | 615 | 595 | 461,074 |
| 1942 | 187 | 200 | 2,215 | 1,236 | 717 | 1,499 | 6,822 | 754 | 358 | 152 | 90 | 238 | 14,468 |
| 1943 | 52 | 92 | 118 | 52,678 | 31,761 | 74,506 | 11,422 | 1,427 | 1,131 | 615 | 615 | 595 | 175,011 |
| 1944 | 90 | 90 | 197 | 329 | 22,944 | 39,178 | 5,388 | 1,494 | 1,131 | 615 | 615 | 595 | 72,665 |
| 1945 | 90 | 203 | 161 | 198 | 2,425 | 5,168 | 3,019 | 1,244 | 1,131 | 615 | 615 | 595 | 15,463 |
| 1946 | 458 | 337 | 527 | 208 | 289 | 611 | 863 | 1,230 | 1,131 | 2,767 | 2,656 | 2,558 | 13,634 |
| 1947 | 2,533 | 177 | 201 | 133 | 201 | 196 | 168 | 2,829 | 2,757 | 2,628 | 2,500 | 2,434 | 16,758 |
| 1948 | 2,238 | 429 | 6 | 7 | 8 | 10 | 8 | 1 | 257 | 315 | 0 | 0 | 3,278 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 1,481 | 0 | 815 | 30 | 0 | 0 | 0 | 2,326 |
| 1950 | 0 | 0 | 1 | 0 | 1,091 | 2 | 0 | 1,716 | 1 | 0 | 0 | 0 | 2,811 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 11,177 | 1,472 | 9,586 | 10,538 | 1,375 | 1,131 | 615 | 615 | 617 | 37,127 |
| 1953 | 480 | 167 | 1,075 | 2,612 | 407 | 318 | 283 | 164 | 122 | 3,016 | 2,637 | 2,004 | 13,285 |
| 1954 | 948 | 83 | 88 | 736 | 1,250 | 1,198 | 482 | 157 | 139 | 3,179 | 2,380 | 1,646 | 12,285 |
| 1955 | 1,123 | 479 | 31 | 166 | 103 | 78 | 66 | 92 | 4 | 948 | 1,912 | 174 | 5,174 |
| 1956 | 0 | 0 | 3,563 | 5,353 | 806 | 394 | 643 | 321 | 53 | 25 | 688 | 331 | 12,177 |
| 1957 | 0 | 0 | 0 | 11 | 142 | 145 | 83 | 55 | 3,245 | 349 | 1,677 | 375 | 6,083 |
| 1958 | 2 | 8 | 0 | 193 | 4,849 | 8,378 | 48,456 | 10,850 | 1,403 | 615 | 615 | 595 | 75,963 |
| 1959 | 90 | 90 | 90 | 218 | 2,966 | 414 | 284 | 200 | 147 | 2,986 | 2,630 | 992 | 11,107 |
| 1960 | 923 | 583 | 132 | 174 | 1,762 | 196 | 265 | 161 | 115 | 0 | 1,265 | 0 | 5,574 |
| 1961 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 707 | 34 | 0 | 0 | 0 | 754 |
| 1962 | 0 | 0 | 18 | 44 | 19,361 | 4,850 | 2,316 | 1,243 | 1,131 | 615 | 615 | 734 | 30,925 |
| 1963 | 65 | 55 | 74 | 122 | 838 | 773 | 408 | 248 | 152 | 55 | 1,083 | 0 | 3,873 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 875 | 75 | 0 | 0 | 0 | 949 |
| 1965 | 0 | 0 | 0 | 51 | 4 | 4 | 1,280 | 14 | 2,293 | 1,965 | 488 | 63 | 6,163 |
| 1966 | 0 | 1,094 | 1,273 | 1,934 | 1,781 | 3,028 | 1,968 | 1,230 | 1,131 | 615 | 3,227 | 2,611 | 19,892 |
| 1967 | 2,556 | 2,562 | 1,309 | 4,419 | 2,823 | 19,625 | 54,672 | 22,381 | 1,194 | 615 | 2,900 | 2,341 | 117,397 |
| 1968 | 90 | 90 | 116 | 149 | 232 | 1,826 | 293 | 160 | 2,779 | 91 | 243 | 1,097 | 7,167 |
| 1969 | 787 | 406 | 135 | 145,627 | 212,039 | 86,547 | 20,150 | 6,562 | 1,404 | 615 | 615 | 595 | 475,482 |
| 1970 | 90 | 126 | 154 | 307 | 381 | 3,386 | 279 | 180 | 129 | 2,747 | 2,638 | 272 | 10,689 |
| 1971 | 678 | 576 | 663 | 328 | 254 | 251 | 207 | 153 | 2,747 | 2,689 | 2,564 | 757 | 11,865 |
| 1972 | 702 | 448 | 709 | 242 | 226 | 167 | 165 | 2,866 | 2,767 | 2 | 504 | 1,241 | 10,041 |
| 1973 | 876 | 88 | 24 | 3,724 | 10,015 | 17,938 | 8,624 | 1,475 | 1,131 | 615 | 615 | 595 | 45,720 |
| 1974 | 90 | 315 | 115 | 2,685 | 407 | 901 | 587 | 1,230 | 1,131 | 615 | 615 | 595 | 9,286 |
| 1975 | 595 | 116 | 876 | 240 | 4,326 | 9,953 | 5,632 | 1,490 | 1,131 | 615 | 615 | 595 | 26,185 |
| 1976 | 60 | 61 | 83 | 106 | 1,858 | 271 | 241 | 180 | 2,797 | 2,705 | 2,560 | 1,040 | 11,962 |
| 1977 | 621 | 102 | 113 | 129 | 143 | 50 | 37 | 24 | 3 | 1,391 | 0 | 0 | 2,614 |
| 1978 | 0 | 0 | 0 | 3,191 | 24,119 | 163,611 | 40,167 | 8,508 | 1,442 | 615 | 615 | 595 | 242,862 |
| 1979 | 100 | 103 | 154 | 982 | 2,270 | 22,809 | 12,552 | 1,502 | 1,131 | 615 | 615 | 595 | 43,428 |
| 1980 | 374 | 265 | 138 | 802 | 78,208 | 46,299 | 7,814 | 1,672 | 1,202 | 615 | 615 | 595 | 138,598 |
| 1981 | 90 | 90 | 90 | 235 | 363 | 5,475 | 629 | 298 | 189 | 90 | 325 | 1,193 | 9,066 |
| 1982 | 841 | 434 | 146 | 202 | 210 | 2,131 | 1,600 | 344 | 138 | 2,860 | 2,656 | 2,558 | 14,119 |
| 1983 | 21 | 94 | 1,680 | 20,296 | 66,402 | 210,882 | 63,112 | 33,466 | 6,146 | 762 | 615 | 595 | 404,072 |
| 1984 | 291 | 176 | 13,275 | 5,310 | 2,004 | 705 | 1,990 | 1,230 | 1,131 | 615 | 615 | 595 | 27,937 |
| 1985 | 309 | 297 | 235 | 171 | 236 | 244 | 199 | 149 | 2,738 | 2,679 | 192 | 1,000 | 8,450 |
| 1986 | 439 | 11 | 25 | 87 | 4,333 | 5,191 | 2,132 | 1,276 | 1,131 | 615 | 615 | 595 | 16,449 |
| 1987 | 343 | 90 | 109 | 163 | 146 | 1,885 | 199 | 163 | 123 | 61 | 839 | 346 | 4,468 |
| 1988 | 57 | 50 | 71 | 165 | 142 | 1,988 | 288 | 72 | 2,915 | 1,927 | 651 | 1,059 | 9,385 |
| 1989 | 3 | 0 | 0 | 1 | 31 | 17 | 12 | 6 | 363 | 1,191 | 189 | 0 | 1,813 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 0 | 16 | 0 | 0 | 333 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 3,524 | 1,968 | 1,230 | 1,131 | 831 | 1,393 | 595 | 10,672 |
| 1992 | 26 | 0 | 13 | 130 | 7,315 | 4,283 | 2,607 | 1,353 | 1,131 | 615 | 3,140 | 2,655 | 23,268 |
| 1993 | 464 | 332 | 131 | 30,916 | 124,308 | 72,428 | 31,723 | 7,460 | 1,491 | 615 | 615 | 595 | 271,077 |
| AVG | 459 | 193 | 502 | 4,131 | 11,318 | 19,023 | 7,505 | 2,151 | 1,064 | 1,031 | 1,122 | 855 | 49,354 |
| MEDIAN | 90 | 90 | 90 | 205 | 822 | 1,278 | 516 | 631 | 1,131 | 615 | 615 | 595 | 11,839 |

## Alternative 5B

**SANTA YNEZ RIVER NEAR BUELLTON (acre-feet/month)**

| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 | 0 | 0 | 0 | 4 | 68,310 | 135,767 | 21,941 | 6,622 | 1,751 | 564 | 457 | 431 | 235,846 |
| 1919 | 4 | 9 | 56 | 680 | 1,110 | 1,136 | 95 | 100 | 38 | 2,571 | 0 | 533 | 6,331 |
| 1920 | 354 | 89 | 74 | 54 | 612 | 1,994 | 917 | 222 | 49 | 2,606 | 0 | 813 | 7,784 |
| 1921 | 433 | 300 | 0 | 146 | 405 | 722 | 90 | 52 | 0 | 0 | 2,872 | 1,536 | 6,556 |
| 1922 | 743 | 167 | 6,531 | 4,067 | 13,212 | 7,389 | 9,282 | 1,763 | 1,075 | 490 | 426 | 379 | 45,523 |
| 1923 | 0 | 0 | 1,412 | 1,055 | 1,307 | 1,027 | 359 | 186 | 94 | 24 | 2,732 | 2,405 | 10,601 |
| 1924 | 2,262 | 67 | 11 | 31 | 56 | 418 | 108 | 62 | 24 | 0 | 393 | 591 | 4,023 |
| 1925 | 334 | 31 | 0 | 0 | 0 | 46 | 505 | 6 | 0 | 127 | 976 | 0 | 2,025 |
| 1926 | 0 | 0 | 0 | 0 | 1,564 | 359 | 9,658 | 1,541 | 978 | 444 | 354 | 417 | 15,316 |
| 1927 | 3,062 | 1,116 | 504 | 582 | 21,409 | 12,598 | 5,669 | 1,435 | 1,028 | 485 | 417 | 361 | 48,666 |
| 1928 | 0 | 0 | 10 | 589 | 2,106 | 1,672 | 219 | 121 | 65 | 2,600 | 2,421 | 2,288 | 12,091 |
| 1929 | 2,252 | 0 | 0 | 21 | 244 | 449 | 346 | 97 | 2,478 | 2,315 | 182 | 755 | 9,138 |
| 1930 | 442 | 58 | 0 | 0 | 0 | 1,268 | 40 | 0 | 0 | 130 | 354 | 0 | 2,292 |
| 1931 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 200 |
| 1932 | 0 | 0 | 3,121 | 1,195 | 10,087 | 5,304 | 2,275 | 1,216 | 937 | 417 | 359 | 424 | 25,335 |
| 1933 | 80 | 0 | 0 | 2,064 | 606 | 114 | 74 | 0 | 2,451 | 2,439 | 1,901 | 318 | 10,047 |
| 1934 | 0 | 0 | 0 | 1,939 | 650 | 222 | 0 | 0 | 2,567 | 1,729 | 649 | 823 | 8,579 |
| 1935 | 0 | 0 | 0 | 2,296 | 740 | 2,567 | 4,449 | 1,455 | 970 | 421 | 2,713 | 1,980 | 17,590 |
| 1936 | 100 | 209 | 0 | 0 | 6,955 | 1,325 | 910 | 75 | 0 | 0 | 558 | 0 | 10,132 |
| 1937 | 0 | 0 | 0 | 745 | 16,925 | 22,292 | 19,794 | 1,719 | 1,134 | 501 | 420 | 367 | 63,898 |
| 1938 | 0 | 170 | 53 | 678 | 45,873 | 215,248 | 19,260 | 2,138 | 1,288 | 629 | 459 | 421 | 286,216 |
| 1939 | 6 | 6 | 159 | 1,285 | 1,718 | 2,523 | 596 | 194 | 69 | 2,447 | 2,441 | 2,315 | 13,759 |
| 1940 | 0 | 0 | 0 | 189 | 938 | 744 | 391 | 108 | 16 | 2,596 | 2,369 | 403 | 7,754 |
| 1941 | 330 | 0 | 1,374 | 6,369 | 85,090 | 241,980 | 141,859 | 21,864 | 3,705 | 1,025 | 723 | 581 | 504,902 |
| 1942 | 214 | 239 | 3,894 | 2,104 | 1,057 | 2,342 | 7,427 | 1,037 | 411 | 105 | 35 | 31 | 18,898 |
| 1943 | 0 | 11 | 35 | 57,518 | 34,283 | 80,016 | 12,418 | 1,694 | 1,185 | 561 | 457 | 419 | 188,597 |
| 1944 | 15 | 14 | 208 | 484 | 26,776 | 41,622 | 5,993 | 1,856 | 1,171 | 493 | 446 | 378 | 79,455 |
| 1945 | 1 | 261 | 138 | 195 | 4,499 | 5,695 | 3,494 | 1,310 | 968 | 446 | 400 | 346 | 17,753 |
| 1946 | 149 | 147 | 949 | 193 | 360 | 678 | 1,452 | 1,194 | 948 | 2,448 | 2,464 | 2,332 | 13,315 |
| 1947 | 2,297 | 236 | 261 | 88 | 206 | 176 | 102 | 2,534 | 2,607 | 2,457 | 2,278 | 2,179 | 15,421 |
| 1948 | 1,982 | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 99 | 56 | 0 | 0 | 2,241 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 1,577 | 0 | 415 | 0 | 0 | 0 | 0 | 1,992 |
| 1950 | 0 | 0 | 0 | 0 | 951 | 0 | 0 | 1,039 | 0 | 0 | 0 | 0 | 1,990 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 18,904 | 1,825 | 18,927 | 11,630 | 1,723 | 981 | 504 | 474 | 248 | 55,218 |
| 1953 | 277 | 110 | 1,786 | 3,357 | 572 | 368 | 245 | 65 | 31 | 2,636 | 2,403 | 1,751 | 13,600 |
| 1954 | 420 | 0 | 0 | 808 | 1,287 | 2,038 | 753 | 53 | 53 | 2,732 | 2,134 | 963 | 11,239 |
| 1955 | 563 | 217 | 0 | 109 | 75 | 40 | 22 | 100 | 0 | 489 | 1,208 | 5 | 2,829 |
| 1956 | 0 | 0 | 6,248 | 8,383 | 1,330 | 608 | 949 | 542 | 8 | 8 | 286 | 37 | 18,400 |
| 1957 | 0 | 0 | 0 | 0 | 177 | 217 | 84 | 45 | 2,801 | 150 | 1,024 | 111 | 4,609 |
| 1958 | 0 | 0 | 0 | 258 | 8,935 | 15,692 | 60,087 | 12,322 | 1,804 | 532 | 446 | 395 | 100,473 |
| 1959 | 1 | 0 | 2 | 232 | 4,085 | 585 | 237 | 115 | 80 | 2,614 | 2,411 | 500 | 10,863 |
| 1960 | 451 | 317 | 13 | 60 | 1,683 | 86 | 224 | 60 | 24 | 0 | 696 | 0 | 3,614 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 264 | 0 | 0 | 0 | 0 | 264 |
| 1962 | 0 | 0 | 0 | 0 | 34,328 | 7,505 | 2,801 | 1,260 | 922 | 424 | 358 | 306 | 47,905 |
| 1963 | 0 | 0 | 0 | 8 | 1,279 | 1,181 | 567 | 239 | 85 | 0 | 541 | 0 | 3,901 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 380 | 0 | 0 | 0 | 0 | 380 |
| 1965 | 0 | 0 | 0 | 17 | 0 | 0 | 2,032 | 0 | 1,489 | 1,259 | 97 | 0 | 4,894 |
| 1966 | 0 | 1,650 | 2,088 | 3,441 | 2,267 | 3,181 | 1,747 | 1,100 | 959 | 418 | 2,758 | 2,373 | 21,982 |
| 1967 | 2,296 | 2,309 | 2,478 | 8,334 | 4,110 | 20,063 | 55,064 | 23,680 | 1,201 | 465 | 2,666 | 2,194 | 124,860 |
| 1968 | 6 | 2 | 55 | 103 | 264 | 1,957 | 341 | 66 | 2,480 | 10 | 44 | 616 | 5,942 |
| 1969 | 374 | 194 | 20 | 163,134 | 230,185 | 94,929 | 21,420 | 7,373 | 1,760 | 528 | 481 | 440 | 520,837 |
| 1970 | 13 | 100 | 113 | 447 | 589 | 4,520 | 234 | 88 | 44 | 2,432 | 2,447 | 38 | 11,066 |
| 1971 | 297 | 415 | 884 | 433 | 253 | 200 | 132 | 58 | 2,441 | 2,528 | 2,350 | 343 | 10,335 |
| 1972 | 306 | 222 | 1,187 | 251 | 206 | 76 | 77 | 2,581 | 2,630 | 0 | 176 | 707 | 8,420 |
| 1973 | 430 | 50 | 0 | 6,102 | 18,587 | 19,597 | 9,513 | 1,635 | 1,038 | 455 | 425 | 374 | 58,204 |
| 1974 | 0 | 129 | 35 | 4,992 | 598 | 1,407 | 778 | 1,211 | 947 | 430 | 384 | 242 | 11,153 |
| 1975 | 238 | 5 | 1,398 | 224 | 6,442 | 14,516 | 6,283 | 1,848 | 1,039 | 470 | 426 | 374 | 33,262 |
| 1976 | 0 | 0 | 1 | 13 | 1,988 | 276 | 203 | 91 | 2,491 | 2,532 | 2,336 | 543 | 10,474 |
| 1977 | 232 | 0 | 3 | 16 | 31 | 0 | 0 | 0 | 0 | 866 | 0 | 0 | 1,148 |
| 1978 | 0 | 0 | 0 | 5,301 | 38,433 | 181,400 | 44,830 | 9,581 | 1,781 | 711 | 572 | 427 | 283,036 |
| 1979 | 25 | 32 | 118 | 1,789 | 4,005 | 24,705 | 13,982 | 1,854 | 1,115 | 472 | 418 | 361 | 48,875 |
| 1980 | 169 | 94 | 38 | 1,433 | 89,201 | 51,466 | 8,585 | 2,097 | 1,264 | 503 | 430 | 383 | 155,662 |
| 1981 | 1 | 0 | 4 | 273 | 548 | 8,803 | 1,047 | 351 | 157 | 10 | 71 | 680 | 11,947 |
| 1982 | 414 | 216 | 30 | 122 | 154 | 2,416 | 2,919 | 406 | 48 | 2,540 | 2,454 | 2,325 | 14,044 |
| 1983 | 0 | 60 | 3,002 | 27,080 | 75,244 | 218,177 | 67,010 | 36,383 | 7,292 | 1,076 | 786 | 582 | 436,692 |
| 1984 | 471 | 168 | 13,961 | 5,715 | 2,284 | 933 | 1,944 | 1,088 | 952 | 446 | 409 | 354 | 28,724 |
| 1985 | 62 | 119 | 243 | 109 | 235 | 235 | 144 | 57 | 2,439 | 2,514 | 47 | 537 | 6,740 |
| 1986 | 128 | 0 | 0 | 82 | 7,924 | 8,335 | 2,373 | 1,265 | 1,031 | 443 | 399 | 348 | 22,327 |
| 1987 | 78 | 0 | 11 | 78 | 45 | 1,927 | 109 | 65 | 33 | 0 | 432 | 61 | 2,840 |
| 1988 | 0 | 0 | 0 | 112 | 57 | 2,305 | 330 | 18 | 2,582 | 1,760 | 276 | 558 | 7,997 |
| 1989 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 114 | 722 | 22 | 0 | 866 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 39 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 6,779 | 2,469 | 1,170 | 704 | 419 | 803 | 276 | 12,621 |
| 1992 | 0 | 0 | 0 | 202 | 14,034 | 6,168 | 3,410 | 1,532 | 1,097 | 450 | 2,703 | 2,428 | 32,024 |
| 1993 | 220 | 132 | 38 | 36,548 | 134,352 | 78,997 | 34,776 | 8,317 | 1,841 | 641 | 555 | 416 | 296,834 |
| AVG | 296 | 129 | 691 | 5,040 | 13,627 | 20,920 | 8,277 | 2,281 | 998 | 873 | 884 | 607 | 54,624 |
| MEDIAN | 5 | 1 | 4 | 213 | 1,084 | 1,624 | 766 | 393 | 950 | 479 | 439 | 381 | 11,593 |

| Alternative 5B | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER ABOVE SALSIPUEDES CREEK CONFLUENCE (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 0 | 0 | 0 | 0 | 77,294 | 135,579 | 24,007 | 7,780 | 2,263 | 493 | 225 | 159 | 247,800 |
| 1919 | 0 | 0 | 0 | 358 | 897 | 1,061 | 26 | 48 | 0 | 2,046 | 0 | 6 | 4,444 |
| 1920 | 0 | 0 | 0 | 0 | 606 | 2,088 | 1,249 | 234 | 0 | 2,055 | 0 | 79 | 6,310 |
| 1921 | 0 | 4 | 0 | 55 | 403 | 907 | 84 | 42 | 0 | 0 | 1,934 | 1,166 | 4,595 |
| 1922 | 70 | 0 | 8,784 | 5,965 | 17,702 | 9,906 | 10,584 | 2,302 | 1,135 | 384 | 188 | 103 | 57,123 |
| 1923 | 0 | 0 | 1,572 | 969 | 1,341 | 1,017 | 477 | 211 | 68 | 0 | 2,031 | 2,049 | 9,736 |
| 1924 | 1,897 | 0 | 0 | 0 | 0 | 427 | 45 | 2 | 0 | 0 | 0 | 10 | 2,381 |
| 1925 | 0 | 0 | 0 | 0 | 0 | 0 | 515 | 0 | 0 | 0 | 118 | 0 | 633 |
| 1926 | 0 | 0 | 0 | 0 | 1,660 | 303 | 11,002 | 1,786 | 845 | 244 | 60 | 0 | 15,901 |
| 1927 | 2,139 | 1,270 | 584 | 796 | 29,309 | 13,026 | 6,714 | 1,728 | 1,022 | 359 | 155 | 65 | 57,166 |
| 1928 | 0 | 0 | 0 | 237 | 1,882 | 1,728 | 213 | 80 | 3 | 2,083 | 2,086 | 1,899 | 10,211 |
| 1929 | 1,852 | 0 | 0 | 0 | 176 | 486 | 371 | 48 | 2,074 | 2,052 | 0 | 54 | 7,114 |
| 1930 | 0 | 0 | 0 | 0 | 0 | 1,555 | 1 | 0 | 0 | 0 | 0 | 0 | 1,556 |
| 1931 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1932 | 0 | 0 | 3,768 | 1,145 | 10,425 | 6,810 | 2,496 | 1,291 | 773 | 201 | 66 | 0 | 26,975 |
| 1933 | 0 | 0 | 0 | 2,595 | 686 | 112 | 69 | 0 | 2,054 | 2,177 | 1,543 | 0 | 9,236 |
| 1934 | 0 | 0 | 0 | 2,319 | 657 | 246 | 0 | 0 | 2,069 | 1,455 | 45 | 81 | 6,873 |
| 1935 | 0 | 0 | 0 | 2,894 | 932 | 3,245 | 5,943 | 1,742 | 871 | 215 | 2,063 | 1,659 | 19,564 |
| 1936 | 0 | 0 | 0 | 0 | 8,783 | 1,933 | 1,093 | 97 | 0 | 0 | 19 | 0 | 11,925 |
| 1937 | 0 | 0 | 0 | 705 | 24,499 | 28,033 | 21,667 | 2,215 | 1,266 | 398 | 174 | 83 | 79,041 |
| 1938 | 0 | 0 | 0 | 372 | 53,403 | 221,402 | 21,363 | 2,237 | 1,570 | 668 | 245 | 157 | 301,416 |
| 1939 | 0 | 0 | 47 | 1,238 | 1,930 | 3,218 | 831 | 222 | 21 | 2,025 | 2,137 | 1,943 | 13,612 |
| 1940 | 0 | 0 | 0 | 81 | 1,179 | 964 | 487 | 82 | 0 | 2,042 | 2,027 | 0 | 6,862 |
| 1941 | 0 | 0 | 1,565 | 9,060 | 88,843 | 258,205 | 147,333 | 23,837 | 4,163 | 1,302 | 744 | 471 | 535,522 |
| 1942 | 160 | 194 | 4,811 | 2,781 | 1,349 | 3,030 | 8,162 | 1,407 | 498 | 50 | 0 | 0 | 22,442 |
| 1943 | 0 | 0 | 0 | 60,529 | 37,287 | 85,042 | 13,742 | 2,096 | 1,344 | 503 | 246 | 162 | 200,951 |
| 1944 | 0 | 0 | 92 | 509 | 28,962 | 44,099 | 6,859 | 2,388 | 1,310 | 380 | 210 | 90 | 84,899 |
| 1945 | 0 | 166 | 41 | 131 | 6,670 | 6,112 | 4,243 | 1,531 | 895 | 270 | 120 | 40 | 20,219 |
| 1946 | 0 | 0 | 1,158 | 130 | 412 | 500 | 2,175 | 1,254 | 810 | 2,049 | 2,171 | 1,972 | 12,631 |
| 1947 | 1,922 | 176 | 233 | 35 | 183 | 170 | 70 | 2,296 | 2,470 | 2,225 | 1,936 | 1,774 | 13,491 |
| 1948 | 1,578 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,578 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 824 | 0 | 0 | 0 | 0 | 0 | 0 | 824 |
| 1950 | 0 | 0 | 0 | 0 | 189 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 236 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 26,393 | 1,005 | 27,314 | 12,221 | 2,063 | 760 | 321 | 237 | 0 | 70,315 |
| 1953 | 21 | 0 | 1,813 | 3,854 | 761 | 475 | 213 | 15 | 0 | 2,121 | 2,053 | 1,365 | 12,692 |
| 1954 | 0 | 0 | 0 | 589 | 1,120 | 2,559 | 1,056 | 0 | 0 | 2,110 | 1,768 | 163 | 9,365 |
| 1955 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 3 | 233 | 0 | 301 |
| 1956 | 0 | 0 | 6,741 | 8,909 | 1,721 | 824 | 1,151 | 841 | 0 | 0 | 0 | 0 | 20,186 |
| 1957 | 0 | 0 | 0 | 0 | 7 | 108 | 13 | 0 | 2,095 | 0 | 171 | 0 | 2,395 |
| 1958 | 0 | 0 | 0 | 69 | 11,628 | 22,684 | 71,961 | 14,253 | 2,357 | 407 | 202 | 127 | 123,689 |
| 1959 | 0 | 0 | 0 | 115 | 4,822 | 738 | 159 | 47 | 30 | 2,078 | 2,068 | 2 | 10,061 |
| 1960 | 0 | 10 | 0 | 0 | 1,259 | 0 | 109 | 0 | 0 | 0 | 11 | 0 | 1,390 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 46,773 | 8,394 | 2,909 | 1,115 | 622 | 166 | 45 | 0 | 60,024 |
| 1963 | 0 | 0 | 0 | 0 | 911 | 1,000 | 450 | 134 | 3 | 0 | 0 | 0 | 2,498 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 1,263 | 0 | 244 | 243 | 0 | 0 | 1,750 |
| 1966 | 0 | 907 | 1,935 | 4,361 | 2,482 | 3,354 | 1,579 | 1,041 | 838 | 205 | 2,076 | 2,023 | 20,800 |
| 1967 | 1,909 | 1,940 | 3,566 | 12,002 | 5,472 | 20,712 | 55,715 | 25,194 | 1,239 | 319 | 2,282 | 1,950 | 132,301 |
| 1968 | 0 | 0 | 0 | 14 | 237 | 2,052 | 418 | 10 | 2,163 | 0 | 0 | 17 | 4,911 |
| 1969 | 0 | 0 | 0 | 182,825 | 249,459 | 105,364 | 22,324 | 8,329 | 2,156 | 410 | 280 | 208 | 571,354 |
| 1970 | 0 | 17 | 20 | 523 | 801 | 5,601 | 218 | 45 | 2 | 2,027 | 2,154 | 0 | 11,408 |
| 1971 | 0 | 112 | 744 | 450 | 214 | 138 | 75 | 5 | 2,126 | 2,312 | 2,019 | 0 | 8,195 |
| 1972 | 0 | 0 | 1,394 | 210 | 172 | 18 | 27 | 2,326 | 2,504 | 0 | 0 | 40 | 6,690 |
| 1973 | 0 | 0 | 0 | 6,852 | 26,940 | 20,818 | 10,728 | 1,845 | 975 | 303 | 175 | 88 | 68,723 |
| 1974 | 0 | 0 | 0 | 6,613 | 762 | 1,833 | 1,005 | 1,275 | 815 | 227 | 97 | 0 | 12,629 |
| 1975 | 0 | 0 | 1,260 | 117 | 7,843 | 18,229 | 7,081 | 2,363 | 945 | 308 | 180 | 91 | 38,417 |
| 1976 | 0 | 0 | 0 | 0 | 1,777 | 224 | 140 | 16 | 2,120 | 2,275 | 1,972 | 11 | 8,536 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 63 |
| 1978 | 0 | 0 | 0 | 5,248 | 51,203 | 200,998 | 50,149 | 10,997 | 2,169 | 772 | 446 | 158 | 322,141 |
| 1979 | 0 | 0 | 11 | 2,280 | 5,477 | 26,521 | 15,842 | 2,359 | 1,103 | 296 | 143 | 54 | 54,086 |
| 1980 | 0 | 0 | 0 | 1,732 | 100,092 | 57,413 | 9,688 | 2,615 | 1,324 | 351 | 181 | 93 | 173,488 |
| 1981 | 0 | 0 | 0 | 140 | 593 | 11,694 | 1,515 | 454 | 149 | 0 | 0 | 18 | 14,563 |
| 1982 | 0 | 0 | 0 | 0 | 33 | 2,537 | 4,316 | 489 | 0 | 2,086 | 2,139 | 1,948 | 13,548 |
| 1983 | 0 | 0 | 4,011 | 32,757 | 84,010 | 223,674 | 69,591 | 39,092 | 8,684 | 1,379 | 896 | 494 | 464,587 |
| 1984 | 563 | 94 | 14,397 | 6,294 | 2,754 | 1,334 | 2,024 | 1,058 | 860 | 276 | 137 | 51 | 29,842 |
| 1985 | 0 | 0 | 70 | 10 | 159 | 186 | 101 | 2 | 2,102 | 2,280 | 0 | 5 | 4,914 |
| 1986 | 0 | 0 | 0 | 0 | 10,274 | 10,565 | 2,728 | 1,258 | 1,007 | 268 | 127 | 49 | 26,275 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 1,609 | 23 | 0 | 0 | 0 | 0 | 0 | 1,632 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 2,249 | 281 | 0 | 2,053 | 1,489 | 0 | 0 | 6,073 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 40 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 8,992 | 2,392 | 894 | 168 | 1 | 68 | 0 | 12,514 |
| 1992 | 0 | 0 | 0 | 79 | 20,246 | 8,210 | 4,488 | 1,861 | 1,162 | 265 | 2,092 | 2,100 | 40,503 |
| 1993 | 1 | 0 | 0 | 42,101 | 145,553 | 86,807 | 38,779 | 9,324 | 2,201 | 603 | 423 | 156 | 325,947 |
| AVG | 159 | 64 | 771 | 5,756 | 15,582 | 22,595 | 9,007 | 2,479 | 954 | 680 | 595 | 332 | 58,975 |
| MEDIAN | 0 | 0 | 0 | 116 | 968 | 1,780 | 1,031 | 228 | 792 | 286 | 149 | 18 | 12,220 |

| Alternative 5B | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER AT LOMPOC NARROWS (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 0 | 0 | 0 | 54 | 83,154 | 144,219 | 25,699 | 8,326 | 2,672 | 670 | 289 | 218 | 265,302 |
| 1919 | 68 | 67 | 73 | 414 | 1,087 | 1,249 | 19 | 133 | 0 | 1,946 | 0 | 0 | 5,057 |
| 1920 | 23 | 47 | 55 | 59 | 842 | 3,030 | 1,662 | 323 | 84 | 1,974 | 0 | 22 | 8,120 |
| 1921 | 0 | 0 | 0 | 158 | 634 | 1,292 | 166 | 122 | 27 | 64 | 1,795 | 1,122 | 5,381 |
| 1922 | 23 | 0 | 12,076 | 7,500 | 22,255 | 11,823 | 11,440 | 2,522 | 1,227 | 462 | 159 | 71 | 69,557 |
| 1923 | 0 | 0 | 2,549 | 1,178 | 1,633 | 1,106 | 618 | 304 | 156 | 79 | 1,933 | 2,007 | 11,564 |
| 1924 | 1,849 | 0 | 66 | 71 | 74 | 692 | 132 | 84 | 79 | 0 | 0 | 0 | 3,048 |
| 1925 | 0 | 0 | 0 | 0 | 0 | 10 | 730 | 49 | 49 | 0 | 17 | 0 | 855 |
| 1926 | 0 | 0 | 10 | 20 | 2,476 | 670 | 15,662 | 2,198 | 930 | 317 | 35 | 0 | 22,317 |
| 1927 | 1,964 | 1,908 | 960 | 1,084 | 35,421 | 14,451 | 7,357 | 1,934 | 1,107 | 431 | 122 | 33 | 66,772 |
| 1928 | 0 | 49 | 56 | 276 | 2,575 | 2,146 | 305 | 167 | 86 | 2,003 | 2,042 | 1,844 | 11,550 |
| 1929 | 1,796 | 0 | 61 | 74 | 258 | 679 | 563 | 131 | 2,010 | 2,016 | 0 | 3 | 7,592 |
| 1930 | 0 | 0 | 0 | 0 | 21 | 1,922 | 77 | 69 | 0 | 0 | 0 | 0 | 2,089 |
| 1931 | 0 | 0 | 0 | 0 | 62 | 20 | 37 | 0 | 0 | 0 | 0 | 0 | 119 |
| 1932 | 0 | 0 | 5,392 | 1,568 | 16,635 | 7,786 | 2,923 | 1,486 | 851 | 219 | 38 | 0 | 36,900 |
| 1933 | 0 | 0 | 0 | 3,267 | 1,050 | 203 | 163 | 83 | 1,987 | 2,140 | 1,493 | 0 | 10,387 |
| 1934 | 0 | 0 | 0 | 0 | 3,071 | 1,085 | 434 | 85 | 32 | 1,996 | 1,419 | 7 | 18 | 8,147 |
| 1935 | 0 | 0 | 0 | 3,669 | 1,315 | 4,266 | 7,584 | 1,946 | 952 | 234 | 1,973 | 1,620 | 23,559 |
| 1936 | 0 | 0 | 0 | 48 | 11,067 | 2,455 | 1,538 | 193 | 37 | 0 | 0 | 0 | 15,338 |
| 1937 | 0 | 0 | 0 | 984 | 29,702 | 32,627 | 22,957 | 2,434 | 1,361 | 475 | 144 | 53 | 90,736 |
| 1938 | 0 | 0 | 55 | 400 | 58,126 | 235,308 | 22,657 | 2,338 | 1,673 | 751 | 312 | 220 | 321,840 |
| 1939 | 0 | 0 | 199 | 1,477 | 2,325 | 3,801 | 1,134 | 317 | 110 | 1,962 | 2,095 | 1,889 | 15,309 |
| 1940 | 0 | 0 | 0 | 208 | 1,571 | 1,367 | 705 | 169 | 33 | 1,959 | 1,980 | 0 | 7,993 |
| 1941 | 0 | 0 | 2,288 | 11,640 | 108,116 | 277,073 | 156,986 | 25,527 | 4,878 | 1,800 | 1,124 | 744 | 590,176 |
| 1942 | 438 | 472 | 8,215 | 4,461 | 2,260 | 4,857 | 9,290 | 1,919 | 793 | 231 | 167 | 55 | 33,158 |
| 1943 | 66 | 157 | 165 | 63,415 | 39,245 | 88,983 | 14,704 | 2,512 | 1,543 | 684 | 315 | 227 | 212,016 |
| 1944 | 74 | 73 | 359 | 884 | 33,115 | 46,628 | 7,500 | 2,810 | 1,509 | 460 | 277 | 63 | 93,753 |
| 1945 | 21 | 321 | 209 | 305 | 7,526 | 6,722 | 4,473 | 1,636 | 881 | 247 | 90 | 14 | 22,446 |
| 1946 | 0 | 0 | 1,239 | 199 | 497 | 1,296 | 2,482 | 1,343 | 887 | 1,993 | 2,131 | 1,921 | 13,988 |
| 1947 | 1,867 | 331 | 413 | 118 | 368 | 283 | 159 | 2,253 | 2,445 | 2,185 | 1,880 | 1,710 | 14,012 |
| 1948 | 1,515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,515 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 1,916 | 0 | 0 | 0 | 0 | 0 | 0 | 1,916 |
| 1950 | 0 | 0 | 0 | 0 | 555 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 557 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 32,930 | 1,267 | 36,012 | 12,515 | 2,096 | 753 | 321 | 253 | 0 | 86,147 |
| 1953 | 55 | 212 | 3,670 | 4,904 | 959 | 588 | 363 | 51 | 31 | 2,023 | 2,002 | 1,309 | 16,167 |
| 1954 | 0 | 0 | 0 | 649 | 1,382 | 3,938 | 1,257 | 0 | 76 | 2,001 | 1,717 | 91 | 11,112 |
| 1955 | 0 | 0 | 0 | 275 | 147 | 68 | 85 | 120 | 1 | 0 | 93 | 0 | 790 |
| 1956 | 0 | 0 | 12,858 | 16,085 | 2,831 | 1,334 | 1,895 | 1,142 | 87 | 79 | 0 | 1 | 36,311 |
| 1957 | 0 | 0 | 1 | 44 | 342 | 268 | 95 | 73 | 1,985 | 1 | 87 | 0 | 2,896 |
| 1958 | 1 | 0 | 0 | 309 | 16,916 | 29,651 | 80,416 | 15,138 | 2,770 | 583 | 280 | 187 | 146,251 |
| 1959 | 68 | 66 | 68 | 280 | 6,177 | 1,036 | 360 | 135 | 114 | 1,995 | 2,022 | 0 | 12,321 |
| 1960 | 0 | 0 | 3 | 49 | 1,747 | 84 | 411 | 77 | 0 | 0 | 0 | 0 | 2,370 |
| 1961 | 0 | 47 | 85 | 2 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 1962 | 1 | 0 | 114 | 436 | 65,393 | 12,134 | 3,529 | 1,408 | 712 | 237 | 21 | 0 | 83,983 |
| 1963 | 0 | 2 | 36 | 54 | 2,660 | 2,609 | 1,319 | 513 | 182 | 71 | 0 | 0 | 7,446 |
| 1964 | 0 | 0 | 1 | 3 | 4 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 22 |
| 1965 | 0 | 0 | 0 | 0 | 337 | 23 | 83 | 2,716 | 80 | 223 | 176 | 1 | 0 | 3,639 |
| 1966 | 1 | 3,540 | 4,318 | 6,691 | 3,862 | 3,871 | 1,745 | 1,225 | 913 | 220 | 1,974 | 1,978 | 30,338 |
| 1967 | 1,858 | 1,888 | 4,031 | 15,926 | 5,934 | 21,130 | 56,630 | 25,656 | 1,431 | 298 | 2,206 | 1,915 | 138,903 |
| 1968 | 0 | 20 | 69 | 87 | 305 | 2,208 | 513 | 4 | 2,098 | 0 | 1 | 0 | 5,307 |
| 1969 | 0 | 0 | 0 | 190,943 | 257,779 | 108,154 | 24,160 | 8,965 | 2,562 | 571 | 348 | 271 | 593,753 |
| 1970 | 74 | 93 | 190 | 696 | 987 | 6,348 | 311 | 38 | 0 | 1,939 | 2,109 | 0 | 12,785 |
| 1971 | 0 | 54 | 1,032 | 609 | 399 | 223 | 170 | 1 | 2,052 | 2,272 | 1,966 | 0 | 8,777 |
| 1972 | 0 | 0 | 1,528 | 268 | 240 | 8 | 17 | 2,247 | 2,474 | 0 | 0 | 0 | 6,783 |
| 1973 | 0 | 101 | 1 | 10,934 | 33,715 | 23,587 | 11,581 | 2,147 | 1,158 | 376 | 186 | 56 | 83,842 |
| 1974 | 18 | 16 | 62 | 9,255 | 1,068 | 2,744 | 1,408 | 1,467 | 894 | 246 | 108 | 0 | 17,285 |
| 1975 | 2 | 11 | 2,725 | 293 | 11,276 | 24,993 | 8,015 | 2,780 | 1,228 | 397 | 244 | 103 | 52,066 |
| 1976 | 66 | 65 | 68 | 72 | 2,315 | 422 | 340 | 101 | 2,064 | 2,240 | 1,919 | 0 | 9,672 |
| 1977 | 0 | 3 | 5 | 43 | 51 | 70 | 0 | 55 | 0 | 2 | 0 | 0 | 230 |
| 1978 | 0 | 0 | 0 | 9,539 | 66,397 | 213,004 | 54,199 | 11,955 | 2,574 | 1,052 | 610 | 234 | 359,564 |
| 1979 | 147 | 163 | 182 | 3,353 | 7,618 | 29,191 | 16,826 | 2,777 | 1,389 | 383 | 154 | 64 | 62,247 |
| 1980 | 18 | 16 | 73 | 2,369 | 108,757 | 61,596 | 10,436 | 3,032 | 1,614 | 507 | 194 | 103 | 188,715 |
| 1981 | 21 | 19 | 65 | 396 | 862 | 15,362 | 2,026 | 654 | 240 | 31 | 13 | 0 | 19,689 |
| 1982 | 0 | 5 | 43 | 137 | 93 | 2,688 | 4,957 | 583 | 37 | 2,019 | 2,099 | 1,897 | 14,557 |
| 1983 | 0 | 62 | 4,342 | 41,368 | 93,640 | 233,629 | 74,810 | 41,016 | 9,541 | 1,879 | 1,179 | 669 | 502,135 |
| 1984 | 844 | 372 | 15,773 | 6,822 | 3,076 | 1,551 | 2,225 | 1,152 | 892 | 253 | 104 | 22 | 33,086 |
| 1985 | 0 | 10 | 389 | 89 | 328 | 371 | 182 | 0 | 2,030 | 2,241 | 0 | 0 | 5,638 |
| 1986 | 0 | 1 | 35 | 110 | 15,034 | 16,102 | 3,149 | 1,556 | 1,097 | 246 | 97 | 22 | 37,449 |
| 1987 | 7 | 16 | 61 | 157 | 72 | 2,340 | 109 | 35 | 0 | 0 | 0 | 0 | 2,797 |
| 1988 | 0 | 0 | 18 | 114 | 51 | 2,230 | 373 | 80 | 1,983 | 1,454 | 0 | 0 | 6,304 |
| 1989 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 12,810 | 2,252 | 710 | 0 | 0 | 0 | 0 | 15,773 |
| 1992 | 0 | 0 | 2 | 10 | 24,758 | 9,365 | 4,672 | 2,038 | 1,236 | 330 | 1,997 | 2,054 | 46,463 |
| 1993 | 0 | 0 | 138 | 45,488 | 153,103 | 90,065 | 39,960 | 9,863 | 2,506 | 782 | 491 | 126 | 342,522 |
| AVG | 170 | 134 | 1,137 | 6,694 | 17,850 | 24,621 | 9,814 | 2,689 | 1,044 | 710 | 591 | 328 | 65,781 |
| MEDIAN | 0 | 0 | 56 | 287 | 1,348 | 2,285 | 1,364 | 418 | 866 | 319 | 115 | 0 | 14,000 |

| Alternative 5C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER BELOW HILTON CREEK (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 476 | 453 | 433 | 414 | 47,567 | 127,927 | 17,774 | 5,003 | 1,061 | 839 | 1,086 | 1,108 | 204,142 |
| 1919 | 428 | 378 | 365 | 1,273 | 1,296 | 1,294 | 351 | 361 | 374 | 3,790 | 441 | 2,163 | 12,513 |
| 1920 | 1,460 | 515 | 342 | 356 | 273 | 329 | 239 | 352 | 378 | 3,857 | 375 | 2,717 | 11,193 |
| 1921 | 1,642 | 911 | 197 | 163 | 162 | 183 | 196 | 206 | 229 | 235 | 4,837 | 2,165 | 11,126 |
| 1922 | 2,576 | 736 | 615 | 395 | 1,048 | 2,412 | 7,035 | 1,187 | 1,310 | 934 | 1,113 | 1,166 | 20,527 |
| 1923 | 382 | 390 | 302 | 1,299 | 1,307 | 1,283 | 314 | 346 | 364 | 378 | 4,272 | 3,037 | 13,674 |
| 1924 | 3,022 | 673 | 382 | 378 | 372 | 309 | 369 | 376 | 384 | 394 | 1,887 | 2,092 | 10,636 |
| 1925 | 1,411 | 595 | 200 | 211 | 219 | 206 | 171 | 220 | 229 | 1,229 | 2,801 | 553 | 8,046 |
| 1926 | 211 | 222 | 222 | 222 | 270 | 166 | 927 | 1,234 | 1,490 | 1,029 | 1,203 | 1,920 | 9,116 |
| 1927 | 4,466 | 225 | 171 | 169 | 1,553 | 9,303 | 4,165 | 1,220 | 1,359 | 952 | 1,139 | 1,198 | 25,919 |
| 1928 | 383 | 386 | 378 | 1,272 | 1,385 | 1,336 | 332 | 354 | 364 | 3,805 | 3,038 | 3,026 | 16,059 |
| 1929 | 3,017 | 401 | 394 | 380 | 343 | 310 | 326 | 372 | 3,546 | 2,801 | 1,495 | 2,411 | 15,796 |
| 1930 | 1,617 | 503 | 200 | 210 | 216 | 220 | 205 | 219 | 229 | 1,338 | 1,861 | 205 | 7,022 |
| 1931 | 223 | 233 | 237 | 238 | 219 | 231 | 229 | 1,518 | 266 | 226 | 246 | 259 | 4,125 |
| 1932 | 265 | 264 | 438 | 250 | 949 | 2,728 | 1,945 | 1,343 | 1,458 | 1,049 | 1,195 | 1,925 | 13,809 |
| 1933 | 679 | 208 | 217 | 294 | 277 | 355 | 194 | 216 | 3,538 | 2,994 | 2,993 | 2,053 | 14,019 |
| 1934 | 204 | 219 | 226 | 292 | 193 | 165 | 220 | 227 | 3,821 | 2,890 | 2,392 | 2,463 | 13,312 |
| 1935 | 192 | 209 | 218 | 308 | 188 | 327 | 450 | 1,268 | 1,489 | 1,055 | 4,097 | 2,646 | 12,446 |
| 1936 | 1,196 | 875 | 205 | 212 | 633 | 215 | 201 | 198 | 223 | 235 | 2,478 | 399 | 7,069 |
| 1937 | 221 | 231 | 235 | 205 | 1,220 | 5,978 | 16,930 | 1,173 | 1,237 | 924 | 1,128 | 1,177 | 30,659 |
| 1938 | 459 | 876 | 366 | 1,273 | 31,689 | 187,385 | 15,924 | 2,249 | 1,137 | 795 | 1,075 | 1,106 | 244,334 |
| 1939 | 417 | 425 | 347 | 1,314 | 1,331 | 1,378 | 274 | 345 | 367 | 3,560 | 3,037 | 3,035 | 15,831 |
| 1940 | 403 | 406 | 403 | 350 | 239 | 265 | 326 | 375 | 390 | 3,940 | 3,019 | 1,986 | 12,103 |
| 1941 | 1,525 | 191 | 260 | 588 | 56,272 | 193,829 | 120,510 | 18,361 | 2,956 | 555 | 722 | 879 | 396,648 |
| 1942 | 322 | 324 | 525 | 413 | 400 | 577 | 6,339 | 486 | 383 | 350 | 372 | 1,071 | 11,561 |
| 1943 | 370 | 361 | 361 | 45,990 | 28,932 | 66,502 | 10,302 | 1,171 | 1,190 | 849 | 1,081 | 1,109 | 158,217 |
| 1944 | 391 | 384 | 329 | 288 | 17,370 | 35,994 | 4,713 | 1,158 | 1,207 | 936 | 1,098 | 1,149 | 65,016 |
| 1945 | 446 | 325 | 349 | 344 | 470 | 4,302 | 2,625 | 1,251 | 1,460 | 1,016 | 1,180 | 1,226 | 14,994 |
| 1946 | 1,296 | 718 | 239 | 347 | 328 | 274 | 410 | 1,459 | 1,518 | 3,455 | 3,038 | 3,035 | 16,118 |
| 1947 | 3,036 | 342 | 338 | 374 | 347 | 358 | 372 | 3,430 | 3,037 | 3,028 | 3,017 | 3,015 | 20,693 |
| 1948 | 2,908 | 1,432 | 206 | 216 | 222 | 228 | 232 | 238 | 772 | 1,246 | 222 | 240 | 8,162 |
| 1949 | 250 | 253 | 252 | 245 | 244 | 1,956 | 211 | 1,812 | 291 | 218 | 240 | 254 | 6,224 |
| 1950 | 260 | 261 | 244 | 250 | 1,908 | 200 | 215 | 3,174 | 194 | 213 | 236 | 251 | 7,408 |
| 1951 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 842 | 24 | 23 | 22 | 213 | 1,291 |
| 1952 | 22 | 22 | 29 | 1,561 | 2,147 | 1,559 | 6,802 | 1,172 | 1,418 | 945 | 1,069 | 1,659 | 18,404 |
| 1953 | 944 | 317 | 359 | 2,041 | 279 | 317 | 327 | 369 | 377 | 3,887 | 3,038 | 2,398 | 14,655 |
| 1954 | 2,171 | 357 | 369 | 676 | 1,323 | 337 | 268 | 370 | 374 | 4,139 | 2,779 | 3,016 | 16,179 |
| 1955 | 1,886 | 802 | 194 | 155 | 177 | 197 | 204 | 194 | 230 | 2,091 | 3,112 | 514 | 9,757 |
| 1956 | 207 | 220 | 765 | 952 | 243 | 177 | 213 | 165 | 210 | 218 | 1,885 | 1,111 | 6,366 |
| 1957 | 228 | 214 | 217 | 205 | 160 | 155 | 190 | 203 | 4,189 | 778 | 2,943 | 800 | 10,283 |
| 1958 | 255 | 303 | 218 | 166 | 833 | 1,234 | 33,425 | 9,142 | 1,044 | 776 | 1,040 | 1,114 | 49,552 |
| 1959 | 422 | 421 | 378 | 330 | 2,085 | 274 | 322 | 356 | 369 | 3,850 | 3,038 | 2,124 | 13,969 |
| 1960 | 1,713 | 943 | 359 | 350 | 1,912 | 351 | 321 | 367 | 377 | 396 | 2,739 | 202 | 10,030 |
| 1961 | 221 | 215 | 215 | 229 | 228 | 226 | 227 | 1,754 | 315 | 222 | 243 | 256 | 4,351 |
| 1962 | 262 | 303 | 172 | 168 | 2,771 | 2,225 | 1,870 | 1,230 | 1,449 | 1,012 | 1,174 | 1,716 | 14,353 |
| 1963 | 362 | 376 | 376 | 363 | 321 | 303 | 238 | 327 | 366 | 395 | 2,362 | 204 | 5,992 |
| 1964 | 222 | 227 | 227 | 226 | 225 | 225 | 225 | 1,912 | 350 | 215 | 237 | 251 | 4,542 |
| 1965 | 258 | 260 | 257 | 173 | 229 | 211 | 378 | 199 | 3,976 | 2,909 | 1,127 | 377 | 10,353 |
| 1966 | 212 | 377 | 368 | 431 | 1,336 | 2,956 | 2,151 | 1,394 | 1,431 | 1,031 | 4,151 | 2,995 | 18,832 |
| 1967 | 2,994 | 2,993 | 306 | 747 | 1,197 | 16,729 | 53,310 | 20,330 | 1,115 | 926 | 3,646 | 2,683 | 106,976 |
| 1968 | 430 | 436 | 368 | 362 | 342 | 1,928 | 322 | 366 | 3,429 | 370 | 1,035 | 2,158 | 11,545 |
| 1969 | 1,482 | 715 | 358 | 127,823 | 188,394 | 78,219 | 17,924 | 5,623 | 1,051 | 812 | 1,009 | 1,077 | 424,489 |
| 1970 | 395 | 356 | 352 | 309 | 297 | 2,186 | 338 | 362 | 378 | 3,589 | 3,037 | 1,085 | 12,684 |
| 1971 | 1,529 | 864 | 247 | 301 | 328 | 342 | 359 | 376 | 3,428 | 3,038 | 3,036 | 1,926 | 15,774 |
| 1972 | 1,504 | 812 | 244 | 334 | 345 | 370 | 372 | 3,413 | 3,020 | 377 | 1,358 | 2,350 | 14,500 |
| 1973 | 1,597 | 158 | 199 | 667 | 1,328 | 15,146 | 7,653 | 1,167 | 1,253 | 969 | 1,118 | 1,152 | 32,407 |
| 1974 | 453 | 778 | 364 | 546 | 280 | 441 | 463 | 1,404 | 1,501 | 1,040 | 1,177 | 4,389 | 12,837 |
| 1975 | 361 | 656 | 315 | 333 | 2,284 | 2,857 | 4,957 | 1,164 | 1,257 | 929 | 1,118 | 1,150 | 17,381 |
| 1976 | 372 | 378 | 377 | 376 | 1,946 | 318 | 335 | 361 | 3,430 | 3,038 | 2,539 | 2,384 | 15,853 |
| 1977 | 1,042 | 358 | 364 | 366 | 368 | 367 | 208 | 218 | 226 | 2,731 | 204 | 227 | 6,679 |
| 1978 | 240 | 245 | 245 | 687 | 10,410 | 145,614 | 35,264 | 7,427 | 1,041 | 622 | 941 | 1,071 | 203,807 |
| 1979 | 357 | 362 | 349 | 312 | 585 | 21,188 | 11,015 | 1,150 | 1,170 | 923 | 1,129 | 1,163 | 39,703 |
| 1980 | 854 | 655 | 354 | 276 | 67,612 | 40,857 | 6,987 | 1,117 | 1,115 | 865 | 1,122 | 1,153 | 122,970 |
| 1981 | 433 | 428 | 377 | 319 | 290 | 2,408 | 237 | 319 | 354 | 419 | 1,212 | 2,269 | 9,065 |
| 1982 | 1,544 | 750 | 353 | 340 | 348 | 1,953 | 340 | 313 | 372 | 3,656 | 3,038 | 3,035 | 16,042 |
| 1983 | 400 | 374 | 364 | 13,684 | 57,349 | 196,392 | 56,422 | 29,378 | 5,102 | 546 | 653 | 893 | 361,556 |
| 1984 | 288 | 337 | 13,090 | 4,824 | 1,679 | 467 | 2,001 | 1,392 | 1,436 | 993 | 1,166 | 1,209 | 28,881 |
| 1985 | 1,051 | 675 | 306 | 356 | 334 | 338 | 362 | 377 | 3,428 | 3,029 | 688 | 2,244 | 13,187 |
| 1986 | 1,115 | 357 | 196 | 173 | 767 | 2,033 | 1,951 | 1,234 | 1,387 | 1,013 | 1,170 | 1,215 | 12,612 |
| 1987 | 1,100 | 361 | 365 | 352 | 368 | 1,949 | 351 | 363 | 373 | 392 | 2,015 | 1,812 | 9,801 |
| 1988 | 357 | 374 | 374 | 340 | 363 | 1,924 | 318 | 353 | 3,465 | 205 | 1,977 | 2,333 | 12,384 |
| 1989 | 311 | 207 | 217 | 218 | 209 | 218 | 222 | 226 | 875 | 2,219 | 695 | 220 | 5,837 |
| 1990 | 234 | 241 | 243 | 243 | 243 | 238 | 241 | 1,361 | 212 | 478 | 310 | 296 | 4,343 |
| 1991 | 434 | 319 | 249 | 248 | 247 | 711 | 1,978 | 1,592 | 1,967 | 1,582 | 2,426 | 1,097 | 12,850 |
| 1992 | 330 | 217 | 208 | 159 | 1,036 | 2,608 | 1,845 | 1,220 | 1,312 | 969 | 4,032 | 3,037 | 16,973 |
| 1993 | 1,001 | 3,018 | 366 | 20,915 | 113,879 | 65,394 | 28,690 | 6,343 | 1,038 | 656 | 973 | 1,121 | 243,392 |
| AVG | 892 | 496 | 472 | 3,213 | 8,771 | 16,612 | 6,535 | 2,130 | 1,309 | 1,452 | 1,739 | 1,536 | 45,157 |
| MEDIAN | 425 | 368 | 322 | 340 | 370 | 522 | 355 | 1,134 | 1,088 | 948 | 1,178 | 1,187 | 13,742 |

| Alternative 5C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER AT 154 BRIDGE (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 300 | 300 | 300 | 300 | 49,070 | 129,261 | 18,256 | 5,158 | 1,131 | 794 | 988 | 1,005 | 206,862 |
| 1919 | 351 | 308 | 300 | 1,163 | 1,252 | 1,249 | 300 | 300 | 300 | 3,581 | 360 | 1,920 | 11,384 |
| 1920 | 1,329 | 464 | 300 | 300 | 300 | 567 | 300 | 300 | 300 | 3,646 | 300 | 2,449 | 10,555 |
| 1921 | 1,509 | 840 | 150 | 150 | 181 | 234 | 150 | 150 | 150 | 150 | 4,541 | 2,093 | 10,299 |
| 1922 | 2,322 | 670 | 1,397 | 810 | 2,529 | 2,951 | 7,187 | 1,230 | 1,261 | 862 | 1,008 | 1,045 | 23,272 |
| 1923 | 300 | 300 | 463 | 1,223 | 1,275 | 1,217 | 300 | 300 | 300 | 300 | 4,040 | 2,961 | 12,979 |
| 1924 | 2,932 | 560 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 1,618 | 1,903 | 9,413 |
| 1925 | 1,285 | 533 | 150 | 150 | 150 | 150 | 195 | 150 | 150 | 995 | 2,550 | 486 | 6,944 |
| 1926 | 150 | 150 | 150 | 150 | 449 | 186 | 2,172 | 1,230 | 1,392 | 935 | 1,082 | 1,705 | 9,753 |
| 1927 | 4,318 | 365 | 218 | 207 | 3,803 | 9,514 | 4,313 | 1,230 | 1,300 | 877 | 1,032 | 1,074 | 28,249 |
| 1928 | 300 | 300 | 300 | 1,153 | 1,486 | 1,362 | 300 | 300 | 300 | 3,611 | 2,961 | 2,930 | 15,303 |
| 1929 | 2,914 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 3,353 | 2,729 | 1,281 | 2,208 | 14,584 |
| 1930 | 1,488 | 446 | 150 | 150 | 150 | 326 | 150 | 150 | 150 | 1,095 | 1,646 | 150 | 6,052 |
| 1931 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,290 | 205 | 150 | 150 | 150 | 2,994 |
| 1932 | 150 | 150 | 847 | 386 | 2,214 | 2,951 | 1,968 | 1,310 | 1,380 | 956 | 1,081 | 1,715 | 15,107 |
| 1933 | 602 | 150 | 150 | 501 | 300 | 300 | 150 | 150 | 3,330 | 2,918 | 2,895 | 1,782 | 13,227 |
| 1934 | 150 | 150 | 150 | 503 | 254 | 150 | 150 | 150 | 3,593 | 2,812 | 2,130 | 2,284 | 12,476 |
| 1935 | 150 | 150 | 150 | 549 | 244 | 604 | 932 | 1,230 | 1,385 | 952 | 3,912 | 2,579 | 12,837 |
| 1936 | 1,020 | 785 | 150 | 150 | 1,419 | 323 | 285 | 150 | 150 | 150 | 2,145 | 326 | 7,053 |
| 1937 | 150 | 150 | 150 | 272 | 2,927 | 7,373 | 17,199 | 1,230 | 1,211 | 858 | 1,024 | 1,058 | 33,603 |
| 1938 | 374 | 760 | 300 | 1,163 | 33,063 | 190,994 | 16,271 | 2,225 | 1,131 | 754 | 977 | 1,001 | 249,013 |
| 1939 | 342 | 341 | 300 | 1,268 | 1,344 | 1,475 | 300 | 300 | 300 | 3,372 | 2,958 | 2,936 | 15,237 |
| 1940 | 300 | 300 | 300 | 300 | 305 | 300 | 300 | 300 | 300 | 3,715 | 2,937 | 1,745 | 11,101 |
| 1941 | 1,376 | 150 | 418 | 1,264 | 60,454 | 199,720 | 123,221 | 18,808 | 3,050 | 615 | 717 | 829 | 410,624 |
| 1942 | 300 | 300 | 1,065 | 654 | 485 | 818 | 6,408 | 552 | 378 | 300 | 304 | 880 | 12,443 |
| 1943 | 300 | 300 | 300 | 47,150 | 29,583 | 68,071 | 10,562 | 1,230 | 1,173 | 800 | 982 | 1,002 | 161,452 |
| 1944 | 320 | 310 | 300 | 300 | 18,510 | 36,709 | 4,860 | 1,230 | 1,185 | 863 | 997 | 1,036 | 66,620 |
| 1945 | 361 | 300 | 300 | 300 | 860 | 4,391 | 2,667 | 1,230 | 1,375 | 926 | 1,061 | 1,094 | 14,867 |
| 1946 | 1,112 | 635 | 300 | 300 | 300 | 336 | 481 | 1,367 | 1,409 | 3,301 | 2,964 | 2,940 | 15,446 |
| 1947 | 2,931 | 300 | 300 | 300 | 300 | 300 | 300 | 3,252 | 2,969 | 2,938 | 2,908 | 2,896 | 19,693 |
| 1948 | 2,787 | 1,178 | 150 | 150 | 150 | 150 | 150 | 150 | 624 | 1,008 | 150 | 150 | 6,798 |
| 1949 | 150 | 150 | 150 | 150 | 150 | 1,959 | 150 | 1,608 | 236 | 150 | 150 | 150 | 5,153 |
| 1950 | 150 | 150 | 150 | 150 | 1,834 | 150 | 150 | 2,911 | 155 | 150 | 150 | 150 | 6,250 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 496 | 0 | 0 | 0 | 29 | 525 |
| 1952 | 0 | 0 | 0 | 3,570 | 1,940 | 3,706 | 6,889 | 1,230 | 1,371 | 888 | 990 | 1,480 | 22,065 |
| 1953 | 874 | 300 | 634 | 2,189 | 300 | 300 | 300 | 300 | 300 | 3,684 | 2,964 | 2,311 | 14,455 |
| 1954 | 1,908 | 300 | 300 | 680 | 1,299 | 582 | 300 | 300 | 300 | 3,916 | 2,703 | 2,747 | 15,334 |
| 1955 | 1,758 | 738 | 150 | 169 | 150 | 150 | 150 | 150 | 150 | 1,806 | 2,893 | 455 | 8,719 |
| 1956 | 150 | 150 | 1,756 | 2,283 | 404 | 227 | 317 | 189 | 150 | 150 | 1,600 | 957 | 8,333 |
| 1957 | 174 | 150 | 150 | 150 | 170 | 150 | 150 | 150 | 3,952 | 688 | 2,699 | 730 | 9,313 |
| 1958 | 194 | 230 | 150 | 187 | 1,949 | 2,951 | 36,013 | 9,518 | 1,131 | 749 | 956 | 1,010 | 55,040 |
| 1959 | 348 | 342 | 303 | 300 | 2,302 | 300 | 300 | 300 | 300 | 3,648 | 2,960 | 1,890 | 13,292 |
| 1960 | 1,566 | 871 | 300 | 300 | 1,876 | 300 | 300 | 300 | 300 | 300 | 2,426 | 150 | 8,989 |
| 1961 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,510 | 252 | 150 | 150 | 150 | 3,262 |
| 1962 | 150 | 187 | 150 | 173 | 7,085 | 2,951 | 1,968 | 1,230 | 1,374 | 927 | 1,063 | 1,524 | 18,782 |
| 1963 | 300 | 300 | 300 | 300 | 531 | 480 | 300 | 300 | 300 | 300 | 2,082 | 150 | 5,643 |
| 1964 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,677 | 294 | 150 | 150 | 150 | 3,471 |
| 1965 | 150 | 150 | 150 | 183 | 150 | 150 | 719 | 150 | 3,649 | 2,782 | 1,029 | 321 | 9,583 |
| 1966 | 150 | 734 | 716 | 865 | 1,472 | 2,951 | 2,089 | 1,346 | 1,356 | 940 | 3,975 | 2,927 | 19,521 |
| 1967 | 2,910 | 2,901 | 524 | 1,663 | 1,472 | 16,766 | 53,525 | 20,705 | 1,131 | 859 | 3,495 | 2,622 | 108,573 |
| 1968 | 351 | 349 | 300 | 300 | 300 | 1,868 | 300 | 300 | 3,252 | 300 | 850 | 1,960 | 10,429 |
| 1969 | 1,358 | 652 | 300 | 130,867 | 192,612 | 79,716 | 18,437 | 5,809 | 1,131 | 768 | 926 | 977 | 433,552 |
| 1970 | 324 | 300 | 300 | 300 | 300 | 2,395 | 306 | 300 | 300 | 3,380 | 2,958 | 897 | 12,061 |
| 1971 | 1,357 | 804 | 344 | 300 | 300 | 300 | 300 | 300 | 3,236 | 2,961 | 2,939 | 1,664 | 14,805 |
| 1972 | 1,348 | 738 | 349 | 300 | 300 | 300 | 300 | 3,246 | 2,959 | 300 | 1,147 | 2,142 | 13,429 |
| 1973 | 1,467 | 150 | 150 | 1,526 | 3,279 | 15,650 | 7,862 | 1,230 | 1,222 | 889 | 1,014 | 1,041 | 35,480 |
| 1974 | 369 | 674 | 300 | 1,124 | 300 | 555 | 476 | 1,333 | 1,397 | 941 | 1,060 | 4,200 | 12,728 |
| 1975 | 300 | 570 | 518 | 300 | 2,849 | 4,128 | 5,084 | 1,230 | 1,229 | 859 | 1,012 | 1,037 | 19,116 |
| 1976 | 300 | 300 | 300 | 300 | 1,927 | 300 | 300 | 300 | 3,260 | 2,967 | 2,449 | 2,102 | 14,806 |
| 1977 | 917 | 300 | 300 | 300 | 300 | 300 | 150 | 150 | 150 | 2,419 | 150 | 150 | 5,586 |
| 1978 | 150 | 150 | 150 | 1,523 | 13,847 | 149,313 | 36,419 | 7,653 | 1,131 | 630 | 880 | 976 | 212,822 |
| 1979 | 300 | 300 | 300 | 500 | 1,001 | 21,536 | 11,348 | 1,230 | 1,165 | 857 | 1,024 | 1,050 | 40,611 |
| 1980 | 756 | 569 | 300 | 411 | 69,770 | 42,109 | 7,154 | 1,230 | 1,131 | 810 | 1,015 | 1,039 | 126,294 |
| 1981 | 356 | 347 | 301 | 300 | 300 | 3,167 | 324 | 300 | 300 | 328 | 1,002 | 2,068 | 9,092 |
| 1982 | 1,414 | 684 | 300 | 300 | 300 | 1,950 | 596 | 300 | 300 | 3,466 | 2,964 | 2,941 | 15,515 |
| 1983 | 300 | 300 | 637 | 15,315 | 59,574 | 198,967 | 57,866 | 30,190 | 5,335 | 615 | 658 | 836 | 370,592 |
| 1984 | 300 | 300 | 13,136 | 4,927 | 1,734 | 503 | 1,968 | 1,333 | 1,353 | 906 | 1,047 | 1,078 | 28,585 |
| 1985 | 882 | 591 | 300 | 300 | 300 | 300 | 300 | 300 | 3,235 | 2,951 | 571 | 1,976 | 12,005 |
| 1986 | 985 | 300 | 150 | 150 | 1,754 | 2,951 | 1,968 | 1,230 | 1,318 | 922 | 1,052 | 1,085 | 13,866 |
| 1987 | 928 | 300 | 300 | 300 | 300 | 1,935 | 300 | 300 | 300 | 300 | 1,743 | 1,638 | 8,643 |
| 1988 | 300 | 300 | 300 | 300 | 300 | 1,901 | 300 | 300 | 3,300 | 150 | 1,734 | 2,147 | 11,331 |
| 1989 | 260 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 734 | 1,948 | 607 | 150 | 4,749 |
| 1990 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 1,113 | 150 | 371 | 209 | 187 | 3,080 |
| 1991 | 302 | 207 | 150 | 150 | 150 | 1,583 | 1,983 | 1,528 | 1,807 | 1,446 | 2,253 | 1,014 | 12,571 |
| 1992 | 263 | 150 | 150 | 150 | 2,461 | 2,951 | 1,968 | 1,230 | 1,260 | 891 | 3,858 | 2,967 | 18,298 |
| 1993 | 884 | 2,934 | 300 | 21,907 | 116,166 | 66,785 | 29,262 | 6,557 | 1,131 | 650 | 900 | 1,012 | 248,488 |
| AVG | 792 | 429 | 483 | 3,396 | 9,319 | 17,090 | 6,711 | 2,115 | 1,241 | 1,349 | 1,607 | 1,402 | 45,935 |
| MEDIAN | 333 | 300 | 300 | 300 | 467 | 711 | 300 | 1,172 | 1,131 | 883 | 1,060 | 1,066 | 13,260 |

## Alternative 5C

### SANTA YNEZ RIVER ABOVE ALISAL BRIDGE (acre-feet/month)

| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 | 9 | 13 | 29 | 61 | 55,454 | 134,126 | 20,051 | 5,775 | 1,358 | 615 | 615 | 595 | 218,701 |
| 1919 | 90 | 90 | 119 | 858 | 1,163 | 1,173 | 197 | 181 | 126 | 2,919 | 90 | 1,001 | 8,006 |
| 1920 | 750 | 258 | 166 | 157 | 411 | 1,358 | 550 | 231 | 134 | 2,976 | 52 | 1,399 | 8,443 |
| 1921 | 898 | 560 | 29 | 127 | 255 | 418 | 96 | 70 | 9 | 3 | 3,456 | 1,769 | 7,690 |
| 1922 | 1,341 | 397 | 3,544 | 2,190 | 7,908 | 5,002 | 7,916 | 1,451 | 1,131 | 615 | 615 | 595 | 32,704 |
| 1923 | 51 | 49 | 801 | 1,052 | 1,243 | 1,108 | 312 | 221 | 158 | 97 | 3,179 | 2,633 | 10,906 |
| 1924 | 2,575 | 221 | 93 | 116 | 147 | 311 | 176 | 149 | 106 | 55 | 728 | 1,088 | 5,764 |
| 1925 | 733 | 297 | 25 | 23 | 22 | 65 | 288 | 38 | 12 | 348 | 1,545 | 182 | 3,578 |
| 1926 | 0 | 0 | 2 | 2 | 843 | 219 | 6,216 | 1,310 | 1,131 | 615 | 615 | 868 | 11,820 |
| 1927 | 3,628 | 689 | 325 | 348 | 12,584 | 10,612 | 4,908 | 1,309 | 1,131 | 615 | 615 | 595 | 37,360 |
| 1928 | 40 | 52 | 84 | 799 | 1,835 | 1,492 | 249 | 192 | 149 | 2,962 | 2,638 | 2,533 | 13,025 |
| 1929 | 2,506 | 30 | 59 | 99 | 214 | 313 | 273 | 155 | 2,807 | 2,452 | 532 | 1,320 | 10,759 |
| 1930 | 903 | 232 | 25 | 23 | 28 | 691 | 71 | 37 | 5 | 420 | 812 | 0 | 3,247 |
| 1931 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 555 | 10 | 0 | 0 | 0 | 571 |
| 1932 | 0 | 0 | 1,584 | 578 | 7,050 | 3,862 | 2,088 | 1,230 | 1,131 | 615 | 615 | 872 | 19,625 |
| 1933 | 278 | 0 | 0 | 1,096 | 390 | 217 | 88 | 39 | 2,776 | 2,631 | 2,503 | 805 | 10,824 |
| 1934 | 0 | 0 | 0 | 1,026 | 415 | 146 | 33 | 13 | 2,948 | 2,508 | 1,145 | 1,428 | 9,664 |
| 1935 | 5 | 0 | 0 | 1,235 | 426 | 1,565 | 2,651 | 1,287 | 1,131 | 615 | 3,166 | 2,279 | 14,359 |
| 1936 | 402 | 451 | 15 | 19 | 4,134 | 741 | 631 | 92 | 20 | 0 | 1,054 | 49 | 7,608 |
| 1937 | 0 | 0 | 0 | 380 | 8,924 | 12,640 | 18,279 | 1,443 | 1,131 | 615 | 615 | 595 | 44,622 |
| 1938 | 90 | 376 | 122 | 865 | 38,387 | 205,686 | 17,601 | 2,184 | 1,154 | 615 | 615 | 595 | 268,289 |
| 1939 | 90 | 90 | 166 | 1,172 | 1,450 | 1,898 | 421 | 228 | 151 | 2,771 | 2,639 | 2,546 | 13,622 |
| 1940 | 19 | 21 | 38 | 172 | 505 | 437 | 292 | 161 | 96 | 2,986 | 2,592 | 853 | 8,174 |
| 1941 | 744 | 19 | 795 | 3,388 | 74,182 | 222,403 | 133,838 | 20,136 | 3,286 | 734 | 615 | 595 | 460,735 |
| 1942 | 187 | 200 | 2,215 | 1,236 | 717 | 1,428 | 6,806 | 754 | 358 | 152 | 90 | 239 | 14,381 |
| 1943 | 52 | 92 | 118 | 52,574 | 31,769 | 74,508 | 11,409 | 1,427 | 1,131 | 615 | 615 | 595 | 174,905 |
| 1944 | 90 | 90 | 197 | 329 | 22,841 | 39,170 | 5,377 | 1,494 | 1,131 | 615 | 615 | 595 | 72,544 |
| 1945 | 90 | 203 | 161 | 198 | 2,425 | 5,042 | 3,001 | 1,244 | 1,131 | 615 | 615 | 595 | 15,319 |
| 1946 | 459 | 337 | 527 | 208 | 289 | 611 | 863 | 1,230 | 1,131 | 2,767 | 2,656 | 2,558 | 13,635 |
| 1947 | 2,533 | 177 | 201 | 133 | 201 | 196 | 168 | 2,829 | 2,757 | 2,628 | 2,500 | 2,438 | 16,762 |
| 1948 | 2,336 | 424 | 6 | 7 | 8 | 10 | 8 | 1 | 253 | 319 | 0 | 0 | 3,371 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 1,481 | 0 | 815 | 30 | 0 | 0 | 0 | 2,327 |
| 1950 | 0 | 0 | 1 | 0 | 1,091 | 2 | 0 | 1,716 | 1 | 0 | 0 | 0 | 2,811 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 11,177 | 1,472 | 9,533 | 6,983 | 1,322 | 1,131 | 615 | 615 | 705 | 33,552 |
| 1953 | 529 | 169 | 1,079 | 2,616 | 408 | 318 | 283 | 164 | 122 | 3,014 | 2,637 | 1,940 | 13,279 |
| 1954 | 946 | 82 | 88 | 735 | 1,249 | 1,198 | 482 | 157 | 139 | 3,180 | 2,368 | 1,649 | 12,273 |
| 1955 | 1,123 | 479 | 31 | 166 | 103 | 78 | 66 | 92 | 4 | 948 | 1,912 | 174 | 5,175 |
| 1956 | 0 | 0 | 3,563 | 5,353 | 806 | 394 | 643 | 321 | 53 | 25 | 688 | 331 | 12,177 |
| 1957 | 0 | 0 | 0 | 11 | 142 | 145 | 83 | 55 | 3,245 | 349 | 1,677 | 375 | 6,083 |
| 1958 | 2 | 8 | 0 | 193 | 4,849 | 8,378 | 46,198 | 10,820 | 1,402 | 615 | 615 | 595 | 73,675 |
| 1959 | 90 | 90 | 90 | 218 | 2,966 | 414 | 284 | 200 | 147 | 2,986 | 2,630 | 993 | 11,108 |
| 1960 | 923 | 583 | 132 | 174 | 1,762 | 196 | 265 | 161 | 115 | 51 | 1,324 | 0 | 5,685 |
| 1961 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 721 | 36 | 0 | 0 | 0 | 772 |
| 1962 | 0 | 0 | 19 | 45 | 19,361 | 4,859 | 2,320 | 1,245 | 1,131 | 615 | 615 | 748 | 30,958 |
| 1963 | 65 | 55 | 75 | 122 | 839 | 774 | 408 | 249 | 152 | 55 | 1,082 | 0 | 3,877 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 875 | 75 | 0 | 0 | 0 | 950 |
| 1965 | 0 | 0 | 0 | 51 | 4 | 4 | 1,281 | 14 | 2,293 | 1,963 | 489 | 63 | 6,161 |
| 1966 | 0 | 1,094 | 1,273 | 1,934 | 1,781 | 3,028 | 1,968 | 1,230 | 1,131 | 615 | 3,227 | 2,611 | 19,892 |
| 1967 | 2,556 | 2,562 | 1,309 | 4,419 | 2,823 | 17,532 | 54,647 | 22,371 | 1,194 | 615 | 2,902 | 2,352 | 115,282 |
| 1968 | 90 | 90 | 116 | 150 | 232 | 1,826 | 293 | 160 | 2,779 | 91 | 243 | 1,098 | 7,167 |
| 1969 | 787 | 406 | 135 | 145,366 | 212,075 | 86,540 | 20,142 | 6,543 | 1,404 | 615 | 615 | 595 | 475,222 |
| 1970 | 90 | 126 | 154 | 307 | 381 | 3,386 | 279 | 180 | 129 | 2,747 | 2,638 | 272 | 10,689 |
| 1971 | 678 | 576 | 663 | 328 | 254 | 251 | 207 | 153 | 2,747 | 2,689 | 2,564 | 757 | 11,865 |
| 1972 | 702 | 448 | 709 | 242 | 226 | 167 | 165 | 2,866 | 2,767 | 77 | 424 | 1,246 | 10,041 |
| 1973 | 877 | 88 | 24 | 3,725 | 10,016 | 17,430 | 8,605 | 1,475 | 1,131 | 615 | 615 | 595 | 45,197 |
| 1974 | 90 | 315 | 115 | 2,685 | 407 | 901 | 587 | 1,230 | 1,131 | 615 | 615 | 3,385 | 12,075 |
| 1975 | 80 | 273 | 834 | 224 | 4,283 | 7,476 | 5,581 | 1,484 | 1,131 | 615 | 615 | 595 | 23,190 |
| 1976 | 59 | 61 | 82 | 106 | 1,858 | 271 | 240 | 180 | 2,797 | 2,705 | 2,100 | 1,085 | 11,544 |
| 1977 | 393 | 92 | 105 | 123 | 137 | 157 | 39 | 25 | 4 | 1,451 | 0 | 0 | 2,526 |
| 1978 | 0 | 0 | 0 | 3,193 | 24,199 | 163,650 | 40,163 | 8,484 | 1,442 | 615 | 615 | 595 | 242,956 |
| 1979 | 100 | 103 | 154 | 982 | 2,193 | 22,811 | 12,535 | 1,502 | 1,131 | 615 | 615 | 595 | 43,337 |
| 1980 | 375 | 265 | 138 | 802 | 78,091 | 46,299 | 7,802 | 1,672 | 1,202 | 615 | 615 | 595 | 138,468 |
| 1981 | 90 | 90 | 90 | 235 | 363 | 5,475 | 629 | 298 | 189 | 90 | 325 | 1,193 | 9,066 |
| 1982 | 841 | 434 | 146 | 202 | 210 | 2,131 | 1,600 | 344 | 138 | 2,860 | 2,656 | 2,558 | 14,119 |
| 1983 | 21 | 94 | 1,680 | 19,930 | 66,401 | 210,927 | 63,109 | 33,451 | 6,124 | 762 | 615 | 595 | 403,709 |
| 1984 | 291 | 176 | 13,226 | 5,305 | 1,996 | 704 | 1,990 | 1,230 | 1,131 | 615 | 615 | 595 | 27,874 |
| 1985 | 310 | 297 | 235 | 171 | 236 | 244 | 199 | 149 | 2,738 | 2,679 | 192 | 1,000 | 8,450 |
| 1986 | 446 | 99 | 30 | 93 | 4,356 | 5,203 | 2,136 | 1,278 | 1,131 | 615 | 615 | 595 | 16,597 |
| 1987 | 334 | 89 | 109 | 163 | 146 | 1,884 | 199 | 163 | 123 | 61 | 840 | 892 | 5,003 |
| 1988 | 78 | 65 | 85 | 179 | 153 | 2,012 | 294 | 189 | 2,829 | 6 | 856 | 1,312 | 8,061 |
| 1989 | 61 | 1 | 1 | 5 | 38 | 23 | 16 | 9 | 367 | 1,088 | 241 | 0 | 1,850 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 312 | 0 | 15 | 0 | 0 | 327 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 3,522 | 1,968 | 1,230 | 1,131 | 809 | 1,398 | 595 | 10,653 |
| 1992 | 26 | 0 | 13 | 130 | 7,314 | 4,283 | 2,607 | 1,353 | 1,131 | 615 | 3,140 | 2,655 | 23,267 |
| 1993 | 457 | 2,623 | 126 | 25,781 | 124,268 | 72,481 | 31,679 | 7,440 | 1,491 | 615 | 615 | 595 | 268,172 |
| AVG | 453 | 228 | 501 | 4,054 | 11,259 | 18,893 | 7,419 | 2,150 | 1,062 | 1,014 | 1,122 | 905 | 49,059 |
| MEDIAN | 90 | 90 | 90 | 205 | 823 | 1,278 | 516 | 638 | 1,131 | 615 | 615 | 595 | 11,843 |

## Alternative 5C

### SANTA YNEZ RIVER NEAR BUELLTON (acre-feet/month)

| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 | 0 | 0 | 0 | 4 | 64,586 | 135,789 | 21,923 | 6,600 | 1,751 | 563 | 457 | 430 | 232,103 |
| 1919 | 4 | 8 | 56 | 680 | 1,110 | 1,136 | 95 | 100 | 38 | 2,571 | 0 | 534 | 6,331 |
| 1920 | 354 | 89 | 74 | 54 | 612 | 1,994 | 917 | 222 | 49 | 2,606 | 0 | 813 | 7,784 |
| 1921 | 433 | 300 | 0 | 146 | 405 | 722 | 90 | 52 | 0 | 0 | 2,872 | 1,529 | 6,548 |
| 1922 | 744 | 167 | 6,531 | 4,067 | 13,212 | 7,375 | 8,867 | 1,762 | 1,075 | 490 | 426 | 379 | 45,092 |
| 1923 | 0 | 0 | 1,411 | 1,055 | 1,307 | 1,027 | 359 | 186 | 94 | 24 | 2,732 | 2,405 | 10,601 |
| 1924 | 2,338 | 62 | 11 | 31 | 56 | 418 | 108 | 62 | 24 | 0 | 342 | 604 | 4,057 |
| 1925 | 339 | 112 | 0 | 0 | 0 | 50 | 510 | 7 | 0 | 94 | 971 | 17 | 2,101 |
| 1926 | 0 | 0 | 0 | 0 | 1,573 | 363 | 9,668 | 1,544 | 979 | 445 | 355 | 411 | 15,338 |
| 1927 | 3,062 | 1,116 | 504 | 582 | 21,383 | 11,253 | 5,645 | 1,433 | 1,027 | 485 | 416 | 360 | 47,267 |
| 1928 | 0 | 0 | 10 | 589 | 2,105 | 1,672 | 219 | 120 | 65 | 2,600 | 2,421 | 2,288 | 12,090 |
| 1929 | 2,252 | 0 | 0 | 21 | 244 | 449 | 346 | 97 | 2,478 | 2,266 | 184 | 755 | 9,092 |
| 1930 | 442 | 59 | 0 | 0 | 0 | 1,268 | 40 | 0 | 0 | 130 | 354 | 0 | 2,292 |
| 1931 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 200 |
| 1932 | 0 | 0 | 3,121 | 1,195 | 10,080 | 5,304 | 2,275 | 1,216 | 937 | 417 | 359 | 417 | 25,320 |
| 1933 | 76 | 0 | 0 | 2,063 | 605 | 205 | 78 | 1 | 2,449 | 2,443 | 2,258 | 325 | 10,503 |
| 1934 | 0 | 0 | 0 | 1,945 | 653 | 223 | 0 | 0 | 2,562 | 2,294 | 604 | 804 | 9,086 |
| 1935 | 0 | 0 | 0 | 2,295 | 739 | 2,566 | 4,448 | 1,454 | 970 | 421 | 2,713 | 2,058 | 17,666 |
| 1936 | 96 | 215 | 0 | 0 | 6,956 | 1,325 | 910 | 75 | 0 | 0 | 557 | 0 | 10,133 |
| 1937 | 0 | 0 | 0 | 745 | 16,925 | 18,629 | 19,697 | 1,716 | 1,133 | 500 | 419 | 366 | 60,131 |
| 1938 | 0 | 178 | 53 | 678 | 45,736 | 215,274 | 19,247 | 2,118 | 1,287 | 629 | 459 | 420 | 286,080 |
| 1939 | 6 | 6 | 159 | 1,285 | 1,718 | 2,523 | 596 | 194 | 69 | 2,447 | 2,441 | 2,315 | 13,759 |
| 1940 | 0 | 0 | 0 | 189 | 938 | 744 | 391 | 108 | 16 | 2,596 | 2,369 | 403 | 7,754 |
| 1941 | 330 | 0 | 1,380 | 6,370 | 84,752 | 242,011 | 141,863 | 21,845 | 3,683 | 1,025 | 723 | 581 | 504,563 |
| 1942 | 214 | 239 | 3,894 | 2,104 | 1,057 | 2,273 | 7,412 | 1,036 | 411 | 105 | 35 | 32 | 18,813 |
| 1943 | 0 | 11 | 35 | 57,415 | 34,291 | 80,017 | 12,406 | 1,694 | 1,185 | 561 | 457 | 419 | 188,490 |
| 1944 | 15 | 14 | 208 | 484 | 26,675 | 41,614 | 5,982 | 1,856 | 1,171 | 493 | 446 | 378 | 79,334 |
| 1945 | 1 | 261 | 138 | 195 | 4,499 | 5,572 | 3,476 | 1,310 | 968 | 446 | 400 | 346 | 17,611 |
| 1946 | 150 | 146 | 949 | 193 | 360 | 678 | 1,452 | 1,194 | 948 | 2,448 | 2,464 | 2,332 | 13,316 |
| 1947 | 2,297 | 236 | 261 | 88 | 206 | 176 | 102 | 2,534 | 2,607 | 2,457 | 2,278 | 2,183 | 15,425 |
| 1948 | 2,076 | 102 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 58 | 0 | 0 | 2,332 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 1,577 | 0 | 415 | 0 | 0 | 0 | 0 | 1,992 |
| 1950 | 0 | 0 | 0 | 0 | 951 | 0 | 0 | 1,039 | 0 | 0 | 0 | 0 | 1,990 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 18,904 | 1,825 | 18,874 | 8,145 | 1,669 | 978 | 500 | 470 | 309 | 51,674 |
| 1953 | 316 | 111 | 1,789 | 3,361 | 573 | 369 | 245 | 66 | 31 | 2,634 | 2,403 | 1,690 | 13,587 |
| 1954 | 418 | 0 | 0 | 807 | 1,286 | 2,037 | 753 | 53 | 53 | 2,733 | 2,123 | 965 | 11,226 |
| 1955 | 564 | 217 | 0 | 109 | 75 | 40 | 22 | 100 | 0 | 489 | 1,208 | 5 | 2,829 |
| 1956 | 0 | 0 | 6,248 | 8,383 | 1,330 | 608 | 949 | 542 | 8 | 8 | 286 | 37 | 18,400 |
| 1957 | 0 | 0 | 0 | 0 | 177 | 217 | 84 | 45 | 2,801 | 150 | 1,024 | 111 | 4,609 |
| 1958 | 0 | 0 | 0 | 258 | 8,935 | 15,692 | 57,841 | 12,291 | 1,803 | 532 | 446 | 394 | 98,194 |
| 1959 | 1 | 0 | 2 | 232 | 4,085 | 585 | 237 | 115 | 80 | 2,614 | 2,411 | 500 | 10,862 |
| 1960 | 451 | 317 | 13 | 60 | 1,683 | 86 | 224 | 60 | 24 | 0 | 753 | 0 | 3,671 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 278 | 0 | 0 | 0 | 0 | 278 |
| 1962 | 0 | 0 | 0 | 1 | 34,340 | 7,516 | 2,806 | 1,262 | 923 | 424 | 358 | 317 | 47,947 |
| 1963 | 0 | 0 | 0 | 9 | 1,281 | 1,182 | 568 | 240 | 86 | 0 | 541 | 0 | 3,905 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 380 | 0 | 0 | 0 | 0 | 380 |
| 1965 | 0 | 0 | 0 | 17 | 0 | 0 | 2,033 | 0 | 1,489 | 1,257 | 97 | 0 | 4,892 |
| 1966 | 0 | 1,651 | 2,088 | 3,441 | 2,267 | 3,181 | 1,747 | 1,100 | 959 | 418 | 2,758 | 2,373 | 21,982 |
| 1967 | 2,296 | 2,309 | 2,478 | 8,334 | 4,110 | 17,990 | 55,035 | 23,668 | 1,200 | 465 | 2,667 | 2,204 | 122,758 |
| 1968 | 6 | 2 | 55 | 102 | 264 | 1,957 | 341 | 66 | 2,479 | 10 | 44 | 616 | 5,942 |
| 1969 | 374 | 194 | 20 | 162,873 | 230,220 | 94,922 | 21,411 | 7,355 | 1,759 | 528 | 481 | 440 | 520,577 |
| 1970 | 13 | 100 | 113 | 447 | 589 | 4,520 | 234 | 88 | 44 | 2,432 | 2,447 | 38 | 11,066 |
| 1971 | 297 | 415 | 884 | 433 | 253 | 200 | 132 | 58 | 2,441 | 2,528 | 2,350 | 343 | 10,335 |
| 1972 | 306 | 222 | 1,187 | 251 | 206 | 76 | 77 | 2,581 | 2,630 | 5 | 127 | 717 | 8,386 |
| 1973 | 434 | 51 | 0 | 6,106 | 18,590 | 19,095 | 9,494 | 1,635 | 1,038 | 455 | 425 | 374 | 57,696 |
| 1974 | 0 | 129 | 35 | 4,992 | 598 | 1,407 | 778 | 1,211 | 947 | 430 | 384 | 2,877 | 13,789 |
| 1975 | 0 | 89 | 1,353 | 208 | 6,396 | 12,066 | 6,227 | 1,840 | 1,038 | 469 | 425 | 372 | 30,482 |
| 1976 | 0 | 0 | 0 | 13 | 1,986 | 276 | 202 | 91 | 2,491 | 2,532 | 1,891 | 577 | 10,058 |
| 1977 | 81 | 0 | 0 | 11 | 25 | 49 | 0 | 0 | 0 | 916 | 0 | 0 | 1,082 |
| 1978 | 0 | 0 | 0 | 5,304 | 38,514 | 181,441 | 44,827 | 9,557 | 1,781 | 711 | 572 | 427 | 283,133 |
| 1979 | 25 | 32 | 118 | 1,789 | 3,930 | 24,706 | 13,965 | 1,853 | 1,115 | 472 | 418 | 361 | 48,785 |
| 1980 | 170 | 94 | 38 | 1,433 | 89,084 | 51,465 | 8,573 | 2,097 | 1,264 | 503 | 430 | 383 | 155,533 |
| 1981 | 1 | 0 | 4 | 273 | 548 | 8,803 | 1,047 | 351 | 157 | 10 | 71 | 680 | 11,947 |
| 1982 | 414 | 216 | 30 | 122 | 154 | 2,416 | 2,919 | 406 | 48 | 2,540 | 2,454 | 2,325 | 14,044 |
| 1983 | 0 | 60 | 3,002 | 26,717 | 75,243 | 218,221 | 67,007 | 36,368 | 7,270 | 1,076 | 786 | 582 | 436,331 |
| 1984 | 471 | 168 | 13,912 | 5,709 | 2,276 | 933 | 1,944 | 1,088 | 952 | 446 | 409 | 354 | 28,662 |
| 1985 | 62 | 119 | 243 | 109 | 235 | 235 | 144 | 57 | 2,439 | 2,514 | 47 | 537 | 6,740 |
| 1986 | 133 | 0 | 0 | 90 | 7,961 | 8,352 | 2,379 | 1,268 | 1,032 | 444 | 400 | 349 | 22,408 |
| 1987 | 73 | 0 | 10 | 78 | 45 | 1,926 | 109 | 65 | 33 | 0 | 433 | 449 | 3,223 |
| 1988 | 0 | 0 | 0 | 131 | 71 | 2,344 | 339 | 101 | 2,507 | 0 | 423 | 762 | 6,677 |
| 1989 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 181 | 634 | 49 | 0 | 878 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 36 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 6,777 | 2,468 | 1,170 | 704 | 401 | 806 | 276 | 12,604 |
| 1992 | 0 | 0 | 0 | 202 | 14,033 | 6,168 | 3,409 | 1,532 | 1,097 | 450 | 2,703 | 2,428 | 32,021 |
| 1993 | 215 | 2,395 | 36 | 31,467 | 134,304 | 79,045 | 34,731 | 8,297 | 1,841 | 640 | 555 | 416 | 293,942 |
| AVG | 294 | 161 | 690 | 4,964 | 13,569 | 20,790 | 8,192 | 2,279 | 997 | 855 | 884 | 651 | 54,326 |
| MEDIAN | 3 | 1 | 3 | 205 | 1,084 | 1,625 | 766 | 393 | 950 | 471 | 439 | 399 | 12,018 |

## Alternative 5C

### SANTA YNEZ RIVER ABOVE SALSIPUEDES CREEK CONFLUENCE (acre-feet/month)

| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 | 0 | 0 | 0 | 0 | 73,601 | 135,576 | 23,988 | 7,758 | 2,262 | 493 | 225 | 159 | 244,061 |
| 1919 | 0 | 0 | 0 | 358 | 897 | 1,061 | 26 | 48 | 0 | 2,047 | 0 | 6 | 4,443 |
| 1920 | 0 | 0 | 0 | 0 | 606 | 2,088 | 1,249 | 234 | 0 | 2,055 | 0 | 79 | 6,310 |
| 1921 | 0 | 4 | 0 | 55 | 403 | 907 | 84 | 42 | 0 | 0 | 1,934 | 1,160 | 4,588 |
| 1922 | 70 | 0 | 8,785 | 5,965 | 17,702 | 9,892 | 10,169 | 2,300 | 1,135 | 384 | 188 | 103 | 56,692 |
| 1923 | 0 | 0 | 1,572 | 969 | 1,341 | 1,017 | 476 | 211 | 68 | 0 | 2,031 | 2,049 | 9,735 |
| 1924 | 1,969 | 0 | 0 | 0 | 0 | 427 | 45 | 2 | 0 | 0 | 0 | 9 | 2,453 |
| 1925 | 0 | 0 | 0 | 0 | 0 | 0 | 528 | 0 | 0 | 0 | 116 | 0 | 644 |
| 1926 | 0 | 0 | 0 | 0 | 1,671 | 307 | 11,017 | 1,790 | 847 | 245 | 60 | 0 | 15,937 |
| 1927 | 2,138 | 1,269 | 584 | 796 | 29,283 | 11,687 | 6,688 | 1,725 | 1,021 | 358 | 154 | 64 | 55,767 |
| 1928 | 0 | 0 | 0 | 237 | 1,882 | 1,727 | 213 | 79 | 3 | 2,083 | 2,086 | 1,899 | 10,209 |
| 1929 | 1,852 | 0 | 0 | 0 | 176 | 486 | 371 | 48 | 2,074 | 2,005 | 0 | 54 | 7,067 |
| 1930 | 0 | 0 | 0 | 0 | 0 | 1,555 | 1 | 0 | 0 | 0 | 0 | 0 | 1,556 |
| 1931 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1932 | 0 | 0 | 3,768 | 1,145 | 10,418 | 6,810 | 2,495 | 1,291 | 773 | 201 | 66 | 0 | 26,967 |
| 1933 | 0 | 0 | 0 | 2,591 | 685 | 181 | 72 | 0 | 2,056 | 2,183 | 1,879 | 0 | 9,647 |
| 1934 | 0 | 0 | 0 | 2,334 | 664 | 250 | 0 | 0 | 2,068 | 1,992 | 32 | 73 | 7,413 |
| 1935 | 0 | 0 | 0 | 2,891 | 930 | 3,244 | 5,942 | 1,741 | 871 | 215 | 2,063 | 1,732 | 19,629 |
| 1936 | 0 | 0 | 0 | 0 | 8,786 | 1,934 | 1,093 | 97 | 0 | 0 | 18 | 0 | 11,929 |
| 1937 | 0 | 0 | 0 | 705 | 24,500 | 24,394 | 21,559 | 2,210 | 1,264 | 396 | 173 | 82 | 75,282 |
| 1938 | 0 | 0 | 0 | 372 | 53,269 | 221,427 | 21,350 | 2,217 | 1,570 | 668 | 245 | 157 | 301,276 |
| 1939 | 0 | 0 | 47 | 1,238 | 1,930 | 3,218 | 831 | 222 | 21 | 2,025 | 2,137 | 1,943 | 13,612 |
| 1940 | 0 | 0 | 0 | 81 | 1,179 | 964 | 487 | 82 | 0 | 2,042 | 2,027 | 0 | 6,862 |
| 1941 | 0 | 0 | 1,570 | 9,061 | 88,506 | 258,234 | 147,337 | 23,817 | 4,141 | 1,302 | 744 | 471 | 535,184 |
| 1942 | 160 | 194 | 4,811 | 2,781 | 1,349 | 2,962 | 8,147 | 1,406 | 498 | 50 | 0 | 0 | 22,357 |
| 1943 | 0 | 0 | 0 | 60,426 | 37,296 | 85,044 | 13,729 | 2,096 | 1,344 | 503 | 246 | 162 | 200,844 |
| 1944 | 0 | 0 | 92 | 509 | 28,862 | 44,090 | 6,848 | 2,388 | 1,310 | 380 | 210 | 90 | 84,779 |
| 1945 | 0 | 166 | 41 | 131 | 6,670 | 5,991 | 4,225 | 1,530 | 895 | 270 | 120 | 40 | 20,077 |
| 1946 | 0 | 0 | 1,158 | 131 | 412 | 500 | 2,175 | 1,254 | 810 | 2,049 | 2,171 | 1,972 | 12,631 |
| 1947 | 1,922 | 176 | 233 | 35 | 183 | 170 | 70 | 2,296 | 2,470 | 2,225 | 1,936 | 1,778 | 13,495 |
| 1948 | 1,665 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,665 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 824 | 0 | 0 | 0 | 0 | 0 | 0 | 824 |
| 1950 | 0 | 0 | 0 | 0 | 189 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 237 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 26,393 | 1,005 | 27,262 | 8,874 | 1,975 | 739 | 306 | 225 | 0 | 66,780 |
| 1953 | 38 | 0 | 1,825 | 3,866 | 764 | 477 | 214 | 16 | 0 | 2,122 | 2,053 | 1,310 | 12,685 |
| 1954 | 0 | 0 | 0 | 588 | 1,119 | 2,557 | 1,056 | 0 | 0 | 2,110 | 1,758 | 164 | 9,351 |
| 1955 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 3 | 233 | 0 | 301 |
| 1956 | 0 | 0 | 6,741 | 8,909 | 1,721 | 824 | 1,151 | 841 | 0 | 0 | 0 | 0 | 20,186 |
| 1957 | 0 | 0 | 0 | 0 | 7 | 108 | 13 | 0 | 2,095 | 0 | 171 | 0 | 2,395 |
| 1958 | 0 | 0 | 0 | 69 | 11,628 | 22,684 | 69,721 | 14,220 | 2,355 | 407 | 202 | 127 | 121,412 |
| 1959 | 0 | 0 | 0 | 115 | 4,821 | 738 | 159 | 47 | 30 | 2,079 | 2,068 | 3 | 10,059 |
| 1960 | 0 | 10 | 0 | 0 | 1,259 | 0 | 109 | 0 | 0 | 0 | 28 | 0 | 1,406 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1962 | 0 | 0 | 0 | 0 | 46,785 | 8,405 | 2,924 | 1,122 | 625 | 168 | 46 | 0 | 60,076 |
| 1963 | 0 | 0 | 0 | 0 | 917 | 1,004 | 452 | 135 | 4 | 0 | 0 | 0 | 2,511 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 1,265 | 0 | 245 | 242 | 0 | 0 | 1,752 |
| 1966 | 0 | 907 | 1,935 | 4,361 | 2,482 | 3,354 | 1,579 | 1,041 | 838 | 205 | 2,076 | 2,023 | 20,801 |
| 1967 | 1,909 | 1,940 | 3,566 | 12,002 | 5,472 | 18,648 | 55,682 | 25,181 | 1,238 | 319 | 2,284 | 1,959 | 130,200 |
| 1968 | 0 | 0 | 0 | 14 | 237 | 2,052 | 418 | 10 | 2,163 | 0 | 0 | 17 | 4,911 |
| 1969 | 0 | 0 | 0 | 182,564 | 249,494 | 105,357 | 22,316 | 8,310 | 2,156 | 410 | 280 | 208 | 571,094 |
| 1970 | 0 | 17 | 20 | 523 | 801 | 5,601 | 218 | 45 | 2 | 2,027 | 2,154 | 0 | 11,408 |
| 1971 | 0 | 112 | 744 | 450 | 214 | 138 | 75 | 5 | 2,126 | 2,312 | 2,019 | 0 | 8,195 |
| 1972 | 0 | 0 | 1,394 | 210 | 172 | 18 | 27 | 2,326 | 2,504 | 0 | 0 | 38 | 6,688 |
| 1973 | 0 | 0 | 0 | 6,846 | 26,936 | 20,317 | 10,708 | 1,844 | 975 | 303 | 175 | 87 | 68,191 |
| 1974 | 0 | 0 | 0 | 6,613 | 762 | 1,833 | 1,005 | 1,275 | 815 | 227 | 97 | 2,066 | 14,694 |
| 1975 | 0 | 0 | 1,314 | 133 | 7,887 | 15,853 | 7,035 | 2,358 | 945 | 308 | 180 | 91 | 36,105 |
| 1976 | 0 | 0 | 0 | 0 | 1,775 | 224 | 139 | 16 | 2,120 | 2,275 | 1,554 | 19 | 8,122 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 0 | 0 | 74 |
| 1978 | 0 | 0 | 0 | 5,251 | 51,284 | 201,008 | 50,148 | 10,975 | 2,169 | 772 | 446 | 158 | 322,211 |
| 1979 | 0 | 0 | 11 | 2,280 | 5,405 | 26,521 | 15,825 | 2,359 | 1,103 | 296 | 143 | 54 | 53,997 |
| 1980 | 0 | 0 | 0 | 1,732 | 99,976 | 57,412 | 9,675 | 2,615 | 1,324 | 350 | 181 | 93 | 173,359 |
| 1981 | 0 | 0 | 0 | 140 | 593 | 11,694 | 1,515 | 454 | 149 | 0 | 0 | 18 | 14,563 |
| 1982 | 0 | 0 | 0 | 0 | 33 | 2,537 | 4,316 | 489 | 0 | 2,086 | 2,139 | 1,948 | 13,548 |
| 1983 | 0 | 0 | 4,011 | 32,398 | 84,005 | 223,717 | 69,588 | 39,076 | 8,662 | 1,379 | 895 | 494 | 464,226 |
| 1984 | 563 | 94 | 14,349 | 6,288 | 2,746 | 1,334 | 2,024 | 1,058 | 860 | 276 | 137 | 51 | 29,780 |
| 1985 | 0 | 0 | 70 | 10 | 159 | 186 | 101 | 2 | 2,102 | 2,280 | 0 | 5 | 4,914 |
| 1986 | 0 | 0 | 0 | 0 | 10,316 | 10,584 | 2,736 | 1,262 | 1,009 | 268 | 128 | 49 | 26,351 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 1,608 | 23 | 0 | 0 | 0 | 0 | 0 | 1,631 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 2,388 | 319 | 7 | 2,050 | 0 | 0 | 48 | 4,812 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 28 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 8,990 | 2,413 | 902 | 173 | 0 | 70 | 0 | 12,548 |
| 1992 | 0 | 0 | 0 | 80 | 20,248 | 8,210 | 4,488 | 1,861 | 1,162 | 265 | 2,092 | 2,100 | 40,505 |
| 1993 | 0 | 2,049 | 0 | 37,236 | 145,478 | 86,855 | 38,734 | 9,304 | 2,201 | 602 | 423 | 156 | 323,037 |
| AVG | 162 | 91 | 772 | 5,683 | 15,525 | 22,467 | 8,924 | 2,475 | 953 | 667 | 594 | 360 | 58,672 |
| MEDIAN | 0 | 0 | 0 | 123 | 967 | 1,780 | 1,031 | 228 | 792 | 273 | 149 | 39 | 12,238 |

| Alternative 5C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SANTA YNEZ RIVER AT LOMPOC NARROWS (acre-feet/month) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 0 | 0 | 0 | 54 | 79,462 | 144,216 | 25,679 | 8,304 | 2,671 | 670 | 289 | 218 | 261,563 |
| 1919 | 68 | 67 | 73 | 414 | 1,086 | 1,248 | 19 | 133 | 0 | 1,946 | 0 | 0 | 5,056 |
| 1920 | 23 | 47 | 55 | 59 | 842 | 3,030 | 1,662 | 323 | 84 | 1,974 | 0 | 22 | 8,120 |
| 1921 | 0 | 0 | 0 | 158 | 634 | 1,292 | 166 | 122 | 27 | 64 | 1,795 | 1,116 | 5,374 |
| 1922 | 23 | 0 | 12,076 | 7,500 | 22,255 | 11,808 | 11,026 | 2,520 | 1,227 | 462 | 158 | 71 | 69,126 |
| 1923 | 0 | 0 | 2,549 | 1,178 | 1,633 | 1,106 | 618 | 304 | 156 | 79 | 1,933 | 2,007 | 11,563 |
| 1924 | 1,921 | 0 | 67 | 71 | 74 | 692 | 132 | 84 | 79 | 0 | 0 | 0 | 3,120 |
| 1925 | 0 | 0 | 0 | 0 | 0 | 10 | 742 | 49 | 49 | 0 | 16 | 0 | 866 |
| 1926 | 0 | 0 | 10 | 20 | 2,486 | 674 | 15,677 | 2,201 | 931 | 318 | 35 | 0 | 22,353 |
| 1927 | 1,963 | 1,908 | 960 | 1,084 | 35,394 | 13,112 | 7,331 | 1,931 | 1,106 | 431 | 122 | 33 | 65,374 |
| 1928 | 0 | 49 | 56 | 275 | 2,574 | 2,146 | 305 | 167 | 86 | 2,003 | 2,042 | 1,844 | 11,547 |
| 1929 | 1,796 | 0 | 61 | 74 | 257 | 679 | 563 | 131 | 2,010 | 1,970 | 0 | 3 | 7,545 |
| 1930 | 0 | 0 | 0 | 0 | 21 | 1,922 | 77 | 69 | 0 | 0 | 0 | 0 | 2,089 |
| 1931 | 0 | 0 | 0 | 0 | 62 | 20 | 37 | 0 | 0 | 0 | 0 | 0 | 119 |
| 1932 | 0 | 0 | 5,392 | 1,569 | 16,628 | 7,786 | 2,923 | 1,486 | 851 | 219 | 38 | 0 | 36,892 |
| 1933 | 0 | 0 | 0 | 3,262 | 1,049 | 269 | 168 | 84 | 1,990 | 2,146 | 1,826 | 0 | 10,793 |
| 1934 | 0 | 0 | 0 | 3,086 | 1,093 | 438 | 85 | 32 | 1,996 | 1,953 | 1 | 13 | 8,697 |
| 1935 | 0 | 0 | 0 | 3,665 | 1,310 | 4,262 | 7,583 | 1,946 | 952 | 234 | 1,973 | 1,692 | 23,617 |
| 1936 | 0 | 0 | 0 | 48 | 11,071 | 2,456 | 1,538 | 194 | 37 | 0 | 0 | 0 | 15,343 |
| 1937 | 0 | 0 | 0 | 983 | 29,702 | 28,987 | 22,849 | 2,429 | 1,358 | 473 | 142 | 52 | 86,978 |
| 1938 | 0 | 0 | 55 | 401 | 57,992 | 235,333 | 22,645 | 2,318 | 1,673 | 751 | 312 | 220 | 321,699 |
| 1939 | 0 | 0 | 199 | 1,477 | 2,325 | 3,801 | 1,134 | 317 | 110 | 1,962 | 2,095 | 1,889 | 15,309 |
| 1940 | 0 | 0 | 0 | 208 | 1,571 | 1,367 | 705 | 169 | 33 | 1,959 | 1,980 | 0 | 7,993 |
| 1941 | 0 | 0 | 2,293 | 11,641 | 107,780 | 277,103 | 156,990 | 25,507 | 4,856 | 1,800 | 1,124 | 744 | 589,837 |
| 1942 | 438 | 472 | 8,215 | 4,461 | 2,260 | 4,789 | 9,274 | 1,918 | 792 | 231 | 167 | 55 | 33,073 |
| 1943 | 66 | 157 | 165 | 63,311 | 39,253 | 88,984 | 14,691 | 2,512 | 1,543 | 684 | 315 | 227 | 211,910 |
| 1944 | 74 | 73 | 359 | 884 | 33,014 | 46,619 | 7,489 | 2,810 | 1,509 | 460 | 277 | 63 | 93,633 |
| 1945 | 21 | 321 | 209 | 305 | 7,526 | 6,600 | 4,455 | 1,635 | 881 | 247 | 90 | 14 | 22,305 |
| 1946 | 0 | 0 | 1,239 | 199 | 497 | 1,296 | 2,482 | 1,343 | 887 | 1,993 | 2,131 | 1,921 | 13,989 |
| 1947 | 1,867 | 331 | 413 | 118 | 368 | 283 | 159 | 2,253 | 2,445 | 2,185 | 1,880 | 1,714 | 14,016 |
| 1948 | 1,601 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,601 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 1,917 | 0 | 0 | 0 | 0 | 0 | 0 | 1,917 |
| 1950 | 0 | 0 | 0 | 0 | 555 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 557 |
| 1951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1952 | 0 | 0 | 0 | 32,930 | 1,267 | 35,959 | 9,168 | 2,008 | 735 | 307 | 242 | 0 | 82,616 |
| 1953 | 67 | 213 | 3,684 | 4,916 | 962 | 590 | 364 | 51 | 31 | 2,024 | 2,003 | 1,254 | 16,158 |
| 1954 | 0 | 0 | 0 | 648 | 1,381 | 3,937 | 1,257 | 0 | 76 | 2,001 | 1,707 | 92 | 11,097 |
| 1955 | 0 | 0 | 0 | 275 | 147 | 68 | 85 | 120 | 1 | 0 | 93 | 0 | 790 |
| 1956 | 0 | 0 | 12,858 | 16,085 | 2,831 | 1,334 | 1,895 | 1,142 | 87 | 79 | 0 | 1 | 36,311 |
| 1957 | 0 | 0 | 1 | 44 | 342 | 268 | 95 | 73 | 1,985 | 1 | 87 | 0 | 2,896 |
| 1958 | 1 | 0 | 0 | 309 | 16,916 | 29,651 | 78,176 | 15,104 | 2,768 | 582 | 280 | 187 | 143,974 |
| 1959 | 68 | 66 | 68 | 280 | 6,176 | 1,036 | 360 | 135 | 114 | 1,995 | 2,022 | 0 | 12,320 |
| 1960 | 0 | 0 | 3 | 49 | 1,747 | 84 | 411 | 77 | 0 | 0 | 0 | 0 | 2,370 |
| 1961 | 0 | 51 | 88 | 2 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 153 |
| 1962 | 1 | 0 | 116 | 438 | 65,405 | 12,148 | 3,544 | 1,415 | 715 | 239 | 22 | 0 | 84,042 |
| 1963 | 0 | 2 | 36 | 54 | 2,665 | 2,613 | 1,322 | 515 | 182 | 71 | 0 | 0 | 7,461 |
| 1964 | 0 | 0 | 1 | 3 | 4 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 22 |
| 1965 | 0 | 0 | 0 | 337 | 24 | 83 | 2,718 | 80 | 224 | 175 | 1 | 0 | 3,641 |
| 1966 | 1 | 3,540 | 4,318 | 6,691 | 3,862 | 3,871 | 1,745 | 1,225 | 913 | 220 | 1,974 | 1,978 | 30,339 |
| 1967 | 1,858 | 1,888 | 4,031 | 15,926 | 5,934 | 19,067 | 56,596 | 25,643 | 1,430 | 298 | 2,207 | 1,924 | 136,802 |
| 1968 | 0 | 20 | 69 | 87 | 305 | 2,208 | 513 | 4 | 2,098 | 0 | 1 | 0 | 5,307 |
| 1969 | 0 | 0 | 0 | 190,682 | 257,814 | 108,147 | 24,152 | 8,947 | 2,562 | 571 | 348 | 271 | 593,494 |
| 1970 | 74 | 93 | 190 | 696 | 987 | 6,348 | 311 | 38 | 0 | 1,939 | 2,109 | 0 | 12,785 |
| 1971 | 0 | 54 | 1,032 | 609 | 399 | 223 | 170 | 1 | 2,052 | 2,272 | 1,966 | 0 | 8,777 |
| 1972 | 0 | 0 | 1,528 | 268 | 240 | 8 | 17 | 2,247 | 2,474 | 0 | 0 | 0 | 6,783 |
| 1973 | 0 | 101 | 1 | 10,928 | 33,710 | 23,086 | 11,561 | 2,147 | 1,158 | 376 | 185 | 56 | 83,309 |
| 1974 | 18 | 16 | 62 | 9,254 | 1,068 | 2,744 | 1,408 | 1,467 | 894 | 246 | 108 | 1,950 | 19,234 |
| 1975 | 24 | 22 | 2,835 | 316 | 11,339 | 22,619 | 7,969 | 2,775 | 1,228 | 397 | 244 | 102 | 49,871 |
| 1976 | 66 | 65 | 68 | 72 | 2,313 | 422 | 340 | 101 | 2,064 | 2,240 | 1,505 | 0 | 9,255 |
| 1977 | 0 | 4 | 5 | 44 | 51 | 71 | 0 | 55 | 0 | 6 | 0 | 0 | 236 |
| 1978 | 0 | 0 | 0 | 9,542 | 66,477 | 213,021 | 54,197 | 11,933 | 2,574 | 1,053 | 610 | 235 | 359,642 |
| 1979 | 147 | 163 | 182 | 3,353 | 7,546 | 29,192 | 16,810 | 2,776 | 1,389 | 383 | 154 | 64 | 62,158 |
| 1980 | 18 | 16 | 73 | 2,369 | 108,642 | 61,595 | 10,423 | 3,032 | 1,614 | 507 | 194 | 103 | 188,585 |
| 1981 | 21 | 19 | 65 | 396 | 862 | 15,362 | 2,026 | 654 | 240 | 31 | 13 | 0 | 19,689 |
| 1982 | 0 | 5 | 43 | 137 | 93 | 2,688 | 4,957 | 583 | 37 | 2,019 | 2,099 | 1,897 | 14,557 |
| 1983 | 0 | 62 | 4,342 | 41,009 | 93,636 | 233,672 | 74,807 | 41,000 | 9,519 | 1,879 | 1,179 | 669 | 501,774 |
| 1984 | 844 | 372 | 15,724 | 6,817 | 3,068 | 1,551 | 2,225 | 1,152 | 892 | 253 | 104 | 22 | 33,024 |
| 1985 | 0 | 10 | 389 | 89 | 328 | 371 | 182 | 0 | 2,030 | 2,241 | 0 | 0 | 5,638 |
| 1986 | 0 | 1 | 35 | 110 | 15,075 | 16,121 | 3,157 | 1,560 | 1,098 | 247 | 98 | 22 | 37,525 |
| 1987 | 7 | 16 | 61 | 157 | 72 | 2,340 | 109 | 35 | 0 | 0 | 0 | 0 | 2,796 |
| 1988 | 0 | 0 | 18 | 114 | 51 | 2,366 | 411 | 87 | 1,981 | 0 | 0 | 0 | 5,028 |
| 1989 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 12,808 | 2,274 | 719 | 0 | 0 | 0 | 0 | 15,801 |
| 1992 | 0 | 0 | 2 | 10 | 24,760 | 9,365 | 4,679 | 2,039 | 1,236 | 331 | 1,997 | 2,054 | 46,473 |
| 1993 | 0 | 1,982 | 155 | 40,673 | 153,028 | 90,113 | 39,915 | 9,843 | 2,505 | 782 | 491 | 125 | 339,613 |
| AVG | 172 | 161 | 1,139 | 6,621 | 17,794 | 24,492 | 9,731 | 2,685 | 1,043 | 697 | 589 | 354 | 65,478 |
| MEDIAN | 0 | 0 | 56 | 293 | 1,345 | 2,353 | 1,365 | 419 | 866 | 302 | 115 | 2 | 14,002 |

# Appendix B

Monthly Cachuma Project Deliveries
(simulation, 1918-1993)

New Alternatives 5B and 5C

| Cachuma Project Deliveries in Acre-feet - Alternative 5B (SYRHM simulation 1918-1993) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1919 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1920 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1921 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1922 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1923 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1924 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1925 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,536 | 2,856 | 3,465 | 3,290 | 2,536 | 25,163 |
| 1926 | 1,817 | 1,270 | 1,226 | 1,160 | 1,095 | 1,565 | 1,967 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,335 |
| 1927 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1928 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1929 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1930 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,415 | 2,719 | 3,299 | 3,132 | 2,415 | 24,459 |
| 1931 | 1,730 | 1,209 | 1,167 | 1,105 | 1,042 | 1,490 | 1,873 | 1,813 | 2,041 | 2,476 | 2,351 | 1,813 | 20,110 |
| 1932 | 1,299 | 907 | 876 | 829 | 782 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 23,593 |
| 1933 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1934 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,515 | 2,832 | 3,436 | 3,263 | 2,515 | 25,040 |
| 1935 | 1,802 | 1,259 | 1,216 | 1,151 | 1,085 | 1,552 | 1,951 | 2,584 | 2,909 | 3,530 | 3,351 | 2,584 | 24,974 |
| 1936 | 1,851 | 1,293 | 1,249 | 1,182 | 1,115 | 1,594 | 2,004 | 2,485 | 2,798 | 3,395 | 3,223 | 2,485 | 24,674 |
| 1937 | 1,780 | 1,244 | 1,201 | 1,137 | 1,072 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,334 |
| 1938 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1939 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1940 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1941 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1942 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1943 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1944 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1945 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1946 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1947 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1948 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1949 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,114 | 2,381 | 2,889 | 2,743 | 2,114 | 22,721 |
| 1950 | 1,515 | 1,059 | 1,022 | 967 | 913 | 1,305 | 1,640 | 1,600 | 1,802 | 2,186 | 2,076 | 1,600 | 17,685 |
| 1951 | 1,146 | 801 | 773 | 732 | 691 | 987 | 1,241 | 1,181 | 1,330 | 1,613 | 1,532 | 1,181 | 13,208 |
| 1952 | 846 | 591 | 571 | 540 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 22,583 |
| 1953 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1954 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1955 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1956 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,497 | 2,811 | 3,411 | 3,239 | 2,497 | 24,934 |
| 1957 | 1,789 | 1,250 | 1,207 | 1,142 | 1,078 | 1,541 | 1,937 | 2,033 | 2,290 | 2,778 | 2,638 | 2,033 | 21,714 |
| 1958 | 1,457 | 1,018 | 983 | 930 | 878 | 1,255 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 23,796 |
| 1959 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1960 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1961 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,535 | 2,854 | 3,463 | 3,288 | 2,535 | 25,155 |
| 1962 | 1,816 | 1,269 | 1,225 | 1,160 | 1,094 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,464 |
| 1963 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1964 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1965 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,332 | 2,627 | 3,187 | 3,026 | 2,332 | 23,983 |
| 1966 | 1,671 | 1,168 | 1,127 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,206 |
| 1967 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1968 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1969 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1970 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1971 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1972 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1973 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1974 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1975 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1976 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1977 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1978 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1979 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1980 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1981 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1982 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1983 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1984 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1985 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1986 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1987 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1988 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1989 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,310 | 2,601 | 3,156 | 2,996 | 2,310 | 23,851 |
| 1990 | 1,655 | 1,156 | 1,116 | 1,057 | 997 | 1,425 | 1,792 | 1,721 | 1,938 | 2,351 | 2,232 | 1,721 | 19,161 |
| 1991 | 1,233 | 862 | 832 | 787 | 743 | 1,062 | 1,335 | 2,145 | 2,415 | 2,930 | 2,782 | 2,145 | 19,269 |
| 1992 | 1,537 | 1,074 | 1,037 | 981 | 926 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 24,453 |
| 1993 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| AVG | 1,817 | 1,269 | 1,226 | 1,162 | 1,104 | 1,591 | 2,007 | 2,536 | 2,855 | 3,464 | 3,289 | 2,536 | 24,855 |
| MEDIAN | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |

| Cachuma Project Deliveries in Acre-feet - Alternative 5C | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (SYRHM simulation 1918-1993) | | | | | | | | | | | | | |
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1919 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1920 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1921 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1922 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1923 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1924 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1925 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,597 | 2,925 | 3,549 | 3,369 | 2,597 | 25,517 |
| 1926 | 1,861 | 1,300 | 1,256 | 1,188 | 1,121 | 1,603 | 2,015 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,578 |
| 1927 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1928 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1929 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1930 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,489 | 2,803 | 3,401 | 3,229 | 2,489 | 24,892 |
| 1931 | 1,784 | 1,246 | 1,203 | 1,139 | 1,074 | 1,536 | 1,931 | 1,913 | 2,154 | 2,614 | 2,482 | 1,913 | 20,991 |
| 1932 | 1,371 | 958 | 925 | 875 | 826 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 23,854 |
| 1933 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1934 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,540 | 2,860 | 3,471 | 3,295 | 2,540 | 25,186 |
| 1935 | 1,820 | 1,272 | 1,228 | 1,162 | 1,096 | 1,568 | 1,971 | 2,591 | 2,917 | 3,540 | 3,361 | 2,591 | 25,116 |
| 1936 | 1,856 | 1,297 | 1,252 | 1,185 | 1,118 | 1,599 | 2,010 | 2,496 | 2,810 | 3,410 | 3,238 | 2,496 | 24,767 |
| 1937 | 1,788 | 1,250 | 1,206 | 1,142 | 1,077 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,363 |
| 1938 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1939 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1940 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1941 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1942 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1943 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1944 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1945 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1946 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1947 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1948 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1949 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,205 | 2,482 | 3,012 | 2,860 | 2,205 | 23,243 |
| 1950 | 1,579 | 1,104 | 1,066 | 1,009 | 951 | 1,360 | 1,710 | 1,708 | 1,923 | 2,333 | 2,215 | 1,708 | 18,667 |
| 1951 | 1,224 | 855 | 826 | 781 | 737 | 1,054 | 1,325 | 1,297 | 1,460 | 1,771 | 1,682 | 1,297 | 14,308 |
| 1952 | 929 | 649 | 627 | 593 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 22,833 |
| 1953 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1954 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1955 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1956 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,559 | 2,882 | 3,496 | 3,320 | 2,559 | 25,295 |
| 1957 | 1,833 | 1,281 | 1,237 | 1,171 | 1,104 | 1,579 | 1,985 | 2,115 | 2,381 | 2,889 | 2,743 | 2,115 | 22,434 |
| 1958 | 1,515 | 1,059 | 1,022 | 967 | 913 | 1,305 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 24,057 |
| 1959 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1960 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1961 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,596 | 2,924 | 3,548 | 3,368 | 2,596 | 25,512 |
| 1962 | 1,860 | 1,300 | 1,255 | 1,188 | 1,121 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,624 |
| 1963 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1964 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1965 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,392 | 2,694 | 3,268 | 3,103 | 2,392 | 24,329 |
| 1966 | 1,714 | 1,198 | 1,156 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,307 |
| 1967 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1968 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1969 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1970 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1971 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1972 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1973 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1974 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1975 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1976 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1977 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1978 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1979 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1980 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1981 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1982 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1983 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1984 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1985 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1986 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1987 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1988 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| 1989 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,392 | 2,694 | 3,269 | 3,103 | 2,392 | 24,330 |
| 1990 | 1,714 | 1,198 | 1,156 | 1,094 | 1,033 | 1,476 | 1,856 | 1,829 | 2,060 | 2,499 | 2,373 | 1,829 | 20,117 |
| 1991 | 1,310 | 916 | 884 | 837 | 789 | 1,129 | 1,419 | 2,203 | 2,481 | 3,010 | 2,858 | 2,203 | 20,038 |
| 1992 | 1,578 | 1,103 | 1,065 | 1,008 | 951 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 24,604 |
| 1993 | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |
| AVG | 1,827 | 1,277 | 1,233 | 1,168 | 1,110 | 1,597 | 2,013 | 2,550 | 2,872 | 3,484 | 3,308 | 2,550 | 24,988 |
| MEDIAN | 1,885 | 1,317 | 1,272 | 1,204 | 1,136 | 1,624 | 2,041 | 2,631 | 2,963 | 3,595 | 3,414 | 2,631 | 25,714 |

# Appendix C

Monthly Cachuma Project Shortages
(simulation, 1918-1993)

New Alternatives 5B and 5C

| Cachuma Project Shortages in Acre-feet - Alternative 5B (SYRHM simulation 1918-1993) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1920 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1921 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1922 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1923 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1924 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1925 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 107 | 130 | 124 | 95 | 551 |
| 1926 | 68 | 48 | 46 | 44 | 41 | 59 | 74 | 0 | 0 | 0 | 0 | 0 | 379 |
| 1927 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1928 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1929 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1930 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 217 | 244 | 296 | 281 | 217 | 1,255 |
| 1931 | 155 | 108 | 105 | 99 | 94 | 134 | 168 | 819 | 922 | 1,119 | 1,062 | 819 | 5,604 |
| 1932 | 587 | 410 | 396 | 375 | 353 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,121 |
| 1933 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1934 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 | 131 | 159 | 151 | 116 | 674 |
| 1935 | 83 | 58 | 56 | 53 | 50 | 72 | 90 | 48 | 54 | 65 | 62 | 48 | 740 |
| 1936 | 34 | 24 | 23 | 22 | 21 | 30 | 37 | 147 | 165 | 200 | 190 | 147 | 1,040 |
| 1937 | 105 | 73 | 71 | 67 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 380 |
| 1938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1939 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1940 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1941 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1942 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1943 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1944 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1945 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1946 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1947 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1948 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 517 | 582 | 706 | 671 | 517 | 2,993 |
| 1950 | 370 | 259 | 250 | 236 | 223 | 319 | 401 | 1,031 | 1,161 | 1,409 | 1,338 | 1,031 | 8,029 |
| 1951 | 739 | 516 | 498 | 472 | 445 | 636 | 800 | 1,451 | 1,634 | 1,982 | 1,882 | 1,451 | 12,506 |
| 1952 | 1,039 | 726 | 701 | 664 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,131 |
| 1953 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1954 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1956 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 | 152 | 184 | 175 | 135 | 780 |
| 1957 | 97 | 67 | 65 | 62 | 58 | 83 | 104 | 598 | 674 | 817 | 776 | 598 | 4,000 |
| 1958 | 429 | 299 | 289 | 274 | 258 | 369 | 0 | 0 | 0 | 0 | 0 | 0 | 1,918 |
| 1959 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1960 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | 109 | 132 | 125 | 97 | 559 |
| 1962 | 69 | 48 | 47 | 44 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 299 | 337 | 408 | 388 | 299 | 1,731 |
| 1966 | 214 | 150 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 508 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 322 | 362 | 440 | 417 | 322 | 1,863 |
| 1990 | 230 | 161 | 156 | 147 | 139 | 199 | 250 | 911 | 1,025 | 1,244 | 1,181 | 911 | 6,553 |
| 1991 | 652 | 456 | 440 | 417 | 393 | 562 | 706 | 487 | 548 | 665 | 631 | 487 | 6,445 |
| 1992 | 349 | 244 | 235 | 223 | 210 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,261 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVG | 69 | 48 | 46 | 42 | 31 | 32 | 35 | 96 | 108 | 131 | 124 | 96 | 859 |
| MEDIAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Cachuma Project Shortages in Acre-feet - Alternative 5C (SYRHM simulation 1918-1993) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water Year | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | SUM |
| 1918 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1919 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1920 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1921 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1922 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1923 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1924 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1925 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 38 | 47 | 44 | 34 | 197 |
| 1926 | 24 | 17 | 16 | 16 | 15 | 21 | 26 | 0 | 0 | 0 | 0 | 0 | 136 |
| 1927 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1928 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1929 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1930 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 160 | 194 | 184 | 142 | 822 |
| 1931 | 102 | 71 | 69 | 65 | 61 | 88 | 110 | 718 | 809 | 981 | 932 | 718 | 4,723 |
| 1932 | 514 | 360 | 347 | 329 | 310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,860 |
| 1933 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1934 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 103 | 125 | 118 | 91 | 528 |
| 1935 | 65 | 46 | 44 | 42 | 39 | 56 | 71 | 41 | 46 | 56 | 53 | 41 | 598 |
| 1936 | 29 | 20 | 20 | 19 | 18 | 25 | 32 | 136 | 153 | 185 | 176 | 136 | 947 |
| 1937 | 97 | 68 | 66 | 62 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 351 |
| 1938 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1939 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1940 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1941 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1942 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1943 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1944 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1945 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1946 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1947 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1948 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1949 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 427 | 481 | 583 | 554 | 427 | 2,471 |
| 1950 | 306 | 214 | 206 | 195 | 184 | 263 | 331 | 924 | 1,040 | 1,262 | 1,198 | 924 | 7,047 |
| 1951 | 662 | 462 | 446 | 423 | 399 | 570 | 716 | 1,335 | 1,503 | 1,824 | 1,732 | 1,335 | 11,406 |
| 1952 | 956 | 668 | 645 | 611 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,881 |
| 1953 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1954 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1956 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 81 | 99 | 94 | 72 | 419 |
| 1957 | 52 | 36 | 35 | 33 | 31 | 45 | 56 | 517 | 582 | 706 | 670 | 517 | 3,280 |
| 1958 | 370 | 259 | 250 | 236 | 223 | 319 | 0 | 0 | 0 | 0 | 0 | 0 | 1,657 |
| 1959 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1960 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 39 | 48 | 45 | 35 | 202 |
| 1962 | 25 | 17 | 17 | 16 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| 1963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1965 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 239 | 269 | 327 | 310 | 239 | 1,385 |
| 1966 | 171 | 120 | 116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 407 |
| 1967 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1968 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 239 | 269 | 327 | 310 | 239 | 1,384 |
| 1990 | 171 | 120 | 116 | 109 | 103 | 148 | 185 | 802 | 903 | 1,096 | 1,041 | 802 | 5,597 |
| 1991 | 575 | 402 | 388 | 367 | 346 | 495 | 622 | 428 | 483 | 585 | 556 | 428 | 5,676 |
| 1992 | 307 | 215 | 207 | 196 | 185 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,110 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVG | 58 | 41 | 39 | 36 | 26 | 27 | 28 | 81 | 92 | 111 | 105 | 81 | 726 |
| MEDIAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

# Appendix D

Annual State Water Project Water
Deliveries to South Coast
(simulation, 1942-1993)

New Alternatives 5B and 5C

## SUMMARY OF STATE WATER PROJECT DELIVERIES
## FOR ALTERNATIVE 5B
## (ACRE-FEET/YEAR)

| | DEMAND | | SUPPLY | | | DELIVERY | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | M&I Projected | ID No. 1 | Reduced | | | | Total Imports |
| WATER | TOTAL | ID No. 1 | Delivery as Percentage | Exchange | Delivery due | ID No. 1 | SWP in | SWP in | under South |
| YEAR | SWP Demand [1] | Exchange | of Full Entitlement [2] | Shortage [3] | to Spill [4] | Exchange | Cachuma [5] | Outlet Works [6] | Coast Contracts |
| 1942 | 13,750 | 2,571 | 100% | 100% | 1,868 | 2,571 | 8,392 | 521 | 11,483 |
| 1943 | 13,750 | 2,571 | 89% | 100% | 3,173 | 2,571 | 2,831 | 1,421 | 6,822 |
| 1944 | 13,750 | 2,571 | 92% | 100% | 2,467 | 2,571 | 5,367 | 1,500 | 9,438 |
| 1945 | 13,750 | 2,571 | 90% | 100% | 1,645 | 2,571 | 6,589 | 1,659 | 10,819 |
| 1946 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 6,589 | 4,988 | 14,148 |
| 1947 | 13,750 | 2,571 | 75% | 100% | 0 | 2,571 | 3,203 | 4,888 | 10,662 |
| 1948 | 13,750 | 2,571 | 67% | 100% | 0 | 2,571 | 4,007 | 2,588 | 9,166 |
| 1949 | 13,750 | 2,571 | 65% | 88% | 0 | 2,272 | 5,649 | 1,055 | 8,976 |
| 1950 | 13,750 | 2,571 | 67% | 69% | 0 | 1,768 | 6,162 | 1,236 | 9,167 |
| 1951 | 13,750 | 2,571 | 88% | 51% | 0 | 1,321 | 10,196 | 515 | 12,031 |
| 1952 | 13,750 | 2,571 | 96% | 88% | 1,820 | 2,258 | 5,022 | 1,647 | 8,927 |
| 1953 | 13,750 | 2,571 | 90% | 100% | 0 | 2,571 | 9,207 | 3,065 | 14,843 |
| 1954 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 5,892 | 2,995 | 11,458 |
| 1955 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 4,123 | 2,855 | 9,549 |
| 1956 | 13,750 | 2,571 | 90% | 97% | 0 | 2,493 | 8,174 | 1,494 | 12,161 |
| 1957 | 13,750 | 2,571 | 88% | 84% | 0 | 2,171 | 5,863 | 3,101 | 11,135 |
| 1958 | 13,750 | 2,571 | 90% | 93% | 1,677 | 2,379 | 7,350 | 1,171 | 10,900 |
| 1959 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,283 | 3,162 | 13,016 |
| 1960 | 13,750 | 2,571 | 63% | 100% | 0 | 2,571 | 3,749 | 2,274 | 8,594 |
| 1961 | 13,750 | 2,571 | 61% | 98% | 0 | 2,515 | 4,848 | 1,040 | 8,403 |
| 1962 | 13,750 | 2,571 | 78% | 99% | 0 | 2,546 | 3,216 | 2,047 | 7,810 |
| 1963 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 12,415 | 885 | 15,871 |
| 1964 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 9,285 | 175 | 12,031 |
| 1965 | 13,750 | 2,571 | 82% | 93% | 0 | 2,398 | 5,642 | 3,227 | 11,267 |
| 1966 | 13,750 | 2,571 | 96% | 98% | 0 | 2,520 | 3,591 | 3,177 | 9,288 |
| 1967 | 13,750 | 2,571 | 96% | 100% | 3,545 | 2,571 | 2,705 | 5,665 | 10,942 |
| 1968 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 7,153 | 2,684 | 12,409 |
| 1969 | 13,750 | 2,571 | 93% | 100% | 4,230 | 2,571 | 2,705 | 2,044 | 7,321 |
| 1970 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 8,760 | 2,168 | 13,499 |
| 1971 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 5,157 | 5,523 | 13,251 |
| 1972 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 4,945 | 3,857 | 11,373 |
| 1973 | 13,750 | 2,571 | 82% | 100% | 1,453 | 2,571 | 3,453 | 2,333 | 8,356 |
| 1974 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 7,793 | 2,171 | 12,535 |
| 1975 | 13,750 | 2,571 | 96% | 100% | 1,773 | 2,571 | 4,015 | 2,142 | 8,728 |
| 1976 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,732 | 5,506 | 15,809 |
| 1977 | 13,750 | 2,571 | 33% | 100% | 0 | 2,571 | 888 | 1,364 | 4,823 |
| 1978 | 13,750 | 2,571 | 68% | 100% | 2,231 | 2,571 | 3,421 | 922 | 6,914 |
| 1979 | 13,750 | 2,571 | 85% | 100% | 2,214 | 2,571 | 3,271 | 1,515 | 7,357 |
| 1980 | 13,750 | 2,571 | 82% | 100% | 2,875 | 2,571 | 2,705 | 2,179 | 7,455 |
| 1981 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 9,572 | 1,485 | 13,628 |
| 1982 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 6,004 | 4,412 | 12,986 |
| 1983 | 13,750 | 2,571 | 100% | 100% | 5,544 | 2,571 | 4,716 | 384 | 7,671 |
| 1984 | 13,750 | 2,571 | 100% | 100% | 2,779 | 2,571 | 3,345 | 1,632 | 7,548 |
| 1985 | 13,750 | 2,571 | 96% | 100% | 0 | 2,571 | 6,292 | 5,291 | 14,154 |
| 1986 | 13,750 | 2,571 | 81% | 100% | 699 | 2,571 | 4,958 | 2,178 | 9,706 |
| 1987 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 7,928 | 1,666 | 12,166 |
| 1988 | 13,750 | 2,571 | 43% | 100% | 0 | 2,571 | 1,433 | 1,958 | 5,962 |
| 1989 | 13,750 | 2,571 | 58% | 93% | 0 | 2,385 | 3,749 | 1,887 | 8,021 |
| 1990 | 13,750 | 2,571 | 46% | 75% | 0 | 1,916 | 3,189 | 1,197 | 6,302 |
| 1991 | 13,750 | 2,571 | 29% | 75% | 0 | 1,927 | 0 | 2,084 | 4,011 |
| 1992 | 13,750 | 2,571 | 31% | 95% | 0 | 2,445 | 44 | 1,713 | 4,202 |
| 1993 | 13,750 | 2,571 | 76% | 100% | 3,282 | 2,571 | 2,460 | 1,835 | 6,866 |
| AVG | 13,750 | 2,571 | 80% | 96% | 832 | 2,470 | 5,251 | 2,317 | 10,038 |

NOTES

1) Based on total South Coast contractual agreements with CCWA not including drought buffers and additional water (4,500 afy) contracted by Goleta.

2) Based on DWR's SWP model DWRSIM v. 9.06T
Uses results from DWR's No Action scenario 786 which uses Delta historic hydrology
with regulations (including 1995 WQCP Bay-Delta Accord, 1997 AFRP CVPIA(b) and the New Melones Interim Operation plan)
and no new storage facilities. The percentages in this table do not include the option of purchasing the 10% drought buffer.

3) Based on shortages in Cachuma Project estimated by the SYRHM 0498

4) Assumes no CCWA deliveries when Cachuma is spilling and also that South Coast would not want to make-up that delivery water
because of the wetness of the basin and already assuming full deliveries of 13750 pending spills

5) SWP reductions in delivery (due to restrictions of 50% SWP during water right releases and 0% SWP during passage releases)
are redistributed to the following months up to one year.

6) Limited to being 50% of outlet releases

## SUMMARY OF STATE WATER PROJECT DELIVERIES
## FOR ALTERNATIVE 5C
## (ACRE-FEET/YEAR)

| | DEMAND | | SUPPLY | | | DELIVERY | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | M&I Projected | ID No. 1 | Reduced | | | | Total Imports |
| WATER | TOTAL | ID No. 1 | Delivery as Percentage | Exchange | Delivery due | ID No. 1 | SWP in | SWP in | under South |
| YEAR | SWP Demand [1] | Exchange | of Full Entitlement [2] | Shortage [3] | to Spill [4] | Exchange | Cachuma [5] | Outlet Works [6] | Coast Contracts |
| 1942 | 13,750 | 2,571 | 100% | 100% | 919 | 2,571 | 9,341 | 522 | 12,434 |
| 1943 | 13,750 | 2,571 | 89% | 100% | 3,173 | 2,571 | 2,830 | 1,421 | 6,821 |
| 1944 | 13,750 | 2,571 | 92% | 100% | 2,467 | 2,571 | 5,367 | 1,500 | 9,438 |
| 1945 | 13,750 | 2,571 | 90% | 100% | 1,645 | 2,571 | 6,589 | 1,660 | 10,820 |
| 1946 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 6,589 | 4,989 | 14,149 |
| 1947 | 13,750 | 2,571 | 75% | 100% | 0 | 2,571 | 3,203 | 4,887 | 10,661 |
| 1948 | 13,750 | 2,571 | 67% | 100% | 0 | 2,571 | 4,004 | 2,591 | 9,166 |
| 1949 | 13,750 | 2,571 | 65% | 90% | 0 | 2,324 | 5,595 | 1,057 | 8,976 |
| 1950 | 13,750 | 2,571 | 67% | 73% | 0 | 1,866 | 6,080 | 1,220 | 9,166 |
| 1951 | 13,750 | 2,571 | 88% | 56% | 0 | 1,431 | 10,086 | 515 | 12,031 |
| 1952 | 13,750 | 2,571 | 96% | 89% | 1,816 | 2,283 | 5,014 | 1,735 | 9,032 |
| 1953 | 13,750 | 2,571 | 90% | 100% | 0 | 2,571 | 9,207 | 2,965 | 14,743 |
| 1954 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 5,892 | 2,995 | 11,458 |
| 1955 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 4,124 | 2,854 | 9,549 |
| 1956 | 13,750 | 2,571 | 90% | 98% | 0 | 2,529 | 8,144 | 1,491 | 12,165 |
| 1957 | 13,750 | 2,571 | 88% | 87% | 0 | 2,243 | 5,819 | 3,094 | 11,156 |
| 1958 | 13,750 | 2,571 | 90% | 94% | 1,673 | 2,405 | 7,317 | 1,167 | 10,889 |
| 1959 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,274 | 3,162 | 13,007 |
| 1960 | 13,750 | 2,571 | 63% | 100% | 0 | 2,571 | 3,749 | 2,274 | 8,594 |
| 1961 | 13,750 | 2,571 | 61% | 99% | 0 | 2,551 | 4,817 | 1,035 | 8,403 |
| 1962 | 13,750 | 2,571 | 78% | 100% | 0 | 2,562 | 3,209 | 2,055 | 7,827 |
| 1963 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 12,398 | 885 | 15,854 |
| 1964 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 9,285 | 175 | 12,031 |
| 1965 | 13,750 | 2,571 | 82% | 95% | 0 | 2,433 | 5,612 | 3,223 | 11,268 |
| 1966 | 13,750 | 2,571 | 96% | 98% | 0 | 2,530 | 3,588 | 3,177 | 9,295 |
| 1967 | 13,750 | 2,571 | 96% | 100% | 3,545 | 2,571 | 2,705 | 5,666 | 10,942 |
| 1968 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 7,153 | 2,685 | 12,409 |
| 1969 | 13,750 | 2,571 | 93% | 100% | 4,230 | 2,571 | 2,705 | 2,044 | 7,321 |
| 1970 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 8,760 | 2,168 | 13,498 |
| 1971 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 5,157 | 5,523 | 13,251 |
| 1972 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 4,945 | 3,778 | 11,295 |
| 1973 | 13,750 | 2,571 | 82% | 100% | 1,453 | 2,571 | 3,531 | 2,333 | 8,435 |
| 1974 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 7,793 | 2,754 | 13,118 |
| 1975 | 13,750 | 2,571 | 96% | 100% | 1,773 | 2,571 | 4,058 | 1,816 | 8,445 |
| 1976 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,732 | 5,449 | 15,752 |
| 1977 | 13,750 | 2,571 | 33% | 100% | 0 | 2,571 | 1,251 | 1,357 | 5,178 |
| 1978 | 13,750 | 2,571 | 68% | 100% | 2,231 | 2,571 | 3,324 | 1,019 | 6,914 |
| 1979 | 13,750 | 2,571 | 85% | 100% | 2,214 | 2,571 | 3,271 | 1,515 | 7,357 |
| 1980 | 13,750 | 2,571 | 82% | 100% | 2,875 | 2,571 | 2,705 | 2,179 | 7,455 |
| 1981 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 9,571 | 1,485 | 13,628 |
| 1982 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 6,004 | 4,412 | 12,986 |
| 1983 | 13,750 | 2,571 | 100% | 100% | 5,544 | 2,571 | 4,716 | 384 | 7,671 |
| 1984 | 13,750 | 2,571 | 100% | 100% | 2,779 | 2,571 | 3,345 | 1,632 | 7,548 |
| 1985 | 13,750 | 2,571 | 96% | 100% | 0 | 2,571 | 6,292 | 5,291 | 14,154 |
| 1986 | 13,750 | 2,571 | 81% | 100% | 699 | 2,571 | 4,953 | 2,202 | 9,725 |
| 1987 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 7,917 | 1,701 | 12,189 |
| 1988 | 13,750 | 2,571 | 43% | 100% | 0 | 2,571 | 1,391 | 1,958 | 5,920 |
| 1989 | 13,750 | 2,571 | 58% | 95% | 0 | 2,433 | 3,653 | 1,935 | 8,021 |
| 1990 | 13,750 | 2,571 | 46% | 78% | 0 | 2,011 | 3,096 | 1,195 | 6,302 |
| 1991 | 13,750 | 2,571 | 29% | 78% | 0 | 2,004 | 296 | 1,711 | 4,010 |
| 1992 | 13,750 | 2,571 | 31% | 96% | 0 | 2,460 | 0 | 1,741 | 4,201 |
| 1993 | 13,750 | 2,571 | 76% | 100% | 3,282 | 2,571 | 1,337 | 2,958 | 6,866 |
| AVG | 13,750 | 2,571 | 80% | 97% | 814 | 2,484 | 5,246 | 2,337 | 10,068 |

NOTES

1) Based on total South Coast contractual agreements with CCWA not including drought buffers and additional water (4,500 afy) contracted by Goleta.

2) Based on DWR's SWP model DWRSIM v. 9.06T
Uses results from DWR's No Action scenario 786 which uses Delta historic hydrology
with regulations (including 1995 WQCP Bay-Delta Accord, 1997 AFRP CVPIA(b) and the New Melones Interim Operation plan)
and no new storage facilities. The percentages in this table do not include the option of purchasing the 10% drought buffer.

3) Based on shortages in Cachuma Project estimated by the SYRHM 0498

4) Assumes no CCWA deliveries when Cachuma is spilling and also that South Coast would not want to make-up that delivery water
because of the wetness of the basin and already assuming full deliveries of 13750 pending spills

5) SWP reductions in delivery (due to restrictions of 50% SWP during water right releases and 0% SWP during passage releases)
are redistributed to the following months up to one year.

6) Limited to being 50% of outlet releases

# Draft Technical Memorandum No. 6
# Santa Ynez River Flow Analysis for
# Impact Assessment on Steelhead

# D R A F T
# TECHNICAL MEMORANDUM No. 6

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**TO:** David Fee, URS
Gina Morimoto, ENTRIX

**DATE:** April 24, 2006
rev. August 22, 2006

**FROM:** Curtis Lawler

**JOB NO:** 1893

**RE:** Santa Ynez River Flow Analysis for Impact Assessment on Steelhead

## 1. INTRODUCTION

This technical memorandum was prepared to provide hydrologic data in connection with the impact assessment on Alternatives 5B and 5C. The two additional alternatives (Alternatives 5B and 5C) were identified for the revised Draft Environmental Impact Report on Consideration of Modifications to the U.S. Bureau of Reclamation's Water Right Permits 11308 and 11310 (Applications 11331 and 11332) to Protect Public Trust Values and Downstream Water Rights on the Santa Ynez River below Bradbury Dam (Cachuma Reservoir) dated August 2003. The Draft Technical Memorandum No. 5 (Re: Hydrologic Impact Analysis of Possible Cachuma Operations Alternatives) provides a detailed discussion on how these alternatives (Alternatives 5B and 5C) were analyzed using the Santa Ynez River Hydrology Model (SYRHM). Draft Technical Memorandum No. 5 includes the results on: (1) Cachuma Reservoir operations; (2) Santa Ynez River flows; (3) above Narrows groundwater storage; (4) water rights releases; (5) Cachuma Project water supply; (6) State Water Project deliveries; and (7) sensitivity analysis.

Tables A-1 and A-2 (Appendix A) of this memorandum provide the simulated monthly flows for Alternatives 5B and 5C for the period from 1918 through 1993. This technical memorandum provides additional hydrologic data used in assessing impacts on steelhead including daily flow data generated from the monthly flow output of the SYRHM for the two additional alternatives (Alternatives 5B and 5C). The daily flow data is utilized to assess impacts

on passage flows. The daily flow analysis uses the monthly results from the SYRHM as presented in Draft Technical Memorandum No. 5. Monthly flows from the SYRHM were converted to daily flows based on daily variations of gaged flow in Salsipuedes Creek (WY 1942-1993). The same procedures as used in the Biological Assessment (BA) and Fish Management Plan (FMP) were used in utilizing the daily flow data for the impact analysis. Hydrologic impacts analyzed in this technical memorandum are coordinated with the work of ENTRIX.

## 2. EFFECTS ON SPAWNING AND REARING HABITAT

Table 1 shows the exceedance flows for various alternatives and for various seasons within the year based on the daily flow data. The daily flow exceedances in Table 1 generally match the monthly flow frequency curves presented in Figures 5A, 5B, and 5C and Table 11 of Draft Technical Memorandum No. 5. The relative difference between Alternatives 5B and 5C is insignificant because they operate under the same operational release criteria for fish. The most significant differences between Alternatives 3B and 5B and between Alternatives 3C and 5C are shown in Table 1 for the months of April through September for the 50% exceedance. These months (April-September) are affected the most because the trigger to switch to the 3A2 operations under Alternatives 5B and 5C (see Draft Technical Memorandum No. 5) is usually not reached until around March and then ends in September. These months show a comparative increase in flows of 6 to 10 cfs in the reach from Bradbury Dam to Highway 154 Bridge at the 50% exceedance for Alternative 5B and 5C in comparison to Alternatives 3B and 3C, respectively. This is primarily due to the 3A2 criteria that flow targets have to be met all the way to Alisal Bridge under Alternatives 5B and 5C. Table 1 also shows that during low flow periods (80% exceedance) Alternatives 5B and 5C are basically the same as Alternatives 3B and 3C because they operate under the same criteria for releases for fish. Because of similarities in the results of daily and monthly flow analyses, comparisons of rearing and spawning flows in the August 2003 DEIR were based on the simulated monthly flows which has a longer period of record (76 years) than the daily flows (52 years). However, due to the flashy nature of the Santa Ynez River, passage flows for steelhead occur primarily during storms and spill events, so daily flows are used for the passage analysis described below.

**TABLE 1**
**FLOW EXCEEDANCES FOR EIR ALTERNATIVES**
**USING SANTA YNEZ RIVER HYDROLOGY MODEL AND DAILY FLOW ANALYSIS [1)]**
**(all flows in cfs)**

| | Flow Exceedance | | |
|---|---|---|---|
| | 80% | 50% | 20% |
| **Alt 2** | | | |
| Bradbury Dam to Highway 154 | | | |
| Jan-April | 2.6 | 3.3 | 46.3 |
| Jan-Mar | 2.5 | 3.2 | 19.7 |
| April-Jun | 3.1 | 5.1 | 55.7 |
| Jul-Sep | 3.7 | 10.4 | 45.3 |
| Oct-Dec | 2.9 | 3.4 | 7.0 |
| Highway 154 to Refugio Road | | | |
| Jan-April | 2.0 | 2.5 | 50.7 |
| Jan-Mar | 2.0 | 2.5 | 26.7 |
| April-Jun | 2.5 | 4.8 | 52.5 |
| Jul-Sep | 2.5 | 9.5 | 42.6 |
| Oct-Dec | 1.5 | 2.5 | 5.5 |
| Refugio Road to Alisal Bridge | | | |
| Jan-April | 0.2 | 2.5 | 70.3 |
| Jan-Mar | 0.1 | 2.3 | 39.9 |
| April-Jun | 0.4 | 4.7 | 45.8 |
| Jul-Sep | 0.0 | 4.8 | 29.0 |
| Oct-Dec | 0.0 | 0.1 | 4.2 |

| | Flow Exceedance | | |
|---|---|---|---|
| | 80% | 50% | 20% |
| **Alt 3B** | | | |
| Bradbury Dam to Highway 154 | | | |
| Jan-April | 3.5 | 5.5 | 51.7 |
| Jan-Mar | 3.3 | 5.4 | 30.8 |
| April-Jun | 5.0 | 6.3 | 55.5 |
| Jul-Sep | 6.0 | 11.7 | 46.9 |
| Oct-Dec | 3.6 | 5.8 | 9.5 |
| Highway 154 to Refugio Road | | | |
| Jan-April | 2.7 | 5.0 | 59.6 |
| Jan-Mar | 2.7 | 5.0 | 36.5 |
| April-Jun | 4.9 | 5.0 | 52.8 |
| Jul-Sep | 4.9 | 10.1 | 42.7 |
| Oct-Dec | 2.4 | 4.9 | 8.4 |
| Refugio Road to Alisal Bridge | | | |
| Jan-April | 1.1 | 4.5 | 76.7 |
| Jan-Mar | 0.8 | 4.1 | 54.7 |
| April-Jun | 2.3 | 5.2 | 46.2 |
| Jul-Sep | 0.8 | 6.1 | 31.2 |
| Oct-Dec | 0.0 | 1.5 | 5.5 |

| | Flow Exceedance | | |
|---|---|---|---|
| | 80% | 50% | 20% |
| **Alt 3C** | | | |
| Bradbury Dam to Highway 154 | | | |
| Jan-April | 3.5 | 5.5 | 49.9 |
| Jan-Mar | 3.3 | 5.4 | 29.9 |
| April-Jun | 5.0 | 6.3 | 55.5 |
| Jul-Sep | 6.2 | 11.7 | 46.3 |
| Oct-Dec | 3.8 | 5.9 | 9.6 |
| Highway 154 to Refugio Road | | | |
| Jan-April | 2.7 | 5.0 | 59.3 |
| Jan-Mar | 2.7 | 5.0 | 35.9 |
| April-Jun | 4.9 | 5.0 | 52.8 |
| Jul-Sep | 4.9 | 10.1 | 42.9 |
| Oct-Dec | 2.5 | 4.9 | 8.5 |
| Refugio Road to Alisal Bridge | | | |
| Jan-April | 1.1 | 4.5 | 75.7 |
| Jan-Mar | 0.8 | 4.1 | 53.6 |
| April-Jun | 2.3 | 5.2 | 46.2 |
| Jul-Sep | 0.8 | 6.1 | 31.1 |
| Oct-Dec | 0.0 | 1.5 | 5.5 |

| | Flow Exceedance | | |
|---|---|---|---|
| | 80% | 50% | 20% |
| **Alt 4B** | | | |
| Bradbury Dam to Highway 154 | | | |
| Jan-April | 3.6 | 5.5 | 47.7 |
| Jan-Mar | 3.4 | 5.4 | 27.3 |
| April-Jun | 4.8 | 6.2 | 28.0 |
| Jul-Sep | 6.3 | 11.2 | 35.2 |
| Oct-Dec | 3.7 | 5.8 | 12.3 |
| Highway 154 to Refugio Road | | | |
| Jan-April | 2.8 | 5.0 | 54.2 |
| Jan-Mar | 2.8 | 5.0 | 32.1 |
| April-Jun | 4.9 | 5.0 | 24.7 |
| Jul-Sep | 4.9 | 9.8 | 30.6 |
| Oct-Dec | 2.5 | 4.9 | 11.2 |
| Refugio Road to Alisal Bridge | | | |
| Jan-April | 1.5 | 4.6 | 70.9 |
| Jan-Mar | 1.2 | 4.1 | 51.2 |
| April-Jun | 1.9 | 4.5 | 19.0 |
| Jul-Sep | 0.8 | 5.3 | 15.4 |
| Oct-Dec | 0.0 | 1.5 | 7.1 |

| | Flow Exceedance | | |
|---|---|---|---|
| | 80% | 50% | 20% |
| **Alt 5B** | | | |
| Bradbury Dam to Highway 154 | | | |
| Jan-April | 3.8 | 5.5 | 48.0 |
| Jan-Mar | 3.8 | 5.3 | 42.5 |
| April-Jun | 5.0 | 17.8 | 55.5 |
| Jul-Sep | 6.5 | 18.3 | 45.0 |
| Oct-Dec | 3.8 | 5.8 | 12.0 |
| Highway 154 to Refugio Road | | | |
| Jan-April | 2.5 | 5.0 | 50.8 |
| Jan-Mar | 2.5 | 5.0 | 48.0 |
| April-Jun | 5.0 | 16.5 | 53.0 |
| Jul-Sep | 5.0 | 16.5 | 44.0 |
| Oct-Dec | 2.5 | 5.0 | 11.0 |
| Refugio Road to Alisal Bridge | | | |
| Jan-April | 0.5 | 4.8 | 70.0 |
| Jan-Mar | 0.3 | 4.0 | 51.5 |
| April-Jun | 2.3 | 14.3 | 46.5 |
| Jul-Sep | 1.5 | 10.0 | 31.0 |
| Oct-Dec | 0.0 | 1.5 | 5.8 |

| | Flow Exceedance | | |
|---|---|---|---|
| | 80% | 50% | 20% |
| **Alt 5C** | | | |
| Bradbury Dam to Highway 154 | | | |
| Jan-April | 3.8 | 5.8 | 48.0 |
| Jan-Mar | 3.8 | 5.5 | 35.5 |
| April-Jun | 5.0 | 16.0 | 51.5 |
| Jul-Sep | 6.3 | 18.3 | 45.0 |
| Oct-Dec | 3.8 | 5.8 | 12.0 |
| Highway 154 to Refugio Road | | | |
| Jan-April | 2.5 | 5.0 | 50.5 |
| Jan-Mar | 2.5 | 5.0 | 48.0 |
| April-Jun | 5.0 | 16.5 | 53.0 |
| Jul-Sep | 5.0 | 16.5 | 44.0 |
| Oct-Dec | 2.5 | 5.0 | 10.8 |
| Refugio Road to Alisal Bridge | | | |
| Jan-April | 0.5 | 4.8 | 69.8 |
| Jan-Mar | 0.3 | 4.0 | 51.5 |
| April-Jun | 2.3 | 14.3 | 46.5 |
| Jul-Sep | 1.3 | 10.0 | 31.0 |
| Oct-Dec | 0.0 | 1.5 | 5.8 |

1) Monthly flows from the Santa Ynez River Model were converted to daily flows based on daily variations of gaged flow in Salsipuedes Creek (1941-1993) and releases from Cachuma Reservoir.

## 3. EFFECTS ON PASSSAGE

Tables 2A and 2B show the summary of passage days generated for each of the alternatives. A passage day is defined as a condition when natural flows of the Santa Ynez River at Solvang were 25 cfs or greater during the period from January through April. In general, Table 2A shows that in wet years all of the alternatives analyzed have many passage days; and in normal and dry years, Alternatives 3B, 3C, 4B, 5B and 5C have more passage days than Alternative 2 (Baseline) because these five alternatives have passage flow releases as set forth in the Biological Opinion (BO). The criteria for the quantity and timing of passage releases used in Alternatives 3B, 3C, and 4B were also used for the new alternatives (Alternatives 5B and 5C) for consistency.

The passage releases for the 3A2 operations under Alternatives 5B and 5C occur in different years than the BO passage supplementation. This is because the criteria for the different operations are based on different hydrologic year types. BO passage releases (Alternatives 3B, 3C, 4B, 5B, and 5C) are targeted for normal years after a spill year; the 3A2 releases (Alternatives 5B and 5C) are targeted for wet and above-normal years which could be (and often are) a spill year. The BO passage releases augment passage flows in normal years after spill years, and the 3A2 operations increases passage flows in years of spill and/or wet or above-normal years.

However, Table 2A shows that the expected increase of passage days in spill years due to the 3A2 operations do not necessarily show up in Alternatives 5B and 5C because the 3A2 operations more likely do not trigger until the prime season for passage (February through March) is over. Also when the 3A2 operations are triggered, there is often a spill so that there is not an increase in the number of passage days like water years 1943, 1969, 1983, and 1993 under Alternatives 5B and 5C. However, wet years that do not have a spill show a significant increase in the number of passage days like water years 1966 and 1992 under Alternatives 5B and 5C.

**TABLE 2A**

**SUMMARY OF PASSAGE DAYS UNDER EIR ALTERNATIVES**

**JANUARY THROUGH APRIL**

| | | ALT 2 | | ALT 3B | | ALT 3C | | ALT 4B | | ALT 5B | | ALT 5C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hydrologic | # of | | # of | | # of | | # of | | # of | | # of | |
| | Year Type | Passage | Indicator | Passage | Indicator | Passage | Indicator | Passage | Indicator | Passage | Indicator | Passage | Indicator |
| YEAR | Classification 1) | Days 2) | of > 14 days | Days | of > 14 days | Days | of > 14 days | Days | of > 14 days | Days | of > 14 days | Days | of > 14 days |
| 1942 | normal | 47 | X | 41 | X | 41 | X | 40 | X | 40 | X | 40 | X |
| 1943 | wet | 120 | X | 120 | X | 120 | X | 120 | X | 120 | X | 120 | X |
| 1944 | wet | 90 | X | 91 | X | 91 | X | 89 | X | 89 | X | 88 | X |
| 1945 | wet | 66 | X | 66 | X | 66 | X | 66 | X | 66 | X | 66 | X |
| 1946 | normal | 33 | X | 25 | X | 23 | X | 7 | | 6 | | 6 | |
| 1947 | normal | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1948 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1949 | dry | 1 | | 14 | X | 14 | X | 15 | X | 16 | X | 16 | X |
| 1950 | dry | 0 | | 14 | X | 14 | X | 14 | X | 14 | X | 14 | X |
| 1951 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1952 | wet | 76 | X | 73 | X | 73 | X | 73 | X | 98 | X | 98 | X |
| 1953 | normal | 5 | | 18 | X | 18 | X | 19 | X | 19 | X | 19 | X |
| 1954 | normal | 9 | | 24 | X | 24 | X | 24 | X | 24 | X | 24 | X |
| 1955 | dry | 0 | | 0 | | 0 | | 1 | | 1 | | 1 | |
| 1956 | normal | 11 | | 11 | | 11 | | 11 | | 11 | | 11 | |
| 1957 | dry | 0 | | 0 | | 0 | | 0 | | 1 | | 1 | |
| 1958 | wet | 68 | X | 70 | X | 70 | X | 70 | X | 75 | X | 75 | X |
| 1959 | normal | 4 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1960 | dry | 1 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1961 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1962 | wet | 39 | X | 42 | X | 42 | X | 42 | X | 81 | X | 81 | X |
| 1963 | dry | 5 | | 6 | | 6 | | 6 | | 6 | | 6 | |
| 1964 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1965 | normal | 5 | | 5 | | 5 | | 5 | | 5 | | 5 | |
| 1966 | wet | 11 | | 11 | | 11 | | 11 | | 72 | X | 72 | X |
| 1967 | wet | 97 | X | 97 | X | 97 | X | 97 | X | 96 | X | 96 | X |
| 1968 | dry | 1 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1969 | wet | 104 | X | 104 | X | 104 | X | 104 | X | 104 | X | 104 | X |
| 1970 | normal | 9 | | 17 | X | 17 | X | 17 | X | 16 | X | 16 | X |
| 1971 | normal | 0 | | 1 | | 1 | | 1 | | 0 | | 0 | |
| 1972 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1973 | wet | 86 | X | 87 | X | 87 | X | 87 | X | 87 | X | 87 | X |
| 1974 | normal | 28 | X | 12 | | 12 | | 10 | | 9 | | 9 | |
| 1975 | normal | 67 | X | 74 | X | 74 | X | 74 | X | 73 | X | 73 | X |
| 1976 | dry | 1 | | 16 | X | 16 | X | 16 | X | 16 | X | 16 | X |
| 1977 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1978 | wet | 92 | X | 92 | X | 92 | X | 91 | X | 91 | X | 91 | X |
| 1979 | wet | 85 | X | 84 | X | 81 | X | 76 | X | 76 | X | 76 | X |
| 1980 | wet | 95 | X | 95 | X | 95 | X | 95 | X | 95 | X | 95 | X |
| 1981 | normal | 11 | | 22 | X | 22 | X | 22 | X | 21 | X | 21 | X |
| 1982 | normal | 6 | | 19 | X | 19 | X | 19 | X | 19 | X | 19 | X |
| 1983 | wet | 100 | X | 100 | X | 100 | X | 100 | X | 100 | X | 100 | X |
| 1984 | normal | 60 | X | 60 | X | 60 | X | 60 | X | 74 | X | 74 | X |
| 1985 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1986 | wet | 61 | X | 62 | X | 62 | X | 57 | X | 58 | X | 58 | X |
| 1987 | dry | 2 | | 15 | X | 15 | X | 15 | X | 16 | X | 16 | X |
| 1988 | dry | 0 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1989 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1990 | dry | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| 1991 | normal | 11 | | 11 | | 11 | | 11 | | 23 | X | 23 | X |
| 1992 | wet | 28 | X | 29 | X | 29 | X | 31 | X | 65 | X | 65 | X |
| 1993 | wet | 120 | X | 120 | X | 120 | X | 120 | X | 120 | X | 119 | X |
| AVG 42-93 | | 32 | | 35 | | 35 | | 34 | | 38 | | 38 | |
| SUM 42-93 | | | 21 | | 33 | | 33 | | 32 | | 34 | | 34 |
| | | | 40% | | 63% | | 63% | | 62% | | 65% | | 65% |

Notes

1) A wet, normal, or dry year represents a third of the years analyzed of the inflow into Lake Cachuma using USGS Los Laureles gage data.

2) Passage days are defined as number of days when flows at Solvang were 25 cfs or greater, January through April

**TABLE 2B**

**SUMMARY OF PASSAGE DAYS UNDER EIR ALTERNATIVES**

**JANUARY THROUGH APRIL**

**For Years When Passage Supplementation Releases Are Made**

| | | Alt 2 | | Alt 3B | | Alt 3C | | Alt 4B | | Alt 5B | | Alt 5C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Hydrologic | # of | | # of | | # of | | # of | | # of | | # of | |
| | Year Type | Passage | Indicator | Passage | Indicator | Passage | Indicator | Passage | Indicator | Passage | Indicator | Passage | Indicator |
| YEAR | Classification 1) | Days 2) | of > 14 days | Days | of > 14 days | Days | of > 14 days | Days | of > 14 days | Days | of > 14 days | Days | of > 14 days |
| 1949 | dry | 1 | | 14 | X | 14 | X | 15 | X | 16 | X | 16 | X |
| 1950 | dry | 0 | | 14 | X | 14 | X | 14 | X | 14 | X | 14 | X |
| 1953 | normal | 5 | | 18 | X | 18 | X | 19 | X | 19 | X | 19 | X |
| 1954 | normal | 9 | | 24 | X | 24 | X | 24 | X | 24 | X | 24 | X |
| 1959 | normal | 4 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1960 | dry | 1 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1968 | dry | 1 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| 1970 | normal | 9 | | 17 | X | 17 | X | 17 | X | 16 | X | 16 | X |
| 1975 | normal | 67 | X | 74 | X | 74 | X | 74 | X | 73 | X | 73 | X |
| 1976 | dry | 1 | | 16 | X | 16 | X | 16 | X | 16 | X | 16 | X |
| 1981 | normal | 11 | | 22 | X | 22 | X | 22 | X | 21 | X | 21 | X |
| 1982 | normal | 6 | | 19 | X | 19 | X | 19 | X | 19 | X | 19 | X |
| 1987 | dry | 2 | | 15 | X | 15 | X | 15 | X | 16 | X | 16 | X |
| 1988 | dry | 0 | | 15 | X | 15 | X | 15 | X | 15 | X | 15 | X |
| AVG 42-93 | | 8 | | 21 | | 21 | | 21 | | 21 | | 21 | |
| SUM 42-93 | | | 1 | | 14 | | 14 | | 14 | | 14 | | 14 |
| | | | 7% | | 100% | | 100% | | 100% | | 100% | | 100% |

Notes

1) A wet, normal, or dry year represents a third of the years analyzed of the inflow into Lake Cachuma using USGS Los Laureles gage data.

2) Passage days are defined as number of days when flows at Solvang were 25 cfs or greater, January through April

## 4. EFFECTS ON FISH IN CACHUMA LAKE

Tables B-1 and B-2 (Appendix B) show the simulated monthly Cachuma Reservoir storage, elevation and surcharge for the two new alternatives (Alternatives 5B and 5C) for the period 1918 through 1993. Lake elevations may affect shallow lake habitat in Cachuma Reservoir and ability of resident fish to migrate into tributaries for spawning and rearing.

# Appendix A

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-17 | 0 | 8.00 | 7.75 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Nov-17 | 0 | 7.75 | 7.50 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-17 | 0 | 7.25 | 7.00 | 5.00 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-18 | 0 | 6.75 | 6.75 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Feb-18 | 0 | 903.25 | 923.75 | 950.75 | 1066.00 | 1230.00 | 1391.75 | 1497.25 |
| Mar-18 | 1 | 2067.50 | 2080.00 | 2101.75 | 2181.00 | 2208.00 | 2205.00 | 2345.50 |
| Apr-18 | 1 | 293.75 | 299.00 | 307.00 | 337.25 | 368.75 | 403.50 | 432.00 |
| May-18 | 1 | 79.75 | 81.75 | 84.25 | 94.25 | 107.75 | 126.50 | 135.50 |
| Jun-18 | 1 | 16.75 | 17.75 | 19.00 | 22.75 | 29.50 | 38.00 | 45.00 |
| Jul-18 | 1 | 13.50 | 13.75 | 13.00 | 10.00 | 9.25 | 8.00 | 11.00 |
| Aug-18 | 1 | 17.75 | 17.75 | 16.00 | 10.00 | 7.50 | 3.75 | 4.75 |
| Sep-18 | 1 | 18.75 | 18.50 | 17.00 | 10.00 | 7.25 | 2.75 | 3.75 |
| Oct-18 | 0 | 7.00 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 1.00 |
| Nov-18 | 0 | 6.25 | 6.25 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Dec-18 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 1.00 | 0.00 | 1.25 |
| Jan-19 | 0 | 20.75 | 20.75 | 19.00 | 14.00 | 11.00 | 5.75 | 6.75 |
| Feb-19 | 0 | 23.00 | 23.25 | 22.50 | 21.00 | 20.00 | 16.25 | 19.50 |
| Mar-19 | 0 | 20.75 | 21.00 | 20.25 | 19.00 | 18.50 | 17.25 | 20.25 |
| Apr-19 | 0 | 6.00 | 6.00 | 5.00 | 3.25 | 1.50 | 0.50 | 0.25 |
| May-19 | 0 | 6.00 | 5.75 | 5.00 | 3.00 | 1.75 | 0.75 | 2.25 |
| Jun-19 | 0 | 6.50 | 6.25 | 5.00 | 2.00 | 0.75 | 0.00 | 0.00 |
| Jul-19 | 0 | 62.00 | 61.75 | 58.25 | 47.50 | 41.75 | 33.25 | 31.75 |
| Aug-19 | 0 | 7.25 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.00 |
| Sep-19 | 0 | 36.75 | 36.25 | 32.25 | 16.75 | 9.00 | 0.00 | 0.00 |
| Oct-19 | 0 | 23.75 | 23.75 | 21.50 | 12.25 | 5.75 | 0.00 | 0.25 |
| Nov-19 | 0 | 8.75 | 8.75 | 7.75 | 4.25 | 1.50 | 0.00 | 0.75 |
| Dec-19 | 0 | 5.50 | 5.50 | 5.00 | 2.75 | 1.25 | 0.00 | 1.00 |
| Jan-20 | 0 | 5.75 | 5.75 | 5.00 | 2.50 | 1.00 | 0.00 | 1.00 |
| Feb-20 | 0 | 4.00 | 4.75 | 5.25 | 7.25 | 10.75 | 10.50 | 14.75 |
| Mar-20 | 0 | 2.50 | 5.25 | 9.25 | 22.00 | 32.50 | 34.00 | 49.25 |
| Apr-20 | 0 | 3.00 | 4.00 | 5.00 | 9.25 | 15.50 | 21.00 | 28.00 |
| May-20 | 0 | 5.50 | 5.75 | 5.00 | 3.75 | 3.50 | 3.75 | 5.25 |
| Jun-20 | 0 | 6.50 | 6.25 | 5.00 | 2.25 | 0.75 | 0.00 | 1.50 |
| Jul-20 | 0 | 63.00 | 62.75 | 59.25 | 48.50 | 42.50 | 33.50 | 32.00 |
| Aug-20 | 0 | 6.25 | 6.00 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Sep-20 | 0 | 46.00 | 45.75 | 41.25 | 23.50 | 13.75 | 1.25 | 0.25 |
| Oct-20 | 0 | 26.75 | 26.75 | 24.50 | 14.50 | 7.00 | 0.00 | 0.00 |
| Nov-20 | 0 | 15.50 | 15.25 | 14.00 | 9.50 | 5.00 | 0.00 | 0.00 |
| Dec-20 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-21 | 0 | 2.25 | 2.75 | 2.50 | 2.00 | 2.25 | 1.00 | 2.50 |
| Feb-21 | 0 | 2.25 | 3.00 | 3.25 | 4.50 | 7.25 | 7.25 | 11.50 |
| Mar-21 | 0 | 2.00 | 3.00 | 3.75 | 6.75 | 11.75 | 14.75 | 21.00 |
| Apr-21 | 0 | 3.25 | 3.25 | 2.50 | 1.50 | 1.50 | 1.50 | 2.75 |
| May-21 | 0 | 3.25 | 3.25 | 2.50 | 1.25 | 0.75 | 0.75 | 2.00 |
| Jun-21 | 0 | 4.00 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.50 |
| Jul-21 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 1.00 |
| Aug-21 | 0 | 79.00 | 78.75 | 73.75 | 56.25 | 46.75 | 31.50 | 29.25 |
| Sep-21 | 0 | 36.50 | 36.50 | 35.25 | 29.75 | 25.75 | 19.50 | 18.75 |
| Oct-21 | 0 | 42.25 | 41.75 | 37.75 | 21.75 | 12.00 | 1.25 | 0.25 |
| Nov-21 | 0 | 12.50 | 12.25 | 11.25 | 6.75 | 2.75 | 0.00 | 0.00 |
| Dec-21 | 0 | 2.00 | 10.00 | 22.75 | 57.75 | 106.25 | 142.75 | 196.50 |
| Jan-22 | 0 | 2.00 | 6.50 | 13.25 | 35.50 | 66.25 | 97.00 | 122.00 |
| Feb-22 | 1 | 2.50 | 18.75 | 45.50 | 142.50 | 238.00 | 318.75 | 400.75 |
| Mar-22 | 1 | 33.50 | 39.50 | 48.25 | 81.50 | 120.25 | 161.00 | 192.25 |
| Apr-22 | 1 | 123.00 | 125.50 | 128.00 | 140.00 | 156.00 | 177.75 | 192.25 |
| May-22 | 1 | 18.50 | 19.25 | 20.00 | 23.50 | 28.75 | 37.50 | 41.00 |
| Jun-22 | 1 | 21.75 | 22.00 | 21.25 | 19.00 | 18.00 | 19.00 | 20.75 |
| Jul-22 | 1 | 15.25 | 15.25 | 14.00 | 10.00 | 8.00 | 6.25 | 7.50 |
| Aug-22 | 1 | 18.25 | 18.00 | 16.50 | 10.00 | 7.00 | 3.00 | 2.50 |
| Sep-22 | 1 | 19.75 | 19.50 | 17.50 | 10.00 | 6.25 | 1.75 | 1.25 |
| Oct-22 | 0 | 6.25 | 6.25 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Nov-22 | 0 | 6.75 | 6.50 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Dec-22 | 0 | 2.75 | 5.00 | 7.50 | 13.00 | 23.00 | 25.50 | 41.50 |
| Jan-23 | 0 | 20.75 | 21.25 | 20.00 | 17.00 | 17.25 | 15.75 | 19.25 |
| Feb-23 | 0 | 23.00 | 23.50 | 23.00 | 22.50 | 23.50 | 24.25 | 29.50 |
| Mar-23 | 0 | 20.75 | 20.75 | 19.75 | 18.00 | 16.75 | 16.50 | 18.00 |
| Apr-23 | 0 | 5.00 | 5.25 | 5.00 | 5.25 | 6.00 | 8.00 | 10.50 |
| May-23 | 0 | 5.50 | 5.75 | 5.00 | 3.50 | 3.00 | 3.50 | 5.00 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jun-23 | 0 | 6.25 | 6.00 | 5.00 | 2.75 | 1.50 | 1.25 | 2.75 |
| Jul-23 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.50 | 0.00 | 1.25 |
| Aug-23 | 0 | 69.75 | 69.50 | 65.75 | 51.75 | 44.50 | 33.00 | 31.50 |
| Sep-23 | 0 | 51.00 | 51.00 | 49.75 | 44.25 | 40.50 | 34.50 | 33.75 |
| Oct-23 | 0 | 48.00 | 47.75 | 46.25 | 40.50 | 36.75 | 30.75 | 30.00 |
| Nov-23 | 0 | 11.75 | 11.50 | 9.50 | 3.75 | 1.00 | 0.00 | 0.00 |
| Dec-23 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.25 | 0.00 | 1.00 |
| Jan-24 | 0 | 6.25 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 1.25 |
| Feb-24 | 0 | 6.50 | 6.50 | 5.25 | 2.50 | 1.00 | 0.00 | 1.25 |
| Mar-24 | 0 | 4.50 | 5.00 | 5.00 | 5.00 | 6.75 | 7.00 | 11.25 |
| Apr-24 | 0 | 6.25 | 6.25 | 5.00 | 3.00 | 1.75 | 0.75 | 2.25 |
| May-24 | 0 | 6.25 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 1.25 |
| Jun-24 | 0 | 6.50 | 6.50 | 5.00 | 1.75 | 0.50 | 0.00 | 1.25 |
| Jul-24 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-24 | 0 | 33.75 | 33.50 | 28.75 | 13.00 | 6.50 | 0.00 | 0.00 |
| Sep-24 | 0 | 35.25 | 35.00 | 31.75 | 18.00 | 10.00 | 0.25 | 0.00 |
| Oct-24 | 0 | 23.00 | 23.00 | 21.00 | 11.75 | 5.50 | 0.00 | 0.00 |
| Nov-24 | 0 | 7.50 | 7.25 | 6.50 | 3.00 | 0.50 | 0.00 | 0.00 |
| Dec-24 | 0 | 3.25 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jan-25 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Feb-25 | 0 | 4.00 | 4.00 | 2.75 | 0.25 | 0.00 | 0.00 | 0.00 |
| Mar-25 | 0 | 3.25 | 3.25 | 2.50 | 1.00 | 0.75 | 0.00 | 0.25 |
| Apr-25 | 0 | 2.00 | 3.00 | 3.25 | 4.75 | 8.50 | 8.75 | 12.25 |
| May-25 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 0.75 |
| Jun-25 | 0 | 4.00 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.75 |
| Jul-25 | 0 | 21.75 | 21.50 | 17.50 | 6.50 | 2.00 | 0.00 | 0.00 |
| Aug-25 | 0 | 45.75 | 45.50 | 41.50 | 25.25 | 15.75 | 2.00 | 0.25 |
| Sep-25 | 0 | 8.00 | 8.00 | 6.75 | 2.25 | 0.00 | 0.00 | 0.00 |
| Oct-25 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-25 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-25 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Jan-26 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Feb-26 | 0 | 2.25 | 4.75 | 8.00 | 15.00 | 28.25 | 30.00 | 44.50 |
| Mar-26 | 0 | 2.00 | 2.75 | 3.00 | 3.50 | 5.75 | 5.00 | 11.00 |
| Apr-26 | 0 | 2.25 | 15.50 | 36.50 | 104.25 | 162.25 | 185.00 | 263.25 |
| May-26 | 1 | 19.25 | 20.00 | 20.00 | 21.25 | 25.00 | 29.00 | 35.75 |
| Jun-26 | 1 | 25.00 | 25.00 | 23.50 | 19.00 | 16.50 | 14.25 | 15.75 |
| Jul-26 | 1 | 16.75 | 16.75 | 15.25 | 10.00 | 7.25 | 4.00 | 5.25 |
| Aug-26 | 1 | 19.75 | 19.50 | 17.50 | 10.00 | 5.75 | 1.00 | 0.50 |
| Sep-26 | 1 | 32.75 | 32.50 | 28.75 | 14.75 | 7.00 | 0.00 | 0.00 |
| Oct-26 | 0 | 72.75 | 72.75 | 70.25 | 59.00 | 49.75 | 34.75 | 32.00 |
| Nov-26 | 0 | 2.00 | 3.75 | 6.25 | 11.50 | 18.75 | 21.25 | 32.00 |
| Dec-26 | 0 | 2.00 | 2.75 | 3.50 | 5.25 | 8.25 | 9.50 | 15.50 |
| Jan-27 | 0 | 2.00 | 2.75 | 3.25 | 5.75 | 9.50 | 13.00 | 17.75 |
| Feb-27 | 0 | 3.75 | 28.50 | 69.00 | 227.00 | 385.50 | 527.75 | 637.75 |
| Mar-27 | 1 | 170.50 | 173.75 | 177.00 | 194.75 | 205.00 | 211.75 | 235.00 |
| Apr-27 | 1 | 68.25 | 70.25 | 72.75 | 82.75 | 95.25 | 112.75 | 123.75 |
| May-27 | 1 | 19.25 | 19.75 | 20.00 | 21.25 | 23.25 | 28.00 | 31.50 |
| Jun-27 | 1 | 22.75 | 22.75 | 21.75 | 19.00 | 17.25 | 17.25 | 18.50 |
| Jul-27 | 1 | 15.50 | 15.50 | 14.25 | 10.00 | 8.00 | 5.75 | 7.00 |
| Aug-27 | 1 | 18.75 | 18.50 | 16.75 | 10.00 | 6.75 | 2.50 | 2.00 |
| Sep-27 | 1 | 20.25 | 20.25 | 18.00 | 10.00 | 6.00 | 1.00 | 0.50 |
| Oct-27 | 0 | 6.25 | 6.25 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Nov-27 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 0.75 |
| Dec-27 | 0 | 6.25 | 6.25 | 5.00 | 1.25 | 0.25 | 0.00 | 1.00 |
| Jan-28 | 0 | 20.75 | 20.75 | 18.75 | 13.00 | 9.50 | 3.75 | 4.50 |
| Feb-28 | 0 | 22.00 | 24.00 | 25.75 | 32.00 | 36.50 | 32.75 | 44.75 |
| Mar-28 | 0 | 20.75 | 21.75 | 22.25 | 24.25 | 27.25 | 28.00 | 35.00 |
| Apr-28 | 0 | 5.50 | 5.50 | 5.00 | 4.25 | 3.75 | 3.50 | 5.25 |
| May-28 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 2.00 | 1.25 | 2.75 |
| Jun-28 | 0 | 6.25 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 1.50 |
| Jul-28 | 0 | 62.00 | 61.75 | 58.75 | 48.25 | 42.25 | 34.00 | 32.50 |
| Aug-28 | 0 | 49.50 | 49.50 | 48.25 | 43.00 | 39.50 | 34.00 | 33.25 |
| Sep-28 | 0 | 51.00 | 50.75 | 49.25 | 42.50 | 38.50 | 32.00 | 31.00 |
| Oct-28 | 0 | 49.25 | 49.00 | 47.50 | 40.75 | 36.50 | 30.00 | 29.25 |
| Nov-28 | 0 | 6.75 | 6.75 | 5.00 | 0.50 | 0.00 | 0.00 | 0.00 |
| Dec-28 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Jan-29 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.25 | 0.00 | 1.25 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Feb-29 | 0 | 5.75 | 6.25 | 5.50 | 3.75 | 4.50 | 3.25 | 4.75 |
| Mar-29 | 0 | 4.50 | 5.00 | 5.00 | 5.00 | 7.25 | 8.00 | 11.00 |
| Apr-29 | 0 | 5.00 | 5.50 | 5.00 | 4.50 | 5.75 | 6.25 | 9.50 |
| May-29 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.50 | 0.75 | 2.25 |
| Jun-29 | 0 | 59.75 | 59.50 | 56.25 | 47.25 | 41.75 | 34.75 | 33.75 |
| Jul-29 | 0 | 46.50 | 46.50 | 45.25 | 40.75 | 37.75 | 33.25 | 32.75 |
| Aug-29 | 0 | 24.50 | 24.25 | 20.75 | 8.50 | 3.00 | 0.00 | 0.00 |
| Sep-29 | 0 | 40.75 | 40.50 | 37.00 | 22.25 | 12.75 | 1.00 | 0.00 |
| Oct-29 | 0 | 26.50 | 26.25 | 24.25 | 14.75 | 7.25 | 0.00 | 0.00 |
| Nov-29 | 0 | 8.50 | 8.50 | 7.50 | 4.00 | 1.00 | 0.00 | 0.00 |
| Dec-29 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-30 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Feb-30 | 0 | 4.00 | 4.00 | 2.75 | 0.50 | 0.00 | 0.00 | 0.25 |
| Mar-30 | 0 | 2.00 | 3.50 | 5.25 | 11.25 | 20.50 | 25.25 | 31.25 |
| Apr-30 | 0 | 3.50 | 3.50 | 2.50 | 1.25 | 0.75 | 0.00 | 1.25 |
| May-30 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 1.00 |
| Jun-30 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-30 | 0 | 22.00 | 21.75 | 17.75 | 6.75 | 2.00 | 0.00 | 0.00 |
| Aug-30 | 0 | 30.50 | 30.25 | 26.75 | 13.25 | 5.75 | 0.00 | 0.00 |
| Sep-30 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-30 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-30 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-30 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-31 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-31 | 0 | 4.00 | 4.00 | 2.75 | 0.00 | 0.00 | 0.00 | 1.00 |
| Mar-31 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Apr-31 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.50 |
| May-31 | 0 | 25.00 | 24.75 | 21.00 | 9.00 | 3.25 | 0.00 | 0.00 |
| Jun-31 | 0 | 4.50 | 4.50 | 3.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jul-31 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-31 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-31 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-31 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-31 | 0 | 4.50 | 4.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-31 | 0 | 2.00 | 7.00 | 13.75 | 25.75 | 50.75 | 61.25 | 87.75 |
| Jan-32 | 0 | 2.00 | 4.00 | 6.25 | 9.50 | 19.50 | 18.50 | 25.50 |
| Feb-32 | 0 | 2.50 | 16.75 | 38.50 | 122.75 | 175.25 | 181.25 | 289.25 |
| Mar-32 | 1 | 41.00 | 44.25 | 48.00 | 62.75 | 86.25 | 110.75 | 126.75 |
| Apr-32 | 1 | 31.75 | 32.75 | 33.00 | 35.00 | 38.25 | 42.00 | 49.00 |
| May-32 | 1 | 21.50 | 21.75 | 21.25 | 20.00 | 19.75 | 21.00 | 24.25 |
| Jun-32 | 1 | 24.50 | 24.50 | 23.25 | 19.00 | 15.75 | 13.00 | 14.25 |
| Jul-32 | 1 | 17.25 | 17.00 | 15.50 | 10.00 | 6.75 | 3.25 | 3.50 |
| Aug-32 | 1 | 19.50 | 19.50 | 17.50 | 10.00 | 5.75 | 1.00 | 0.50 |
| Sep-32 | 1 | 32.75 | 32.50 | 29.00 | 14.75 | 7.00 | 0.00 | 0.00 |
| Oct-32 | 0 | 11.25 | 11.25 | 10.00 | 4.75 | 1.25 | 0.00 | 0.00 |
| Nov-32 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-32 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-33 | 0 | 2.00 | 4.75 | 8.25 | 17.75 | 33.50 | 42.25 | 53.25 |
| Feb-33 | 0 | 4.00 | 5.00 | 5.50 | 7.00 | 11.00 | 12.25 | 19.00 |
| Mar-33 | 0 | 3.00 | 3.00 | 2.50 | 1.75 | 1.75 | 1.75 | 3.25 |
| Apr-33 | 0 | 3.25 | 3.25 | 2.50 | 1.50 | 1.25 | 1.25 | 2.75 |
| May-33 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 1.25 |
| Jun-33 | 0 | 60.00 | 59.75 | 56.25 | 46.75 | 41.25 | 34.50 | 33.50 |
| Jul-33 | 0 | 48.75 | 48.75 | 47.50 | 42.75 | 39.75 | 35.50 | 34.75 |
| Aug-33 | 0 | 42.50 | 42.25 | 40.75 | 34.75 | 31.00 | 25.00 | 24.25 |
| Sep-33 | 0 | 35.00 | 34.75 | 30.00 | 13.50 | 5.25 | 0.00 | 0.00 |
| Oct-33 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-33 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-33 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-34 | 0 | 2.00 | 4.75 | 8.25 | 16.75 | 31.50 | 37.75 | 50.00 |
| Feb-34 | 0 | 2.25 | 3.50 | 4.50 | 7.50 | 11.75 | 11.75 | 19.50 |
| Mar-34 | 0 | 2.25 | 2.75 | 2.50 | 2.25 | 3.50 | 4.00 | 7.00 |
| Apr-34 | 0 | 3.75 | 3.75 | 2.50 | 0.50 | 0.00 | 0.00 | 1.50 |
| May-34 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.50 |
| Jun-34 | 0 | 64.75 | 64.25 | 60.50 | 49.75 | 43.25 | 34.75 | 33.50 |
| Jul-34 | 0 | 37.00 | 37.00 | 35.75 | 31.25 | 28.00 | 23.75 | 23.00 |
| Aug-34 | 0 | 40.75 | 40.50 | 36.00 | 19.50 | 10.50 | 0.75 | 0.00 |
| Sep-34 | 0 | 42.00 | 41.75 | 38.75 | 24.50 | 13.75 | 1.25 | 0.25 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-34 | 0 | 3.25 | 3.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-34 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-34 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-35 | 0 | 2.00 | 5.00 | 9.00 | 20.00 | 37.25 | 47.00 | 59.75 |
| Feb-35 | 0 | 2.25 | 3.50 | 4.50 | 7.75 | 13.25 | 16.75 | 23.75 |
| Mar-35 | 0 | 2.00 | 5.25 | 9.75 | 25.50 | 41.75 | 52.75 | 69.50 |
| Apr-35 | 0 | 2.00 | 7.50 | 15.75 | 44.50 | 74.75 | 100.00 | 127.50 |
| May-35 | 1 | 20.00 | 20.50 | 20.00 | 21.00 | 23.75 | 28.25 | 31.75 |
| Jun-35 | 1 | 25.00 | 25.00 | 23.25 | 19.00 | 16.25 | 14.75 | 16.00 |
| Jul-35 | 1 | 17.25 | 17.25 | 15.50 | 10.00 | 6.75 | 3.50 | 3.75 |
| Aug-35 | 1 | 66.75 | 66.75 | 63.50 | 51.50 | 44.00 | 33.50 | 32.00 |
| Sep-35 | 1 | 43.25 | 43.00 | 42.00 | 37.00 | 33.25 | 28.00 | 27.25 |
| Oct-35 | 0 | 19.75 | 19.75 | 16.75 | 6.75 | 1.50 | 0.00 | 0.00 |
| Nov-35 | 0 | 14.75 | 14.50 | 13.00 | 7.50 | 3.50 | 0.00 | 0.00 |
| Dec-35 | 0 | 3.50 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jan-36 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.75 |
| Feb-36 | 0 | 2.00 | 11.00 | 24.75 | 71.75 | 121.00 | 152.75 | 192.50 |
| Mar-36 | 0 | 2.00 | 3.50 | 5.25 | 12.00 | 21.50 | 31.50 | 40.00 |
| Apr-36 | 0 | 2.00 | 3.50 | 4.75 | 10.50 | 15.25 | 18.25 | 25.75 |
| May-36 | 0 | 3.25 | 3.25 | 2.50 | 1.50 | 1.25 | 1.50 | 3.25 |
| Jun-36 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.50 |
| Jul-36 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-36 | 0 | 40.75 | 40.25 | 35.00 | 17.25 | 9.00 | 0.25 | 0.00 |
| Sep-36 | 0 | 6.75 | 6.75 | 5.50 | 0.75 | 0.00 | 0.00 | 0.00 |
| Oct-36 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-36 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-36 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-37 | 0 | 2.00 | 3.25 | 4.50 | 6.25 | 12.00 | 11.50 | 16.00 |
| Feb-37 | 0 | 2.50 | 22.00 | 52.75 | 160.75 | 304.75 | 441.25 | 534.75 |
| Mar-37 | 1 | 144.00 | 158.75 | 181.00 | 265.75 | 362.50 | 456.00 | 530.50 |
| Apr-37 | 1 | 281.00 | 284.75 | 290.00 | 308.75 | 332.75 | 364.00 | 385.75 |
| May-37 | 1 | 18.25 | 19.00 | 20.00 | 23.50 | 28.00 | 36.00 | 39.50 |
| Jun-37 | 1 | 20.50 | 20.75 | 20.25 | 19.00 | 19.00 | 21.25 | 22.75 |
| Jul-37 | 1 | 15.00 | 15.00 | 14.00 | 10.00 | 8.25 | 6.50 | 7.75 |
| Aug-37 | 1 | 18.50 | 18.25 | 16.75 | 10.00 | 6.75 | 2.75 | 2.25 |
| Sep-37 | 1 | 20.00 | 19.75 | 17.75 | 10.00 | 6.25 | 1.50 | 1.00 |
| Oct-37 | 0 | 7.50 | 7.50 | 6.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Nov-37 | 0 | 14.50 | 14.50 | 12.50 | 6.25 | 2.75 | 0.00 | 0.00 |
| Dec-37 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 0.75 | 0.00 | 1.00 |
| Jan-38 | 0 | 20.75 | 20.75 | 19.00 | 14.00 | 11.00 | 6.00 | 6.50 |
| Feb-38 | 0 | 556.00 | 573.00 | 597.75 | 693.75 | 826.00 | 961.50 | 1046.50 |
| Mar-38 | 1 | 3013.00 | 3047.00 | 3105.75 | 3344.75 | 3500.75 | 3600.75 | 3827.00 |
| Apr-38 | 1 | 263.75 | 267.75 | 273.75 | 296.00 | 323.75 | 359.00 | 380.75 |
| May-38 | 1 | 36.75 | 37.00 | 36.50 | 35.75 | 34.75 | 36.50 | 38.00 |
| Jun-38 | 1 | 18.75 | 19.00 | 19.00 | 19.50 | 21.75 | 26.50 | 28.00 |
| Jul-38 | 1 | 12.75 | 13.00 | 12.25 | 10.00 | 10.25 | 10.75 | 12.25 |
| Aug-38 | 1 | 17.50 | 17.50 | 16.00 | 10.00 | 7.50 | 4.00 | 5.00 |
| Sep-38 | 1 | 18.75 | 18.50 | 16.75 | 10.00 | 7.00 | 2.75 | 3.75 |
| Oct-38 | 0 | 7.00 | 6.75 | 5.50 | 1.50 | 0.00 | 0.00 | 0.00 |
| Nov-38 | 0 | 7.25 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.00 |
| Dec-38 | 0 | 5.50 | 5.75 | 5.00 | 2.75 | 2.50 | 0.75 | 3.25 |
| Jan-39 | 0 | 20.75 | 21.25 | 20.50 | 19.00 | 21.00 | 20.25 | 24.00 |
| Feb-39 | 0 | 23.00 | 24.00 | 24.25 | 26.00 | 31.00 | 34.75 | 41.75 |
| Mar-39 | 0 | 20.75 | 22.50 | 24.00 | 30.75 | 41.00 | 52.25 | 61.75 |
| Apr-39 | 0 | 4.00 | 4.50 | 5.00 | 7.00 | 10.00 | 14.00 | 19.00 |
| May-39 | 0 | 5.50 | 5.50 | 5.00 | 3.75 | 3.25 | 3.50 | 5.25 |
| Jun-39 | 0 | 6.25 | 6.25 | 5.00 | 2.50 | 1.25 | 0.25 | 1.75 |
| Jul-39 | 0 | 58.00 | 58.00 | 54.75 | 45.00 | 39.75 | 33.00 | 32.00 |
| Aug-39 | 0 | 49.50 | 49.50 | 48.00 | 43.00 | 39.75 | 34.75 | 34.00 |
| Sep-39 | 0 | 51.00 | 51.00 | 49.25 | 42.75 | 39.00 | 32.75 | 31.75 |
| Oct-39 | 0 | 6.75 | 6.50 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Nov-39 | 0 | 7.00 | 6.75 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-39 | 0 | 6.75 | 6.50 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Jan-40 | 0 | 5.50 | 5.75 | 5.00 | 2.75 | 3.00 | 1.25 | 3.50 |
| Feb-40 | 0 | 2.75 | 4.25 | 5.25 | 8.75 | 16.25 | 20.50 | 27.25 |
| Mar-40 | 0 | 3.25 | 4.25 | 5.00 | 7.00 | 12.00 | 15.75 | 22.25 |
| Apr-40 | 0 | 5.00 | 5.50 | 5.00 | 5.00 | 6.50 | 8.25 | 11.75 |
| May-40 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.75 | 1.25 | 2.75 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jun-40 | 0 | 6.75 | 6.50 | 5.00 | 1.50 | 0.25 | 0.00 | 0.50 |
| Jul-40 | 0 | 64.25 | 64.00 | 60.50 | 48.50 | 42.25 | 33.25 | 31.75 |
| Aug-40 | 0 | 49.25 | 49.00 | 47.75 | 42.25 | 38.50 | 33.00 | 32.25 |
| Sep-40 | 0 | 33.75 | 33.25 | 29.25 | 14.25 | 6.75 | 0.00 | 0.00 |
| Oct-40 | 0 | 25.00 | 24.75 | 22.50 | 12.00 | 5.25 | 0.00 | 0.00 |
| Nov-40 | 0 | 3.25 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-40 | 0 | 2.00 | 4.00 | 6.75 | 12.75 | 22.25 | 25.50 | 37.25 |
| Jan-41 | 0 | 2.50 | 9.50 | 20.50 | 55.00 | 103.50 | 147.25 | 189.25 |
| Feb-41 | 0 | 972.50 | 1019.25 | 1094.75 | 1341.75 | 1532.25 | 1599.75 | 1946.75 |
| Mar-41 | 1 | 3096.25 | 3151.75 | 3247.50 | 3616.50 | 3935.50 | 4199.25 | 4506.25 |
| Apr-41 | 1 | 1997.50 | 2025.25 | 2070.75 | 2249.25 | 2384.00 | 2476.00 | 2638.25 |
| May-41 | 1 | 294.75 | 299.00 | 306.25 | 327.75 | 355.50 | 387.75 | 415.25 |
| Jun-41 | 1 | 48.75 | 50.00 | 51.75 | 55.50 | 62.25 | 70.00 | 82.00 |
| Jul-41 | 1 | 8.00 | 9.00 | 10.00 | 12.00 | 16.75 | 21.25 | 29.25 |
| Aug-41 | 1 | 11.25 | 11.75 | 11.75 | 10.00 | 11.75 | 12.00 | 18.25 |
| Sep-41 | 1 | 14.50 | 14.75 | 14.00 | 10.00 | 9.75 | 8.00 | 12.50 |
| Oct-41 | 0 | 5.00 | 5.25 | 5.00 | 3.00 | 3.50 | 2.50 | 7.25 |
| Nov-41 | 0 | 5.00 | 5.50 | 5.00 | 3.25 | 4.00 | 3.25 | 8.00 |
| Dec-41 | 0 | 2.75 | 8.50 | 17.25 | 36.00 | 63.25 | 78.25 | 133.50 |
| Jan-42 | 0 | 3.75 | 6.75 | 10.75 | 20.00 | 34.25 | 45.25 | 72.50 |
| Feb-42 | 0 | 5.75 | 7.25 | 8.75 | 13.00 | 19.00 | 24.25 | 40.75 |
| Mar-42 | 0 | 7.75 | 10.75 | 14.50 | 24.50 | 38.00 | 49.25 | 79.00 |
| Apr-42 | 0 | 104.50 | 106.75 | 108.00 | 114.75 | 124.75 | 137.25 | 156.00 |
| May-42 | 0 | 7.00 | 8.00 | 9.00 | 12.25 | 16.75 | 23.00 | 31.25 |
| Jun-42 | 0 | 6.00 | 6.50 | 6.25 | 6.00 | 7.00 | 8.50 | 13.25 |
| Jul-42 | 0 | 5.50 | 5.75 | 5.00 | 2.50 | 1.75 | 0.75 | 3.75 |
| Aug-42 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.50 | 0.00 | 2.75 |
| Sep-42 | 0 | 18.25 | 18.00 | 14.75 | 4.00 | 0.50 | 0.00 | 1.00 |
| Oct-42 | 0 | 6.00 | 6.00 | 5.00 | 0.75 | 0.00 | 0.00 | 1.00 |
| Nov-42 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.25 | 0.00 | 2.75 |
| Dec-42 | 0 | 5.75 | 5.75 | 5.00 | 2.00 | 0.50 | 0.00 | 2.75 |
| Jan-43 | 0 | 735.50 | 749.75 | 768.50 | 856.75 | 935.50 | 984.50 | 1031.25 |
| Feb-43 | 1 | 514.00 | 520.75 | 532.50 | 572.00 | 617.25 | 671.50 | 706.75 |
| Mar-43 | 1 | 1065.75 | 1081.50 | 1107.00 | 1211.75 | 1301.25 | 1383.00 | 1447.25 |
| Apr-43 | 1 | 170.75 | 173.25 | 177.75 | 192.00 | 208.75 | 231.00 | 247.00 |
| May-43 | 1 | 18.25 | 19.00 | 20.00 | 23.25 | 27.50 | 34.00 | 40.75 |
| Jun-43 | 1 | 19.75 | 20.00 | 19.75 | 19.00 | 20.00 | 22.50 | 26.00 |
| Jul-43 | 1 | 13.75 | 13.75 | 13.00 | 10.00 | 9.00 | 8.25 | 11.25 |
| Aug-43 | 1 | 17.75 | 17.50 | 16.00 | 10.00 | 7.50 | 4.00 | 5.25 |
| Sep-43 | 1 | 18.75 | 18.75 | 16.75 | 10.00 | 7.00 | 2.75 | 3.75 |
| Oct-43 | 0 | 6.50 | 6.25 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Nov-43 | 0 | 6.50 | 6.50 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Dec-43 | 0 | 5.00 | 5.25 | 5.00 | 3.25 | 3.50 | 1.50 | 5.75 |
| Jan-44 | 0 | 4.00 | 4.75 | 5.00 | 5.25 | 7.75 | 8.25 | 14.50 |
| Feb-44 | 0 | 289.75 | 303.75 | 323.50 | 398.75 | 465.50 | 503.50 | 575.75 |
| Mar-44 | 1 | 578.25 | 585.50 | 597.25 | 637.25 | 677.00 | 717.25 | 758.25 |
| Apr-44 | 1 | 77.75 | 79.50 | 81.75 | 90.50 | 100.75 | 115.25 | 126.00 |
| May-44 | 1 | 17.75 | 18.75 | 20.00 | 24.25 | 30.25 | 38.75 | 45.75 |
| Jun-44 | 1 | 20.00 | 20.25 | 20.00 | 19.00 | 19.75 | 22.00 | 25.25 |
| Jul-44 | 1 | 15.25 | 15.25 | 14.00 | 10.00 | 8.00 | 6.25 | 7.50 |
| Aug-44 | 1 | 18.00 | 17.75 | 16.25 | 10.00 | 7.25 | 3.50 | 4.50 |
| Sep-44 | 1 | 19.50 | 19.25 | 17.50 | 10.00 | 6.25 | 1.50 | 1.00 |
| Oct-44 | 0 | 7.25 | 7.25 | 6.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Nov-44 | 0 | 5.00 | 5.50 | 5.00 | 3.50 | 4.50 | 2.75 | 5.50 |
| Dec-44 | 0 | 5.50 | 5.75 | 5.00 | 2.75 | 2.25 | 0.75 | 3.50 |
| Jan-45 | 0 | 5.25 | 5.50 | 5.00 | 3.25 | 3.25 | 2.00 | 5.00 |
| Feb-45 | 0 | 3.50 | 8.50 | 15.50 | 43.75 | 81.00 | 120.00 | 135.50 |
| Mar-45 | 0 | 69.75 | 72.00 | 73.50 | 84.00 | 92.75 | 99.50 | 109.25 |
| Apr-45 | 1 | 43.25 | 44.50 | 45.00 | 50.75 | 58.75 | 71.25 | 75.25 |
| May-45 | 1 | 20.00 | 20.25 | 20.00 | 20.25 | 21.25 | 25.00 | 26.50 |
| Jun-45 | 1 | 24.75 | 24.50 | 23.00 | 19.00 | 16.25 | 15.00 | 14.75 |
| Jul-45 | 1 | 16.75 | 16.50 | 15.00 | 10.00 | 7.25 | 4.50 | 4.00 |
| Aug-45 | 1 | 19.25 | 19.25 | 17.25 | 10.00 | 6.50 | 2.00 | 1.50 |
| Sep-45 | 1 | 20.75 | 20.50 | 18.50 | 10.00 | 5.75 | 0.75 | 0.25 |
| Oct-45 | 0 | 21.25 | 21.00 | 18.00 | 7.50 | 2.50 | 0.00 | 0.00 |
| Nov-45 | 0 | 12.25 | 12.00 | 10.75 | 5.75 | 2.50 | 0.00 | 0.00 |
| Dec-45 | 0 | 2.75 | 4.00 | 5.00 | 8.50 | 15.50 | 18.75 | 20.25 |
| Jan-46 | 0 | 5.50 | 5.75 | 5.00 | 3.50 | 3.25 | 2.00 | 3.25 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Feb-46 | 0 | 5.50 | 6.00 | 5.50 | 5.25 | 6.50 | 7.50 | 9.00 |
| Mar-46 | 0 | 3.25 | 4.50 | 5.50 | 10.00 | 11.00 | 8.25 | 21.00 |
| Apr-46 | 0 | 5.50 | 7.00 | 8.00 | 14.50 | 24.50 | 36.50 | 41.75 |
| May-46 | 1 | 23.50 | 23.75 | 22.25 | 20.00 | 19.50 | 20.50 | 21.75 |
| Jun-46 | 1 | 25.50 | 25.50 | 23.75 | 19.00 | 16.00 | 13.50 | 15.00 |
| Jul-46 | 1 | 56.50 | 56.25 | 53.75 | 45.00 | 39.75 | 33.25 | 32.50 |
| Aug-46 | 1 | 49.50 | 49.50 | 48.25 | 43.25 | 40.00 | 35.25 | 34.75 |
| Sep-46 | 1 | 51.00 | 51.00 | 49.50 | 43.00 | 39.25 | 33.25 | 32.25 |
| Oct-46 | 0 | 49.50 | 49.25 | 47.75 | 41.25 | 37.25 | 31.25 | 30.25 |
| Nov-46 | 0 | 5.25 | 5.75 | 5.00 | 3.00 | 4.00 | 3.00 | 5.50 |
| Dec-46 | 0 | 5.00 | 5.50 | 5.00 | 3.25 | 4.25 | 3.75 | 6.75 |
| Jan-47 | 0 | 6.00 | 6.00 | 5.00 | 2.25 | 1.50 | 0.50 | 2.00 |
| Feb-47 | 0 | 6.00 | 6.25 | 5.50 | 3.50 | 3.75 | 3.25 | 6.50 |
| Mar-47 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 2.75 | 2.75 | 4.50 |
| Apr-47 | 0 | 6.25 | 6.25 | 5.00 | 2.75 | 1.75 | 1.25 | 2.75 |
| May-47 | 0 | 56.00 | 55.75 | 53.00 | 46.00 | 41.25 | 37.25 | 36.75 |
| Jun-47 | 0 | 51.00 | 51.00 | 50.00 | 46.25 | 43.75 | 41.50 | 41.00 |
| Jul-47 | 0 | 49.25 | 49.25 | 47.75 | 42.75 | 40.00 | 36.25 | 35.50 |
| Aug-47 | 0 | 49.25 | 49.00 | 47.25 | 40.75 | 37.00 | 31.50 | 30.50 |
| Sep-47 | 0 | 50.75 | 50.50 | 48.50 | 41.00 | 36.50 | 29.75 | 28.75 |
| Oct-47 | 0 | 45.75 | 45.50 | 43.75 | 36.50 | 32.25 | 25.75 | 24.75 |
| Nov-47 | 0 | 24.50 | 24.25 | 20.00 | 7.25 | 1.75 | 0.00 | 0.00 |
| Dec-47 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-48 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-48 | 0 | 4.00 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Mar-48 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Apr-48 | 0 | 4.00 | 4.00 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| May-48 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jun-48 | 0 | 13.25 | 13.00 | 10.50 | 4.25 | 1.75 | 0.00 | 0.00 |
| Jul-48 | 0 | 20.50 | 20.25 | 16.25 | 5.25 | 1.00 | 0.00 | 0.00 |
| Aug-48 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-48 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-48 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-48 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-48 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-49 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-49 | 0 | 4.50 | 4.50 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-49 | 0 | 30.00 | 31.75 | 31.75 | 24.00 | 25.75 | 13.50 | 31.25 |
| Apr-49 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-49 | 0 | 29.75 | 29.50 | 26.25 | 13.25 | 6.75 | 0.00 | 0.00 |
| Jun-49 | 0 | 5.00 | 5.00 | 4.00 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jul-49 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-49 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-49 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-49 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-49 | 0 | 4.50 | 4.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-49 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-50 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-50 | 0 | 33.25 | 34.25 | 33.00 | 19.75 | 17.00 | 3.50 | 10.00 |
| Mar-50 | 0 | 3.25 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-50 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-50 | 0 | 52.00 | 51.50 | 47.25 | 28.00 | 17.00 | 0.75 | 0.00 |
| Jun-50 | 0 | 3.25 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-50 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-50 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-50 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-50 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-50 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-50 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-51 | 0 | 14.25 | 13.75 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jun-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-51 | 0 | 3.75 | 3.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-52 | 0 | 2.00 | 25.50 | 58.00 | 181.75 | 307.50 | 429.25 | 535.50 |
| Feb-52 | 1 | 35.75 | 37.25 | 33.75 | 25.50 | 31.75 | 17.50 | 22.00 |
| Mar-52 | 1 | 4.00 | 26.25 | 61.25 | 156.00 | 307.75 | 444.25 | 585.75 |
| Apr-52 | 1 | 174.75 | 177.50 | 178.25 | 177.00 | 195.50 | 205.50 | 210.25 |
| May-52 | 1 | 17.75 | 18.75 | 20.00 | 22.25 | 28.00 | 33.50 | 34.00 |
| Jun-52 | 1 | 22.75 | 23.00 | 22.50 | 19.00 | 16.50 | 12.75 | 12.75 |
| Jul-52 | 1 | 14.75 | 15.00 | 14.25 | 10.00 | 8.25 | 5.25 | 5.25 |
| Aug-52 | 1 | 17.00 | 17.00 | 16.00 | 10.00 | 7.75 | 3.75 | 4.00 |
| Sep-52 | 1 | 25.75 | 25.50 | 22.75 | 10.50 | 4.25 | 0.00 | 0.00 |
| Oct-52 | 0 | 14.50 | 14.50 | 13.25 | 7.75 | 4.50 | 0.25 | 1.00 |
| Nov-52 | 0 | 5.00 | 5.25 | 5.00 | 2.75 | 1.75 | 0.00 | 3.50 |
| Dec-52 | 0 | 2.75 | 5.75 | 10.25 | 17.50 | 29.00 | 29.50 | 59.75 |
| Jan-53 | 0 | 30.75 | 33.25 | 35.50 | 42.50 | 54.50 | 62.75 | 79.75 |
| Feb-53 | 0 | 4.25 | 5.00 | 5.50 | 7.25 | 10.25 | 13.75 | 17.25 |
| Mar-53 | 0 | 4.75 | 5.25 | 5.00 | 5.25 | 6.00 | 7.75 | 9.50 |
| Apr-53 | 0 | 5.25 | 5.50 | 5.00 | 4.75 | 4.00 | 3.50 | 6.00 |
| May-53 | 0 | 6.00 | 6.00 | 5.00 | 2.75 | 1.00 | 0.25 | 0.75 |
| Jun-53 | 0 | 6.50 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 0.50 |
| Jul-53 | 0 | 63.50 | 63.25 | 60.00 | 49.00 | 42.75 | 34.50 | 33.00 |
| Aug-53 | 0 | 49.50 | 49.50 | 48.25 | 43.00 | 39.00 | 33.50 | 32.50 |
| Sep-53 | 0 | 41.50 | 41.50 | 40.00 | 33.75 | 29.50 | 23.00 | 22.00 |
| Oct-53 | 0 | 35.50 | 35.25 | 31.00 | 15.50 | 6.75 | 0.00 | 0.00 |
| Nov-53 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Dec-53 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Jan-54 | 0 | 10.25 | 11.00 | 11.00 | 12.00 | 13.25 | 9.50 | 10.50 |
| Feb-54 | 0 | 23.00 | 23.75 | 23.50 | 22.50 | 23.25 | 20.25 | 25.00 |
| Mar-54 | 0 | 2.75 | 5.50 | 9.50 | 19.50 | 33.25 | 41.50 | 64.00 |
| Apr-54 | 0 | 3.75 | 4.50 | 5.00 | 8.00 | 12.75 | 17.75 | 21.25 |
| May-54 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 0.75 | 0.00 | 0.00 |
| Jun-54 | 0 | 6.25 | 6.25 | 5.00 | 2.25 | 1.00 | 0.00 | 1.25 |
| Jul-54 | 0 | 67.50 | 67.25 | 63.75 | 51.75 | 44.50 | 34.25 | 32.50 |
| Aug-54 | 0 | 45.50 | 45.50 | 44.25 | 38.75 | 34.75 | 28.75 | 28.00 |
| Sep-54 | 0 | 51.00 | 50.75 | 46.00 | 27.75 | 16.25 | 2.75 | 1.50 |
| Oct-54 | 0 | 30.75 | 30.75 | 28.50 | 18.25 | 9.25 | 0.25 | 0.00 |
| Nov-54 | 0 | 13.50 | 13.50 | 12.50 | 8.00 | 3.75 | 0.00 | 0.00 |
| Dec-54 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-55 | 0 | 2.00 | 2.50 | 2.75 | 2.75 | 1.75 | 0.00 | 4.50 |
| Feb-55 | 0 | 3.00 | 3.25 | 2.75 | 1.75 | 1.25 | 0.00 | 2.75 |
| Mar-55 | 0 | 3.25 | 3.25 | 2.50 | 1.25 | 0.75 | 0.00 | 1.00 |
| Apr-55 | 0 | 3.50 | 3.50 | 2.50 | 1.00 | 0.25 | 0.00 | 1.50 |
| May-55 | 0 | 3.00 | 3.25 | 2.50 | 1.50 | 1.75 | 1.00 | 2.00 |
| Jun-55 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-55 | 0 | 34.25 | 34.00 | 29.25 | 15.50 | 8.00 | 0.00 | 0.00 |
| Aug-55 | 0 | 50.75 | 50.50 | 47.00 | 31.00 | 19.75 | 3.75 | 1.50 |
| Sep-55 | 0 | 8.75 | 8.75 | 7.75 | 3.00 | 0.00 | 0.00 | 0.00 |
| Oct-55 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-55 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-55 | 0 | 2.00 | 12.50 | 28.50 | 58.00 | 101.50 | 109.75 | 209.00 |
| Jan-56 | 0 | 2.00 | 15.50 | 37.25 | 87.00 | 136.25 | 145.00 | 261.50 |
| Feb-56 | 0 | 2.00 | 4.25 | 7.00 | 14.00 | 23.25 | 30.00 | 49.25 |
| Mar-56 | 0 | 2.00 | 3.00 | 3.75 | 6.50 | 10.00 | 13.50 | 21.75 |
| Apr-56 | 0 | 2.00 | 3.50 | 5.25 | 10.75 | 16.00 | 19.25 | 31.75 |
| May-56 | 0 | 2.00 | 2.75 | 3.00 | 5.25 | 8.75 | 13.75 | 18.50 |
| Jun-56 | 0 | 3.50 | 3.50 | 2.50 | 1.00 | 0.25 | 0.00 | 1.50 |
| Jul-56 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.25 | 0.00 | 1.25 |
| Aug-56 | 0 | 31.00 | 30.75 | 26.00 | 11.25 | 4.75 | 0.00 | 0.00 |
| Sep-56 | 0 | 18.75 | 18.75 | 16.00 | 5.50 | 0.50 | 0.00 | 0.00 |
| Oct-56 | 0 | 3.75 | 3.75 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-56 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-56 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-57 | 0 | 3.25 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.75 |
| Feb-57 | 0 | 2.25 | 3.00 | 3.00 | 2.50 | 3.25 | 0.25 | 6.25 |
| Mar-57 | 0 | 2.00 | 2.50 | 2.50 | 2.25 | 3.50 | 1.75 | 4.25 |
| Apr-57 | 0 | 3.00 | 3.25 | 2.50 | 1.50 | 1.50 | 0.25 | 1.50 |
| May-57 | 0 | 3.25 | 3.25 | 2.50 | 1.00 | 0.75 | 0.00 | 1.25 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jun-57 | 0 | 70.75 | 70.50 | 66.50 | 54.50 | 47.00 | 35.25 | 33.25 |
| Jul-57 | 0 | 12.75 | 12.75 | 11.25 | 5.75 | 2.50 | 0.00 | 0.00 |
| Aug-57 | 0 | 48.25 | 47.75 | 44.00 | 27.25 | 16.75 | 2.75 | 1.50 |
| Sep-57 | 0 | 13.50 | 13.50 | 12.25 | 6.25 | 1.75 | 0.00 | 0.00 |
| Oct-57 | 0 | 4.25 | 4.25 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-57 | 0 | 5.25 | 5.00 | 3.75 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-57 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-58 | 0 | 2.00 | 2.75 | 3.00 | 3.25 | 4.25 | 1.00 | 5.00 |
| Feb-58 | 0 | 2.25 | 15.00 | 35.00 | 87.25 | 161.00 | 209.25 | 304.50 |
| Mar-58 | 1 | 3.00 | 20.00 | 48.00 | 136.25 | 255.25 | 369.00 | 482.25 |
| Apr-58 | 1 | 572.50 | 600.00 | 643.25 | 814.25 | 1009.75 | 1209.25 | 1351.50 |
| May-58 | 1 | 145.50 | 149.00 | 155.25 | 176.50 | 200.50 | 231.75 | 246.25 |
| Jun-58 | 1 | 16.25 | 17.50 | 19.00 | 23.50 | 30.25 | 39.50 | 46.50 |
| Jul-58 | 1 | 12.25 | 12.50 | 12.25 | 10.00 | 8.75 | 6.50 | 9.50 |
| Aug-58 | 1 | 17.00 | 17.00 | 15.50 | 10.00 | 7.25 | 3.25 | 4.50 |
| Sep-58 | 1 | 18.75 | 18.75 | 17.00 | 10.00 | 6.75 | 2.25 | 3.25 |
| Oct-58 | 0 | 7.00 | 6.75 | 5.75 | 1.50 | 0.00 | 0.00 | 1.00 |
| Nov-58 | 0 | 7.25 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 1.00 |
| Dec-58 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.00 | 0.00 | 1.00 |
| Jan-59 | 0 | 5.00 | 5.25 | 5.00 | 3.50 | 3.75 | 1.75 | 4.50 |
| Feb-59 | 0 | 34.00 | 37.50 | 41.50 | 53.50 | 73.50 | 86.75 | 111.25 |
| Mar-59 | 0 | 3.75 | 4.50 | 5.00 | 6.75 | 9.50 | 12.00 | 16.75 |
| Apr-59 | 0 | 5.00 | 5.50 | 5.00 | 4.75 | 4.00 | 2.75 | 6.00 |
| May-59 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 1.75 | 0.75 | 2.25 |
| Jun-59 | 0 | 6.25 | 6.25 | 5.00 | 2.50 | 1.25 | 0.50 | 2.00 |
| Jul-59 | 0 | 62.75 | 62.50 | 59.25 | 48.50 | 42.50 | 33.75 | 32.50 |
| Aug-59 | 0 | 49.50 | 49.50 | 48.25 | 42.75 | 39.25 | 33.75 | 33.00 |
| Sep-59 | 0 | 36.00 | 35.75 | 31.75 | 16.75 | 8.50 | 0.00 | 0.00 |
| Oct-59 | 0 | 28.00 | 27.75 | 25.50 | 15.00 | 7.25 | 0.00 | 0.00 |
| Nov-59 | 0 | 16.00 | 15.75 | 14.75 | 9.75 | 5.25 | 0.25 | 0.00 |
| Dec-59 | 0 | 6.00 | 5.75 | 5.00 | 2.25 | 0.25 | 0.00 | 0.00 |
| Jan-60 | 0 | 5.75 | 5.75 | 5.00 | 2.75 | 1.00 | 0.00 | 0.75 |
| Feb-60 | 0 | 32.50 | 33.25 | 32.50 | 30.75 | 29.25 | 22.00 | 30.25 |
| Mar-60 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 1.50 | 0.00 | 1.25 |
| Apr-60 | 0 | 5.00 | 5.50 | 5.00 | 4.50 | 3.75 | 1.75 | 7.00 |
| May-60 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 1.25 |
| Jun-60 | 0 | 6.50 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 0.00 |
| Jul-60 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-60 | 0 | 45.00 | 44.50 | 39.25 | 20.50 | 11.25 | 0.25 | 0.00 |
| Sep-60 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-60 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-60 | 0 | 3.50 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.75 |
| Dec-60 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 1.50 |
| Jan-61 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-61 | 0 | 4.25 | 4.00 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-61 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Apr-61 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-61 | 0 | 28.75 | 28.50 | 24.50 | 11.50 | 4.25 | 0.00 | 0.00 |
| Jun-61 | 0 | 5.50 | 5.25 | 4.25 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jul-61 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-61 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-61 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-61 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-61 | 0 | 5.25 | 5.00 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-61 | 0 | 2.25 | 2.75 | 2.50 | 0.25 | 0.00 | 0.00 | 1.75 |
| Jan-62 | 0 | 2.00 | 2.75 | 2.75 | 0.75 | 0.00 | 0.00 | 7.00 |
| Feb-62 | 0 | 2.50 | 50.00 | 127.50 | 348.50 | 618.00 | 842.25 | 1177.50 |
| Mar-62 | 1 | 28.50 | 36.25 | 48.00 | 79.00 | 122.00 | 136.50 | 197.25 |
| Apr-62 | 1 | 29.75 | 31.50 | 33.00 | 39.00 | 47.00 | 49.00 | 59.25 |
| May-62 | 1 | 19.50 | 20.00 | 20.00 | 20.25 | 20.50 | 18.25 | 23.00 |
| Jun-62 | 1 | 24.25 | 24.50 | 23.00 | 19.00 | 15.50 | 10.50 | 12.00 |
| Jul-62 | 1 | 16.50 | 16.50 | 15.00 | 10.00 | 7.00 | 2.75 | 3.75 |
| Aug-62 | 1 | 19.25 | 19.00 | 17.25 | 10.00 | 5.75 | 0.75 | 0.25 |
| Sep-62 | 1 | 28.75 | 28.50 | 25.25 | 12.25 | 5.25 | 0.00 | 0.00 |
| Oct-62 | 0 | 6.00 | 6.00 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Nov-62 | 0 | 6.50 | 6.25 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Dec-62 | 0 | 6.25 | 6.00 | 5.00 | 1.25 | 0.00 | 0.00 | 0.50 |
| Jan-63 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 0.25 | 0.00 | 1.00 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Feb-63 | 0 | 2.75 | 5.75 | 9.50 | 15.00 | 23.00 | 16.50 | 48.00 |
| Mar-63 | 0 | 2.75 | 5.00 | 7.75 | 12.50 | 19.25 | 16.25 | 42.50 |
| Apr-63 | 0 | 2.75 | 4.00 | 5.00 | 6.75 | 9.50 | 7.50 | 22.25 |
| May-63 | 0 | 5.00 | 5.25 | 5.00 | 4.00 | 4.00 | 2.25 | 8.25 |
| Jun-63 | 0 | 6.00 | 6.25 | 5.00 | 2.50 | 1.50 | 0.00 | 3.00 |
| Jul-63 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 1.25 |
| Aug-63 | 0 | 38.75 | 38.50 | 34.00 | 17.50 | 8.75 | 0.00 | 0.00 |
| Sep-63 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-63 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-63 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-63 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-64 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-64 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-64 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-64 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-64 | 0 | 31.50 | 31.00 | 27.25 | 14.25 | 6.25 | 0.00 | 0.00 |
| Jun-64 | 0 | 6.00 | 6.00 | 5.00 | 1.25 | 0.00 | 0.00 | 0.00 |
| Jul-64 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-64 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-64 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-64 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-64 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-64 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-65 | 0 | 2.00 | 2.75 | 3.00 | 0.75 | 0.25 | 0.00 | 5.50 |
| Feb-65 | 0 | 4.00 | 4.00 | 2.75 | 0.00 | 0.00 | 0.00 | 0.50 |
| Mar-65 | 0 | 3.25 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 1.25 |
| Apr-65 | 0 | 2.00 | 6.25 | 12.00 | 21.50 | 34.25 | 21.25 | 45.75 |
| May-65 | 0 | 3.00 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 1.25 |
| Jun-65 | 0 | 67.25 | 66.75 | 61.25 | 38.50 | 25.00 | 4.00 | 3.75 |
| Jul-65 | 0 | 47.50 | 47.25 | 45.25 | 32.00 | 20.50 | 4.00 | 2.75 |
| Aug-65 | 0 | 18.50 | 18.25 | 16.75 | 8.00 | 1.50 | 0.00 | 0.00 |
| Sep-65 | 0 | 6.50 | 6.25 | 5.50 | 1.00 | 0.00 | 0.00 | 0.00 |
| Oct-65 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-65 | 0 | 2.00 | 6.25 | 12.25 | 18.50 | 27.75 | 15.25 | 59.50 |
| Dec-65 | 0 | 2.00 | 6.00 | 11.75 | 20.75 | 34.00 | 31.50 | 70.25 |
| Jan-66 | 1 | 2.25 | 7.00 | 14.00 | 31.50 | 56.00 | 71.00 | 108.75 |
| Feb-66 | 1 | 21.50 | 24.00 | 26.50 | 32.00 | 40.75 | 44.75 | 69.50 |
| Mar-66 | 1 | 47.00 | 48.00 | 48.00 | 49.25 | 51.75 | 54.50 | 63.00 |
| Apr-66 | 1 | 36.00 | 36.25 | 35.00 | 33.00 | 29.25 | 26.50 | 29.25 |
| May-66 | 1 | 22.50 | 22.75 | 22.00 | 20.00 | 18.00 | 17.00 | 20.00 |
| Jun-66 | 1 | 24.00 | 24.00 | 22.75 | 19.00 | 16.00 | 14.00 | 15.25 |
| Jul-66 | 1 | 16.75 | 16.75 | 15.25 | 10.00 | 6.75 | 3.25 | 3.50 |
| Aug-66 | 1 | 67.75 | 67.50 | 64.75 | 52.50 | 44.75 | 33.75 | 32.00 |
| Sep-66 | 1 | 50.50 | 50.25 | 49.25 | 44.00 | 40.00 | 34.00 | 33.25 |
| Oct-66 | 0 | 48.75 | 48.75 | 47.25 | 41.50 | 37.25 | 31.00 | 30.25 |
| Nov-66 | 0 | 50.50 | 50.25 | 48.75 | 43.00 | 38.75 | 32.50 | 31.75 |
| Dec-66 | 0 | 2.25 | 5.00 | 8.50 | 21.25 | 40.25 | 58.00 | 65.50 |
| Jan-67 | 1 | 2.50 | 12.25 | 27.00 | 71.75 | 135.50 | 195.25 | 259.00 |
| Feb-67 | 1 | 17.75 | 21.50 | 26.50 | 50.75 | 74.00 | 98.50 | 106.75 |
| Mar-67 | 1 | 304.25 | 306.50 | 307.00 | 319.25 | 326.25 | 336.75 | 343.75 |
| Apr-67 | 1 | 892.75 | 895.75 | 899.75 | 918.75 | 925.50 | 936.25 | 951.75 |
| May-67 | 1 | 327.00 | 331.00 | 337.00 | 364.00 | 385.00 | 409.75 | 417.25 |
| Jun-67 | 1 | 18.25 | 18.75 | 19.00 | 20.00 | 20.25 | 20.75 | 24.00 |
| Jul-67 | 1 | 15.25 | 15.00 | 14.00 | 10.00 | 7.50 | 5.25 | 4.75 |
| Aug-67 | 1 | 59.25 | 59.25 | 56.75 | 47.25 | 43.25 | 37.00 | 36.00 |
| Sep-67 | 1 | 45.00 | 45.00 | 44.00 | 39.25 | 36.75 | 32.75 | 32.25 |
| Oct-67 | 0 | 7.00 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 0.00 |
| Nov-67 | 0 | 7.50 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.25 |
| Dec-67 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 1.00 | 0.00 | 1.25 |
| Jan-68 | 0 | 5.75 | 6.00 | 5.00 | 2.50 | 1.75 | 0.25 | 1.50 |
| Feb-68 | 0 | 5.75 | 6.00 | 5.25 | 4.00 | 4.50 | 4.00 | 5.25 |
| Mar-68 | 0 | 30.75 | 31.25 | 30.50 | 29.75 | 31.75 | 33.25 | 36.00 |
| Apr-68 | 0 | 5.25 | 5.50 | 5.00 | 5.00 | 5.75 | 7.00 | 8.75 |
| May-68 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.00 | 0.25 | 0.00 |
| Jun-68 | 0 | 57.75 | 57.75 | 54.75 | 46.75 | 41.75 | 36.25 | 35.25 |
| Jul-68 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.25 | 0.00 | 0.00 |
| Aug-68 | 0 | 17.00 | 16.75 | 13.75 | 4.00 | 0.75 | 0.00 | 0.00 |
| Sep-68 | 0 | 36.50 | 36.25 | 33.00 | 18.50 | 10.25 | 0.25 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-68 | 0 | 24.25 | 24.00 | 22.00 | 12.75 | 6.00 | 0.00 | 0.00 |
| Nov-68 | 0 | 12.00 | 12.00 | 11.00 | 6.75 | 3.25 | 0.00 | 0.00 |
| Dec-68 | 0 | 6.00 | 5.75 | 5.00 | 2.25 | 0.25 | 0.00 | 0.00 |
| Jan-69 | 0 | 2050.00 | 2083.00 | 2132.50 | 2368.50 | 2653.00 | 2973.25 | 3105.50 |
| Feb-69 | 1 | 3347.25 | 3391.50 | 3467.50 | 3818.00 | 4144.75 | 4491.75 | 4641.50 |
| Mar-69 | 1 | 1257.25 | 1272.25 | 1296.50 | 1407.50 | 1543.75 | 1713.50 | 1759.00 |
| Apr-69 | 1 | 296.25 | 301.25 | 310.00 | 338.75 | 360.00 | 375.25 | 406.00 |
| May-69 | 1 | 89.50 | 91.75 | 94.75 | 106.75 | 120.00 | 135.50 | 145.75 |
| Jun-69 | 1 | 16.50 | 17.75 | 19.00 | 23.50 | 29.50 | 36.25 | 43.00 |
| Jul-69 | 1 | 13.00 | 13.25 | 12.50 | 10.00 | 8.50 | 6.75 | 9.25 |
| Aug-69 | 1 | 16.50 | 16.50 | 15.00 | 10.00 | 7.75 | 4.50 | 5.75 |
| Sep-69 | 1 | 18.25 | 18.00 | 16.50 | 10.00 | 7.50 | 3.50 | 4.50 |
| Oct-69 | 0 | 6.50 | 6.50 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Nov-69 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 1.75 | 0.25 | 1.50 |
| Dec-69 | 0 | 5.50 | 5.75 | 5.00 | 2.50 | 1.75 | 0.25 | 3.00 |
| Jan-70 | 0 | 4.50 | 5.00 | 5.00 | 5.00 | 7.25 | 8.50 | 11.25 |
| Feb-70 | 0 | 4.75 | 5.25 | 5.50 | 6.75 | 10.50 | 14.50 | 17.75 |
| Mar-70 | 0 | 32.50 | 35.50 | 39.00 | 55.00 | 73.50 | 91.00 | 103.25 |
| Apr-70 | 0 | 5.50 | 5.75 | 5.25 | 4.75 | 4.00 | 3.75 | 5.25 |
| May-70 | 0 | 6.00 | 6.00 | 5.00 | 3.00 | 1.50 | 0.75 | 0.75 |
| Jun-70 | 0 | 6.50 | 6.25 | 5.00 | 2.25 | 0.75 | 0.00 | 0.00 |
| Jul-70 | 0 | 58.50 | 58.25 | 55.00 | 44.75 | 39.50 | 33.00 | 31.50 |
| Aug-70 | 0 | 49.50 | 49.50 | 48.00 | 43.00 | 39.75 | 35.00 | 34.25 |
| Sep-70 | 0 | 18.50 | 18.25 | 15.00 | 4.50 | 0.75 | 0.00 | 0.00 |
| Oct-70 | 0 | 25.00 | 24.75 | 22.00 | 11.00 | 4.75 | 0.00 | 0.00 |
| Nov-70 | 0 | 14.50 | 14.50 | 13.50 | 9.75 | 7.00 | 2.00 | 1.00 |
| Dec-70 | 0 | 2.75 | 4.00 | 5.50 | 10.75 | 14.50 | 12.00 | 16.75 |
| Jan-71 | 0 | 4.50 | 5.00 | 5.00 | 5.25 | 7.00 | 7.25 | 10.00 |
| Feb-71 | 0 | 5.50 | 6.00 | 5.50 | 4.50 | 4.50 | 3.75 | 7.25 |
| Mar-71 | 0 | 5.50 | 5.50 | 5.00 | 4.00 | 3.25 | 2.25 | 3.75 |
| Apr-71 | 0 | 6.00 | 6.00 | 5.00 | 3.50 | 2.25 | 1.25 | 2.75 |
| May-71 | 0 | 6.25 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 0.00 |
| Jun-71 | 0 | 57.75 | 57.50 | 54.50 | 46.25 | 41.00 | 35.75 | 34.50 |
| Jul-71 | 0 | 49.50 | 49.50 | 48.25 | 43.75 | 41.00 | 37.50 | 37.00 |
| Aug-71 | 0 | 49.50 | 49.50 | 47.75 | 41.75 | 38.25 | 32.75 | 32.00 |
| Sep-71 | 0 | 32.75 | 32.25 | 28.00 | 12.75 | 5.75 | 0.00 | 0.00 |
| Oct-71 | 0 | 24.75 | 24.50 | 22.00 | 11.50 | 5.00 | 0.00 | 0.00 |
| Nov-71 | 0 | 13.75 | 13.75 | 12.50 | 7.50 | 3.75 | 0.00 | 0.00 |
| Dec-71 | 0 | 2.50 | 4.00 | 5.75 | 11.50 | 19.25 | 22.75 | 24.75 |
| Jan-72 | 0 | 5.25 | 5.50 | 5.00 | 4.00 | 4.00 | 3.50 | 4.25 |
| Feb-72 | 0 | 5.75 | 6.00 | 5.25 | 4.00 | 3.50 | 3.00 | 4.25 |
| Mar-72 | 0 | 6.00 | 6.00 | 5.00 | 2.75 | 1.25 | 0.25 | 0.00 |
| Apr-72 | 0 | 6.25 | 6.25 | 5.00 | 2.75 | 1.25 | 0.50 | 0.25 |
| May-72 | 0 | 55.75 | 55.50 | 52.75 | 46.50 | 42.00 | 37.75 | 36.50 |
| Jun-72 | 0 | 50.75 | 50.75 | 49.75 | 46.50 | 44.25 | 42.00 | 41.50 |
| Jul-72 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-72 | 0 | 25.00 | 24.75 | 21.00 | 8.25 | 2.75 | 0.00 | 0.00 |
| Sep-72 | 0 | 39.50 | 39.25 | 36.00 | 20.75 | 12.00 | 0.75 | 0.00 |
| Oct-72 | 0 | 26.00 | 26.00 | 23.75 | 14.25 | 7.00 | 0.00 | 0.00 |
| Nov-72 | 0 | 2.50 | 2.75 | 2.50 | 1.50 | 0.75 | 0.00 | 1.75 |
| Dec-72 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-73 | 0 | 2.00 | 10.75 | 24.75 | 60.50 | 99.25 | 111.50 | 177.75 |
| Feb-73 | 0 | 2.50 | 24.00 | 59.00 | 180.25 | 334.75 | 485.00 | 607.00 |
| Mar-73 | 1 | 248.50 | 254.75 | 262.75 | 291.75 | 318.75 | 338.50 | 383.50 |
| Apr-73 | 1 | 126.50 | 129.00 | 132.50 | 145.00 | 159.75 | 180.25 | 194.75 |
| May-73 | 1 | 18.00 | 19.00 | 20.00 | 24.00 | 26.50 | 30.00 | 35.00 |
| Jun-73 | 1 | 20.75 | 21.00 | 20.50 | 19.00 | 17.50 | 16.50 | 19.50 |
| Jul-73 | 1 | 15.75 | 15.75 | 14.50 | 10.00 | 7.50 | 5.00 | 6.00 |
| Aug-73 | 1 | 18.25 | 18.25 | 16.50 | 10.00 | 7.00 | 2.75 | 3.00 |
| Sep-73 | 1 | 19.50 | 19.25 | 17.50 | 10.00 | 6.25 | 1.50 | 1.00 |
| Oct-73 | 0 | 7.50 | 7.25 | 6.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Nov-73 | 0 | 13.25 | 13.00 | 11.25 | 5.25 | 2.25 | 0.00 | 0.25 |
| Dec-73 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.50 | 0.00 | 1.00 |
| Jan-74 | 0 | 2.75 | 9.00 | 18.25 | 43.75 | 81.25 | 107.50 | 150.50 |
| Feb-74 | 0 | 4.25 | 5.00 | 5.50 | 7.25 | 10.75 | 13.75 | 19.25 |
| Mar-74 | 0 | 5.50 | 7.25 | 9.00 | 14.75 | 23.00 | 29.75 | 44.50 |
| Apr-74 | 0 | 7.00 | 7.75 | 8.00 | 9.75 | 13.00 | 17.00 | 23.75 |
| May-74 | 1 | 22.50 | 22.75 | 21.75 | 20.00 | 19.75 | 20.75 | 23.75 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jun-74 | 1 | 25.25 | 25.25 | 23.50 | 19.00 | 16.00 | 13.75 | 15.00 |
| Jul-74 | 1 | 17.00 | 17.00 | 15.25 | 10.00 | 7.00 | 3.75 | 4.00 |
| Aug-74 | 1 | 19.25 | 19.25 | 17.25 | 10.00 | 6.25 | 1.50 | 1.75 |
| Sep-74 | 1 | 25.00 | 25.00 | 21.75 | 10.00 | 4.00 | 0.00 | 0.00 |
| Oct-74 | 0 | 21.50 | 21.25 | 19.00 | 9.75 | 3.75 | 0.00 | 0.00 |
| Nov-74 | 0 | 6.00 | 5.75 | 5.00 | 2.00 | 0.00 | 0.00 | 0.25 |
| Dec-74 | 0 | 2.75 | 5.25 | 8.50 | 14.25 | 22.75 | 20.50 | 44.25 |
| Jan-75 | 0 | 5.00 | 5.25 | 5.00 | 4.00 | 3.75 | 2.00 | 4.75 |
| Feb-75 | 0 | 34.00 | 41.25 | 51.50 | 78.00 | 116.00 | 141.25 | 203.00 |
| Mar-75 | 0 | 74.50 | 87.25 | 107.75 | 161.75 | 236.00 | 296.50 | 406.50 |
| Apr-75 | 1 | 81.25 | 83.50 | 86.00 | 94.75 | 105.50 | 119.00 | 134.75 |
| May-75 | 1 | 17.75 | 19.00 | 20.00 | 24.25 | 30.00 | 38.50 | 45.25 |
| Jun-75 | 1 | 20.75 | 21.00 | 20.50 | 19.00 | 17.50 | 16.00 | 20.75 |
| Jul-75 | 1 | 15.00 | 15.00 | 14.00 | 10.00 | 7.75 | 5.00 | 6.50 |
| Aug-75 | 1 | 18.25 | 18.25 | 16.50 | 10.00 | 7.00 | 3.00 | 4.00 |
| Sep-75 | 1 | 19.50 | 19.25 | 17.50 | 10.00 | 6.25 | 1.50 | 1.75 |
| Oct-75 | 0 | 6.25 | 6.00 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Nov-75 | 0 | 6.50 | 6.25 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Dec-75 | 0 | 6.25 | 6.25 | 5.00 | 1.25 | 0.00 | 0.00 | 1.00 |
| Jan-76 | 0 | 6.25 | 6.00 | 5.00 | 1.75 | 0.25 | 0.00 | 1.25 |
| Feb-76 | 0 | 32.75 | 33.75 | 33.50 | 32.25 | 34.50 | 31.00 | 40.25 |
| Mar-76 | 0 | 5.00 | 5.25 | 5.00 | 4.50 | 4.50 | 3.75 | 6.75 |
| Apr-76 | 0 | 5.50 | 5.75 | 5.00 | 4.00 | 3.50 | 2.25 | 5.75 |
| May-76 | 0 | 6.00 | 6.00 | 5.00 | 3.00 | 1.50 | 0.25 | 1.75 |
| Jun-76 | 0 | 57.75 | 57.75 | 54.75 | 47.00 | 41.75 | 35.75 | 34.75 |
| Jul-76 | 0 | 49.50 | 49.50 | 48.25 | 44.00 | 41.25 | 37.00 | 36.50 |
| Aug-76 | 0 | 49.25 | 49.25 | 47.75 | 41.75 | 38.00 | 32.00 | 31.25 |
| Sep-76 | 0 | 39.00 | 38.75 | 34.00 | 17.50 | 9.25 | 0.25 | 0.00 |
| Oct-76 | 0 | 22.25 | 22.00 | 19.75 | 10.00 | 3.75 | 0.00 | 0.00 |
| Nov-76 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.00 | 0.00 | 0.00 |
| Dec-76 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.00 | 0.00 | 0.00 |
| Jan-77 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 0.25 | 0.00 | 0.75 |
| Feb-77 | 0 | 6.75 | 6.50 | 5.50 | 2.50 | 0.50 | 0.00 | 1.00 |
| Mar-77 | 0 | 3.25 | 3.25 | 2.50 | 0.75 | 0.00 | 0.00 | 1.25 |
| Apr-77 | 0 | 3.50 | 3.50 | 2.50 | 0.75 | 0.00 | 0.00 | 0.00 |
| May-77 | 0 | 3.75 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 1.00 |
| Jun-77 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-77 | 0 | 43.75 | 43.25 | 38.25 | 22.75 | 14.00 | 1.00 | 0.00 |
| Aug-77 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-77 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-77 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-77 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-77 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-78 | 0 | 2.00 | 11.25 | 24.75 | 52.00 | 86.25 | 85.25 | 155.25 |
| Feb-78 | 0 | 147.50 | 186.00 | 248.00 | 434.25 | 692.00 | 922.00 | 1195.50 |
| Mar-78 | 1 | 2331.25 | 2367.50 | 2427.75 | 2660.75 | 2950.25 | 3269.00 | 3464.25 |
| Apr-78 | 1 | 581.50 | 592.75 | 612.00 | 675.00 | 753.50 | 842.75 | 910.75 |
| May-78 | 1 | 118.50 | 121.25 | 124.75 | 138.25 | 155.75 | 178.75 | 194.50 |
| Jun-78 | 1 | 16.25 | 17.50 | 19.00 | 24.25 | 30.00 | 36.50 | 43.25 |
| Jul-78 | 1 | 9.50 | 10.00 | 10.25 | 10.00 | 11.50 | 12.50 | 17.00 |
| Aug-78 | 1 | 15.00 | 15.25 | 14.25 | 10.00 | 9.25 | 7.25 | 10.00 |
| Sep-78 | 1 | 18.00 | 18.00 | 16.50 | 10.00 | 7.25 | 2.75 | 4.00 |
| Oct-78 | 0 | 5.75 | 5.75 | 5.00 | 1.75 | 0.50 | 0.00 | 2.50 |
| Nov-78 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.50 | 0.00 | 2.75 |
| Dec-78 | 0 | 5.50 | 5.75 | 5.00 | 2.50 | 2.00 | 0.25 | 3.00 |
| Jan-79 | 0 | 2.75 | 5.00 | 8.25 | 16.00 | 29.00 | 37.00 | 54.50 |
| Feb-79 | 0 | 6.75 | 12.00 | 19.50 | 40.75 | 72.00 | 98.50 | 137.25 |
| Mar-79 | 0 | 339.00 | 344.50 | 350.25 | 371.00 | 401.75 | 431.25 | 474.75 |
| Apr-79 | 1 | 182.00 | 185.50 | 191.00 | 211.00 | 235.00 | 266.25 | 282.75 |
| May-79 | 1 | 17.75 | 18.75 | 20.00 | 24.50 | 30.25 | 38.25 | 45.25 |
| Jun-79 | 1 | 19.25 | 19.75 | 19.50 | 19.00 | 18.75 | 18.50 | 23.25 |
| Jul-79 | 1 | 15.00 | 15.00 | 14.00 | 10.00 | 7.75 | 4.75 | 6.25 |
| Aug-79 | 1 | 18.50 | 18.25 | 16.75 | 10.00 | 6.75 | 2.25 | 2.50 |
| Sep-79 | 1 | 19.75 | 19.50 | 17.75 | 10.00 | 6.00 | 1.00 | 1.00 |
| Oct-79 | 0 | 14.00 | 14.00 | 12.25 | 6.00 | 2.75 | 0.00 | 0.25 |
| Nov-79 | 0 | 11.00 | 11.00 | 9.50 | 4.50 | 1.50 | 0.00 | 0.25 |
| Dec-79 | 0 | 5.75 | 5.75 | 5.00 | 2.25 | 0.50 | 0.00 | 1.25 |
| Jan-80 | 0 | 2.75 | 4.50 | 6.75 | 13.00 | 23.25 | 28.25 | 38.50 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Feb-80 | 0 | 1152.00 | 1177.50 | 1215.00 | 1359.75 | 1550.75 | 1740.00 | 1890.75 |
| Mar-80 | 1 | 652.75 | 664.50 | 684.75 | 753.00 | 837.00 | 933.75 | 1001.75 |
| Apr-80 | 1 | 115.50 | 117.75 | 120.50 | 131.25 | 144.25 | 162.75 | 175.50 |
| May-80 | 1 | 16.75 | 18.25 | 20.00 | 27.25 | 34.00 | 42.50 | 49.25 |
| Jun-80 | 1 | 18.00 | 18.75 | 19.00 | 20.25 | 21.25 | 22.25 | 27.00 |
| Jul-80 | 1 | 14.00 | 14.00 | 13.25 | 10.00 | 8.25 | 5.75 | 8.25 |
| Aug-80 | 1 | 18.50 | 18.25 | 16.50 | 10.00 | 7.00 | 3.00 | 3.25 |
| Sep-80 | 1 | 19.50 | 19.50 | 17.50 | 10.00 | 6.50 | 1.50 | 1.75 |
| Oct-80 | 0 | 7.25 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 0.25 |
| Nov-80 | 0 | 7.25 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.25 |
| Dec-80 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.00 | 0.00 | 1.00 |
| Jan-81 | 0 | 4.75 | 5.25 | 5.00 | 3.75 | 4.50 | 2.25 | 6.50 |
| Feb-81 | 0 | 4.50 | 5.25 | 5.50 | 6.50 | 9.75 | 10.75 | 15.50 |
| Mar-81 | 0 | 30.75 | 39.25 | 51.50 | 89.00 | 143.25 | 190.25 | 249.75 |
| Apr-81 | 0 | 2.75 | 4.00 | 5.50 | 10.50 | 17.50 | 25.50 | 34.00 |
| May-81 | 0 | 4.75 | 5.25 | 5.00 | 4.75 | 5.75 | 7.50 | 10.75 |
| Jun-81 | 0 | 5.75 | 6.00 | 5.00 | 3.25 | 2.75 | 2.50 | 4.00 |
| Jul-81 | 0 | 7.00 | 6.75 | 5.25 | 1.50 | 0.25 | 0.00 | 0.50 |
| Aug-81 | 0 | 20.00 | 19.75 | 16.25 | 5.25 | 1.25 | 0.00 | 0.25 |
| Sep-81 | 0 | 38.50 | 38.25 | 34.75 | 20.00 | 11.50 | 0.25 | 0.00 |
| Oct-81 | 0 | 25.25 | 25.00 | 23.00 | 13.75 | 6.75 | 0.00 | 0.00 |
| Nov-81 | 0 | 12.75 | 12.50 | 11.50 | 7.25 | 3.75 | 0.00 | 0.00 |
| Dec-81 | 0 | 5.75 | 5.75 | 5.00 | 2.25 | 0.50 | 0.00 | 0.75 |
| Jan-82 | 0 | 5.50 | 5.50 | 5.00 | 3.25 | 2.00 | 0.00 | 2.25 |
| Feb-82 | 0 | 6.25 | 6.25 | 5.50 | 3.75 | 2.75 | 0.50 | 1.75 |
| Mar-82 | 0 | 30.75 | 31.75 | 31.75 | 34.75 | 39.25 | 41.25 | 43.75 |
| Apr-82 | 0 | 2.75 | 5.75 | 10.00 | 27.00 | 49.00 | 72.50 | 83.25 |
| May-82 | 0 | 4.75 | 5.00 | 5.00 | 5.50 | 6.50 | 8.00 | 9.50 |
| Jun-82 | 0 | 6.25 | 6.25 | 5.00 | 2.25 | 0.75 | 0.00 | 0.50 |
| Jul-82 | 0 | 59.75 | 59.50 | 56.25 | 46.50 | 41.25 | 34.00 | 32.75 |
| Aug-82 | 0 | 49.50 | 49.50 | 48.25 | 43.25 | 40.00 | 34.75 | 34.25 |
| Sep-82 | 0 | 51.00 | 51.00 | 49.50 | 43.00 | 39.00 | 32.75 | 32.00 |
| Oct-82 | 0 | 6.75 | 6.50 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Nov-82 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 1.00 | 0.00 | 1.00 |
| Dec-82 | 0 | 2.50 | 6.00 | 10.25 | 27.25 | 48.75 | 65.25 | 70.50 |
| Jan-83 | 0 | 211.00 | 228.75 | 255.25 | 330.00 | 440.50 | 532.75 | 672.75 |
| Feb-83 | 1 | 1008.25 | 1032.50 | 1072.50 | 1195.75 | 1354.75 | 1512.75 | 1686.00 |
| Mar-83 | 1 | 3168.50 | 3193.50 | 3235.25 | 3429.75 | 3548.25 | 3637.75 | 3799.50 |
| Apr-83 | 1 | 933.75 | 948.00 | 972.50 | 1060.75 | 1126.25 | 1169.50 | 1257.25 |
| May-83 | 1 | 469.75 | 478.00 | 491.25 | 544.25 | 591.75 | 635.75 | 667.00 |
| Jun-83 | 1 | 83.50 | 86.00 | 90.00 | 103.25 | 122.50 | 146.00 | 160.25 |
| Jul-83 | 1 | 7.75 | 8.75 | 10.00 | 12.50 | 17.50 | 22.50 | 30.50 |
| Aug-83 | 1 | 10.00 | 10.50 | 10.75 | 10.00 | 12.75 | 14.50 | 19.25 |
| Sep-83 | 1 | 14.75 | 15.00 | 14.00 | 10.00 | 9.75 | 8.25 | 11.25 |
| Oct-83 | 0 | 4.00 | 4.75 | 5.00 | 4.75 | 7.75 | 9.25 | 13.75 |
| Nov-83 | 0 | 5.50 | 5.75 | 5.00 | 3.00 | 2.75 | 1.50 | 6.25 |
| Dec-83 | 0 | 211.00 | 213.75 | 214.50 | 216.00 | 227.00 | 234.25 | 256.50 |
| Jan-84 | 0 | 77.25 | 78.50 | 80.25 | 86.25 | 93.00 | 102.25 | 111.00 |
| Feb-84 | 0 | 28.25 | 29.25 | 30.25 | 34.75 | 39.75 | 48.00 | 53.50 |
| Mar-84 | 0 | 7.00 | 7.50 | 8.25 | 11.50 | 15.25 | 21.75 | 25.25 |
| Apr-84 | 1 | 33.25 | 33.75 | 33.00 | 33.50 | 32.75 | 34.00 | 37.50 |
| May-84 | 1 | 22.50 | 22.75 | 21.75 | 20.00 | 17.75 | 17.25 | 18.75 |
| Jun-84 | 1 | 24.25 | 24.25 | 22.75 | 19.00 | 16.00 | 14.50 | 15.00 |
| Jul-84 | 1 | 16.25 | 16.25 | 14.75 | 10.00 | 7.25 | 4.50 | 4.00 |
| Aug-84 | 1 | 19.00 | 19.00 | 17.00 | 10.00 | 6.75 | 2.25 | 1.75 |
| Sep-84 | 1 | 20.50 | 20.25 | 18.00 | 10.00 | 6.00 | 0.75 | 0.25 |
| Oct-84 | 0 | 17.25 | 17.00 | 14.25 | 5.00 | 1.00 | 0.00 | 0.00 |
| Nov-84 | 0 | 11.50 | 11.25 | 10.00 | 5.00 | 2.00 | 0.00 | 0.25 |
| Dec-84 | 0 | 4.50 | 5.00 | 5.00 | 3.75 | 4.00 | 1.25 | 6.25 |
| Jan-85 | 0 | 5.75 | 5.75 | 5.00 | 2.75 | 1.75 | 0.25 | 1.50 |
| Feb-85 | 0 | 5.75 | 6.00 | 5.50 | 4.25 | 4.25 | 2.75 | 6.00 |
| Mar-85 | 0 | 5.25 | 5.50 | 5.00 | 4.00 | 3.75 | 3.00 | 6.00 |
| Apr-85 | 0 | 6.00 | 6.00 | 5.00 | 3.25 | 2.50 | 1.75 | 3.00 |
| May-85 | 0 | 6.25 | 6.25 | 5.00 | 2.50 | 1.00 | 0.00 | 0.00 |
| Jun-85 | 0 | 57.75 | 57.50 | 54.25 | 46.00 | 41.00 | 35.25 | 34.00 |
| Jul-85 | 0 | 49.25 | 49.25 | 48.00 | 43.50 | 41.00 | 37.00 | 36.50 |
| Aug-85 | 0 | 11.25 | 11.25 | 9.25 | 3.25 | 0.75 | 0.00 | 0.00 |
| Sep-85 | 0 | 38.00 | 37.75 | 33.25 | 16.75 | 9.00 | 0.00 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-85 | 0 | 18.00 | 18.00 | 15.75 | 7.25 | 2.00 | 0.00 | 0.00 |
| Nov-85 | 0 | 3.25 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-85 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.50 |
| Jan-86 | 0 | 2.50 | 2.75 | 2.50 | 1.50 | 1.25 | 0.00 | 1.75 |
| Feb-86 | 0 | 2.50 | 13.75 | 31.50 | 78.00 | 142.75 | 185.00 | 270.75 |
| Mar-86 | 1 | 23.50 | 33.00 | 48.00 | 84.50 | 135.50 | 171.75 | 262.00 |
| Apr-86 | 1 | 31.75 | 32.75 | 33.00 | 35.75 | 40.00 | 45.75 | 53.00 |
| May-86 | 1 | 19.50 | 20.00 | 20.00 | 20.75 | 20.50 | 20.50 | 25.25 |
| Jun-86 | 1 | 23.25 | 23.25 | 22.25 | 19.00 | 17.25 | 17.00 | 18.50 |
| Jul-86 | 1 | 16.50 | 16.50 | 15.00 | 10.00 | 7.25 | 4.25 | 4.00 |
| Aug-86 | 1 | 19.25 | 19.00 | 17.25 | 10.00 | 6.50 | 2.00 | 1.50 |
| Sep-86 | 1 | 20.50 | 20.50 | 18.25 | 10.00 | 5.75 | 0.75 | 0.25 |
| Oct-86 | 0 | 18.25 | 18.25 | 15.25 | 5.50 | 1.25 | 0.00 | 0.00 |
| Nov-86 | 0 | 6.25 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Dec-86 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.25 | 0.00 | 1.00 |
| Jan-87 | 0 | 5.75 | 5.75 | 5.00 | 2.75 | 1.25 | 0.00 | 2.50 |
| Feb-87 | 0 | 6.75 | 6.75 | 5.50 | 2.50 | 0.75 | 0.00 | 1.25 |
| Mar-87 | 0 | 30.75 | 31.75 | 31.50 | 30.75 | 31.25 | 26.25 | 38.00 |
| Apr-87 | 0 | 6.00 | 6.00 | 5.00 | 3.25 | 1.75 | 0.50 | 1.75 |
| May-87 | 0 | 6.00 | 6.00 | 5.00 | 2.75 | 1.00 | 0.00 | 0.50 |
| Jun-87 | 0 | 6.25 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 0.00 |
| Jul-87 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Aug-87 | 0 | 33.00 | 32.75 | 28.25 | 13.75 | 7.00 | 0.00 | 0.00 |
| Sep-87 | 0 | 18.25 | 18.00 | 15.75 | 5.75 | 1.00 | 0.00 | 0.00 |
| Oct-87 | 0 | 6.00 | 6.00 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Nov-87 | 0 | 6.50 | 6.50 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Dec-87 | 0 | 6.25 | 6.25 | 5.00 | 1.25 | 0.00 | 0.00 | 0.25 |
| Jan-88 | 0 | 5.25 | 5.50 | 5.00 | 2.75 | 1.75 | 0.00 | 1.75 |
| Feb-88 | 0 | 6.25 | 6.25 | 5.25 | 2.50 | 1.00 | 0.00 | 1.00 |
| Mar-88 | 0 | 30.50 | 31.25 | 30.75 | 32.25 | 37.50 | 36.50 | 36.25 |
| Apr-88 | 0 | 5.00 | 5.25 | 5.00 | 4.75 | 5.50 | 4.75 | 6.25 |
| May-88 | 0 | 3.00 | 3.00 | 2.50 | 1.25 | 0.25 | 0.00 | 1.25 |
| Jun-88 | 0 | 60.50 | 60.50 | 57.50 | 49.00 | 43.50 | 34.50 | 33.25 |
| Jul-88 | 0 | 36.50 | 36.50 | 35.25 | 31.25 | 28.50 | 24.25 | 23.75 |
| Aug-88 | 0 | 27.25 | 27.00 | 23.25 | 10.50 | 4.50 | 0.00 | 0.00 |
| Sep-88 | 0 | 34.75 | 34.50 | 31.25 | 17.75 | 9.25 | 0.00 | 0.00 |
| Oct-88 | 0 | 3.25 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-88 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-88 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-89 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-89 | 0 | 3.75 | 3.75 | 2.75 | 0.50 | 0.25 | 0.00 | 0.00 |
| Mar-89 | 0 | 3.75 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Apr-89 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| May-89 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jun-89 | 0 | 19.25 | 19.00 | 15.50 | 6.00 | 2.00 | 0.00 | 0.00 |
| Jul-89 | 0 | 36.25 | 36.00 | 32.50 | 19.25 | 11.75 | 0.75 | 0.00 |
| Aug-89 | 0 | 9.75 | 9.75 | 8.50 | 3.00 | 0.25 | 0.00 | 0.00 |
| Sep-89 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-89 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-89 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-89 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-90 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-90 | 0 | 4.50 | 4.25 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-90 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-90 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-90 | 0 | 22.50 | 22.25 | 18.00 | 5.25 | 0.75 | 0.00 | 0.00 |
| Jun-90 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-90 | 0 | 8.00 | 7.75 | 6.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Aug-90 | 0 | 5.25 | 5.00 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-90 | 0 | 5.25 | 5.00 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-90 | 0 | 7.25 | 7.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-90 | 0 | 5.50 | 5.25 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-90 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-91 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-91 | 0 | 4.50 | 4.50 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-91 | 0 | 2.00 | 11.50 | 25.75 | 57.25 | 110.25 | 146.25 | 208.25 |
| Apr-91 | 1 | 31.75 | 33.25 | 33.25 | 33.00 | 41.50 | 40.25 | 37.75 |
| May-91 | 1 | 25.50 | 25.75 | 24.75 | 20.00 | 19.00 | 14.50 | 11.50 |

1) Rounded to nearest 0.25 cfs

**Table A-1**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5B**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jun-91 | 1 | 33.25 | 33.00 | 30.25 | 19.00 | 11.75 | 2.75 | 0.00 |
| Jul-91 | 1 | 26.25 | 26.25 | 24.00 | 13.50 | 6.75 | 0.00 | 0.00 |
| Aug-91 | 1 | 39.50 | 39.25 | 36.50 | 22.75 | 13.00 | 1.00 | 0.00 |
| Sep-91 | 1 | 18.50 | 18.50 | 17.00 | 10.00 | 4.75 | 0.00 | 0.00 |
| Oct-91 | 0 | 5.50 | 5.25 | 4.25 | 0.50 | 0.00 | 0.00 | 0.00 |
| Nov-91 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-91 | 0 | 3.25 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jan-92 | 0 | 2.00 | 2.50 | 2.50 | 2.00 | 3.25 | 1.25 | 0.25 |
| Feb-92 | 0 | 2.25 | 18.00 | 42.75 | 127.25 | 244.00 | 352.00 | 430.50 |
| Mar-92 | 1 | 38.00 | 42.50 | 48.00 | 69.75 | 100.25 | 133.50 | 152.25 |
| Apr-92 | 1 | 29.00 | 31.00 | 33.00 | 43.75 | 57.25 | 75.50 | 78.50 |
| May-92 | 1 | 19.25 | 19.75 | 20.00 | 22.00 | 25.00 | 30.25 | 33.25 |
| Jun-92 | 1 | 21.75 | 22.00 | 21.25 | 19.00 | 18.50 | 19.50 | 20.75 |
| Jul-92 | 1 | 15.75 | 15.75 | 14.50 | 10.00 | 7.25 | 4.25 | 5.25 |
| Aug-92 | 1 | 65.75 | 65.50 | 62.75 | 51.00 | 44.00 | 34.00 | 32.50 |
| Sep-92 | 1 | 51.00 | 51.00 | 49.75 | 44.50 | 40.75 | 35.25 | 34.50 |
| Oct-92 | 0 | 16.50 | 16.50 | 14.50 | 7.50 | 3.50 | 0.00 | 0.00 |
| Nov-92 | 0 | 13.25 | 13.00 | 11.25 | 5.50 | 2.25 | 0.00 | 0.00 |
| Dec-92 | 0 | 5.75 | 5.75 | 5.00 | 2.25 | 0.75 | 0.00 | 2.25 |
| Jan-93 | 0 | 411.75 | 423.75 | 439.75 | 502.75 | 594.50 | 684.75 | 739.75 |
| Feb-93 | 1 | 2025.75 | 2050.00 | 2092.00 | 2238.25 | 2419.25 | 2620.75 | 2756.75 |
| Mar-93 | 1 | 1049.75 | 1063.50 | 1085.50 | 1178.00 | 1284.75 | 1411.75 | 1464.75 |
| Apr-93 | 1 | 476.50 | 482.50 | 492.50 | 533.00 | 584.50 | 651.75 | 671.50 |
| May-93 | 1 | 101.00 | 103.50 | 107.00 | 121.25 | 135.25 | 151.75 | 160.50 |
| Jun-93 | 1 | 16.25 | 17.50 | 19.00 | 25.00 | 31.00 | 37.00 | 42.00 |
| Jul-93 | 1 | 10.25 | 10.75 | 10.50 | 10.00 | 10.50 | 9.75 | 12.75 |
| Aug-93 | 1 | 15.75 | 15.75 | 14.75 | 10.00 | 9.00 | 7.00 | 8.00 |
| Sep-93 | 1 | 19.00 | 18.75 | 17.00 | 10.00 | 7.00 | 2.50 | 2.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-17 | 0 | 8.00 | 7.75 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Nov-17 | 0 | 7.75 | 7.50 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-17 | 0 | 7.25 | 7.00 | 5.00 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-18 | 0 | 6.75 | 6.75 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Feb-18 | 0 | 835.75 | 856.50 | 883.50 | 998.50 | 1163.00 | 1325.25 | 1430.75 |
| Mar-18 | 1 | 2068.00 | 2080.50 | 2102.25 | 2181.25 | 2208.50 | 2205.00 | 2345.50 |
| Apr-18 | 1 | 293.50 | 298.75 | 306.75 | 337.00 | 368.50 | 403.25 | 431.50 |
| May-18 | 1 | 79.50 | 81.25 | 84.00 | 94.00 | 107.25 | 126.25 | 135.00 |
| Jun-18 | 1 | 16.75 | 17.75 | 19.00 | 22.75 | 29.50 | 38.00 | 45.00 |
| Jul-18 | 1 | 13.50 | 13.75 | 13.00 | 10.00 | 9.25 | 8.00 | 11.00 |
| Aug-18 | 1 | 17.75 | 17.75 | 16.00 | 10.00 | 7.50 | 3.75 | 4.75 |
| Sep-18 | 1 | 18.75 | 18.50 | 17.00 | 10.00 | 7.25 | 2.75 | 3.75 |
| Oct-18 | 0 | 7.00 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 1.00 |
| Nov-18 | 0 | 6.25 | 6.25 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Dec-18 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 1.00 | 0.00 | 1.25 |
| Jan-19 | 0 | 20.75 | 20.75 | 19.00 | 14.00 | 11.00 | 5.75 | 6.75 |
| Feb-19 | 0 | 23.00 | 23.25 | 22.50 | 21.00 | 20.00 | 16.25 | 19.50 |
| Mar-19 | 0 | 20.75 | 21.00 | 20.25 | 19.00 | 18.50 | 17.25 | 20.25 |
| Apr-19 | 0 | 6.00 | 6.00 | 5.00 | 3.25 | 1.50 | 0.50 | 0.25 |
| May-19 | 0 | 6.00 | 5.75 | 5.00 | 3.00 | 1.75 | 0.75 | 2.25 |
| Jun-19 | 0 | 6.50 | 6.25 | 5.00 | 2.00 | 0.75 | 0.00 | 0.00 |
| Jul-19 | 0 | 62.00 | 61.75 | 58.25 | 47.50 | 41.75 | 33.25 | 31.75 |
| Aug-19 | 0 | 7.25 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.00 |
| Sep-19 | 0 | 36.75 | 36.25 | 32.25 | 16.75 | 9.00 | 0.00 | 0.00 |
| Oct-19 | 0 | 23.75 | 23.75 | 21.50 | 12.25 | 5.75 | 0.00 | 0.25 |
| Nov-19 | 0 | 8.75 | 8.75 | 7.75 | 4.25 | 1.50 | 0.00 | 0.75 |
| Dec-19 | 0 | 5.50 | 5.50 | 5.00 | 2.75 | 1.25 | 0.00 | 1.00 |
| Jan-20 | 0 | 5.75 | 5.75 | 5.00 | 2.50 | 1.00 | 0.00 | 1.00 |
| Feb-20 | 0 | 4.00 | 4.75 | 5.25 | 7.25 | 10.75 | 10.50 | 14.75 |
| Mar-20 | 0 | 2.50 | 5.25 | 9.25 | 22.00 | 32.50 | 34.00 | 49.25 |
| Apr-20 | 0 | 3.00 | 4.00 | 5.00 | 9.25 | 15.50 | 21.00 | 28.00 |
| May-20 | 0 | 5.50 | 5.75 | 5.00 | 3.75 | 3.50 | 3.75 | 5.25 |
| Jun-20 | 0 | 6.50 | 6.25 | 5.00 | 2.25 | 0.75 | 0.00 | 1.50 |
| Jul-20 | 0 | 63.00 | 62.75 | 59.25 | 48.50 | 42.50 | 33.50 | 32.00 |
| Aug-20 | 0 | 6.25 | 6.00 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Sep-20 | 0 | 46.00 | 45.75 | 41.25 | 23.50 | 13.75 | 1.25 | 0.25 |
| Oct-20 | 0 | 26.75 | 26.75 | 24.50 | 14.50 | 7.00 | 0.00 | 0.00 |
| Nov-20 | 0 | 15.50 | 15.25 | 14.00 | 9.50 | 5.00 | 0.00 | 0.00 |
| Dec-20 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-21 | 0 | 2.25 | 2.75 | 2.50 | 2.00 | 2.25 | 1.00 | 2.50 |
| Feb-21 | 0 | 2.25 | 3.00 | 3.25 | 4.50 | 7.25 | 7.25 | 11.50 |
| Mar-21 | 0 | 2.00 | 3.00 | 3.75 | 6.75 | 11.75 | 14.75 | 21.00 |
| Apr-21 | 0 | 3.25 | 3.25 | 2.50 | 1.50 | 1.50 | 1.50 | 2.75 |
| May-21 | 0 | 3.25 | 3.25 | 2.50 | 1.25 | 0.75 | 0.75 | 2.00 |
| Jun-21 | 0 | 4.00 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.50 |
| Jul-21 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 1.00 |
| Aug-21 | 0 | 79.00 | 78.75 | 73.75 | 56.25 | 46.75 | 31.50 | 29.25 |
| Sep-21 | 0 | 36.50 | 36.50 | 35.25 | 29.75 | 25.75 | 19.50 | 18.75 |
| Oct-21 | 0 | 42.25 | 42.00 | 37.75 | 21.75 | 12.00 | 1.25 | 0.25 |
| Nov-21 | 0 | 12.50 | 12.25 | 11.25 | 6.75 | 2.75 | 0.00 | 0.00 |
| Dec-21 | 0 | 2.00 | 10.00 | 22.75 | 57.75 | 106.25 | 142.75 | 196.50 |
| Jan-22 | 0 | 2.00 | 6.50 | 13.25 | 35.50 | 66.25 | 97.00 | 122.00 |
| Feb-22 | 1 | 2.50 | 18.75 | 45.50 | 142.50 | 238.00 | 318.75 | 400.75 |
| Mar-22 | 1 | 33.25 | 39.25 | 48.00 | 81.25 | 120.00 | 161.00 | 192.00 |
| Apr-22 | 1 | 115.75 | 118.25 | 120.75 | 133.00 | 149.00 | 171.00 | 185.25 |
| May-22 | 1 | 18.50 | 19.25 | 20.00 | 23.50 | 28.75 | 37.50 | 41.00 |
| Jun-22 | 1 | 22.00 | 22.00 | 21.25 | 19.00 | 18.00 | 19.00 | 20.50 |
| Jul-22 | 1 | 15.25 | 15.25 | 14.00 | 10.00 | 8.00 | 6.25 | 7.50 |
| Aug-22 | 1 | 18.25 | 18.00 | 16.50 | 10.00 | 7.00 | 3.00 | 2.50 |
| Sep-22 | 1 | 19.75 | 19.50 | 17.50 | 10.00 | 6.25 | 1.75 | 1.25 |
| Oct-22 | 0 | 6.25 | 6.25 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Nov-22 | 0 | 6.75 | 6.50 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Dec-22 | 0 | 2.75 | 5.00 | 7.50 | 13.00 | 23.00 | 25.50 | 41.50 |
| Jan-23 | 0 | 20.75 | 21.25 | 20.00 | 17.00 | 17.25 | 15.75 | 19.25 |
| Feb-23 | 0 | 23.00 | 23.50 | 23.00 | 22.50 | 23.50 | 24.25 | 29.50 |
| Mar-23 | 0 | 20.75 | 20.75 | 19.75 | 18.00 | 16.75 | 16.50 | 18.00 |
| Apr-23 | 0 | 5.00 | 5.25 | 5.00 | 5.25 | 6.00 | 8.00 | 10.50 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| May-23 | 0 | 5.50 | 5.75 | 5.00 | 3.50 | 3.00 | 3.50 | 5.00 |
| Jun-23 | 0 | 6.25 | 6.00 | 5.00 | 2.75 | 1.50 | 1.25 | 2.75 |
| Jul-23 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.50 | 0.00 | 1.25 |
| Aug-23 | 0 | 69.75 | 69.50 | 65.75 | 51.75 | 44.50 | 33.00 | 31.50 |
| Sep-23 | 0 | 51.00 | 51.00 | 49.75 | 44.25 | 40.50 | 34.50 | 33.75 |
| Oct-23 | 0 | 49.25 | 49.25 | 47.75 | 41.75 | 38.00 | 32.00 | 31.25 |
| Nov-23 | 0 | 11.50 | 11.25 | 9.50 | 3.75 | 1.00 | 0.00 | 0.00 |
| Dec-23 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.25 | 0.00 | 1.00 |
| Jan-24 | 0 | 6.25 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 1.25 |
| Feb-24 | 0 | 6.50 | 6.50 | 5.25 | 2.50 | 1.00 | 0.00 | 1.25 |
| Mar-24 | 0 | 4.50 | 5.00 | 5.00 | 5.00 | 6.75 | 7.00 | 11.25 |
| Apr-24 | 0 | 6.25 | 6.25 | 5.00 | 3.00 | 1.75 | 0.75 | 2.25 |
| May-24 | 0 | 6.25 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 1.25 |
| Jun-24 | 0 | 6.50 | 6.50 | 5.00 | 1.75 | 0.50 | 0.00 | 1.25 |
| Jul-24 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Aug-24 | 0 | 31.00 | 30.75 | 26.25 | 11.75 | 5.50 | 0.00 | 0.00 |
| Sep-24 | 0 | 35.50 | 35.25 | 32.00 | 18.25 | 10.25 | 0.25 | 0.00 |
| Oct-24 | 0 | 23.00 | 23.00 | 21.00 | 12.00 | 5.50 | 0.00 | 0.00 |
| Nov-24 | 0 | 10.00 | 10.00 | 9.00 | 5.00 | 2.00 | 0.00 | 0.00 |
| Dec-24 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-25 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Feb-25 | 0 | 4.00 | 4.00 | 2.75 | 0.50 | 0.00 | 0.00 | 0.00 |
| Mar-25 | 0 | 3.25 | 3.25 | 2.50 | 1.00 | 0.75 | 0.00 | 0.25 |
| Apr-25 | 0 | 2.00 | 3.00 | 3.25 | 4.75 | 8.50 | 8.75 | 12.50 |
| May-25 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 0.75 |
| Jun-25 | 0 | 4.00 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.75 |
| Jul-25 | 0 | 20.25 | 20.00 | 16.25 | 5.75 | 1.50 | 0.00 | 0.00 |
| Aug-25 | 0 | 45.75 | 45.50 | 41.50 | 25.25 | 15.75 | 2.00 | 0.25 |
| Sep-25 | 0 | 9.50 | 9.25 | 8.25 | 3.00 | 0.25 | 0.00 | 0.00 |
| Oct-25 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-25 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-25 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Jan-26 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Feb-26 | 0 | 2.25 | 4.75 | 8.00 | 15.25 | 28.25 | 30.00 | 44.75 |
| Mar-26 | 0 | 2.00 | 2.75 | 3.00 | 3.50 | 6.00 | 5.00 | 11.00 |
| Apr-26 | 0 | 2.25 | 15.50 | 36.50 | 104.50 | 162.50 | 185.25 | 263.50 |
| May-26 | 1 | 19.25 | 20.00 | 20.00 | 21.25 | 25.00 | 29.00 | 35.75 |
| Jun-26 | 1 | 25.00 | 25.00 | 23.50 | 19.00 | 16.50 | 14.25 | 15.75 |
| Jul-26 | 1 | 16.75 | 16.75 | 15.25 | 10.00 | 7.25 | 4.00 | 5.25 |
| Aug-26 | 1 | 19.75 | 19.50 | 17.50 | 10.00 | 5.75 | 1.00 | 0.50 |
| Sep-26 | 1 | 32.50 | 32.25 | 28.75 | 14.50 | 7.00 | 0.00 | 0.00 |
| Oct-26 | 0 | 72.75 | 72.75 | 70.25 | 59.00 | 49.75 | 34.75 | 32.00 |
| Nov-26 | 0 | 2.00 | 3.75 | 6.25 | 11.50 | 18.75 | 21.25 | 32.00 |
| Dec-26 | 0 | 2.00 | 2.75 | 3.50 | 5.25 | 8.25 | 9.50 | 15.50 |
| Jan-27 | 0 | 2.00 | 2.75 | 3.25 | 5.75 | 9.50 | 13.00 | 17.75 |
| Feb-27 | 0 | 3.25 | 28.00 | 68.50 | 226.50 | 385.00 | 527.25 | 637.25 |
| Mar-27 | 1 | 148.00 | 151.25 | 154.75 | 172.50 | 183.00 | 190.00 | 213.25 |
| Apr-27 | 1 | 68.00 | 70.00 | 72.50 | 82.50 | 94.75 | 112.50 | 123.25 |
| May-27 | 1 | 19.25 | 19.75 | 20.00 | 21.25 | 23.25 | 28.00 | 31.50 |
| Jun-27 | 1 | 22.75 | 22.75 | 21.75 | 19.00 | 17.25 | 17.25 | 18.50 |
| Jul-27 | 1 | 15.50 | 15.50 | 14.25 | 10.00 | 8.00 | 5.75 | 7.00 |
| Aug-27 | 1 | 18.75 | 18.50 | 16.75 | 10.00 | 6.75 | 2.50 | 2.00 |
| Sep-27 | 1 | 20.25 | 20.25 | 18.00 | 10.00 | 6.00 | 1.00 | 0.50 |
| Oct-27 | 0 | 6.25 | 6.25 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Nov-27 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 0.75 |
| Dec-27 | 0 | 6.25 | 6.25 | 5.00 | 1.25 | 0.25 | 0.00 | 1.00 |
| Jan-28 | 0 | 20.75 | 20.75 | 18.75 | 13.00 | 9.50 | 3.75 | 4.50 |
| Feb-28 | 0 | 22.00 | 24.00 | 25.75 | 32.00 | 36.50 | 32.75 | 44.75 |
| Mar-28 | 0 | 20.75 | 21.75 | 22.25 | 24.25 | 27.25 | 28.00 | 35.00 |
| Apr-28 | 0 | 5.50 | 5.50 | 5.00 | 4.25 | 3.75 | 3.50 | 5.25 |
| May-28 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 2.00 | 1.25 | 2.75 |
| Jun-28 | 0 | 6.25 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 1.50 |
| Jul-28 | 0 | 62.00 | 62.00 | 58.75 | 48.25 | 42.25 | 34.00 | 32.50 |
| Aug-28 | 0 | 49.50 | 49.50 | 48.25 | 43.00 | 39.25 | 34.00 | 33.25 |
| Sep-28 | 0 | 51.00 | 50.75 | 49.25 | 42.50 | 38.50 | 32.00 | 31.00 |
| Oct-28 | 0 | 49.25 | 49.00 | 47.50 | 40.75 | 36.50 | 30.00 | 29.25 |
| Nov-28 | 0 | 6.75 | 6.75 | 5.00 | 0.50 | 0.00 | 0.00 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Dec-28 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Jan-29 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.25 | 0.00 | 1.25 |
| Feb-29 | 0 | 5.75 | 6.25 | 5.50 | 3.75 | 4.50 | 3.25 | 4.75 |
| Mar-29 | 0 | 4.50 | 5.00 | 5.00 | 5.00 | 7.25 | 8.00 | 11.00 |
| Apr-29 | 0 | 5.00 | 5.50 | 5.00 | 4.50 | 5.75 | 6.25 | 9.50 |
| May-29 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.50 | 0.75 | 2.25 |
| Jun-29 | 0 | 59.75 | 59.50 | 56.25 | 47.25 | 41.75 | 34.75 | 33.75 |
| Jul-29 | 0 | 45.75 | 45.50 | 44.50 | 40.00 | 36.75 | 32.50 | 32.00 |
| Aug-29 | 0 | 24.50 | 24.25 | 20.75 | 8.75 | 3.00 | 0.00 | 0.00 |
| Sep-29 | 0 | 40.75 | 40.50 | 37.00 | 22.25 | 12.75 | 1.00 | 0.00 |
| Oct-29 | 0 | 26.50 | 26.25 | 24.25 | 14.75 | 7.25 | 0.00 | 0.00 |
| Nov-29 | 0 | 8.50 | 8.50 | 7.50 | 4.00 | 1.00 | 0.00 | 0.00 |
| Dec-29 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-30 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Feb-30 | 0 | 4.00 | 4.00 | 2.75 | 0.50 | 0.00 | 0.00 | 0.25 |
| Mar-30 | 0 | 2.00 | 3.50 | 5.25 | 11.25 | 20.50 | 25.25 | 31.25 |
| Apr-30 | 0 | 3.50 | 3.50 | 2.50 | 1.25 | 0.75 | 0.00 | 1.25 |
| May-30 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 1.00 |
| Jun-30 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-30 | 0 | 22.00 | 21.75 | 17.75 | 6.75 | 2.00 | 0.00 | 0.00 |
| Aug-30 | 0 | 30.50 | 30.25 | 26.75 | 13.25 | 5.75 | 0.00 | 0.00 |
| Sep-30 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-30 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-30 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-30 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-31 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-31 | 0 | 4.00 | 4.00 | 2.75 | 0.00 | 0.00 | 0.00 | 1.00 |
| Mar-31 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Apr-31 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.50 |
| May-31 | 0 | 25.00 | 24.75 | 21.00 | 9.00 | 3.25 | 0.00 | 0.00 |
| Jun-31 | 0 | 4.50 | 4.50 | 3.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jul-31 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-31 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-31 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-31 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-31 | 0 | 4.50 | 4.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-31 | 0 | 2.00 | 7.00 | 13.75 | 25.75 | 50.75 | 61.25 | 87.75 |
| Jan-32 | 0 | 2.00 | 4.00 | 6.25 | 9.50 | 19.50 | 18.50 | 25.50 |
| Feb-32 | 0 | 2.25 | 16.50 | 38.50 | 122.50 | 175.25 | 181.00 | 289.00 |
| Mar-32 | 1 | 41.00 | 44.25 | 48.00 | 62.75 | 86.25 | 110.75 | 126.75 |
| Apr-32 | 1 | 31.75 | 32.75 | 33.00 | 35.00 | 38.25 | 42.00 | 49.00 |
| May-32 | 1 | 21.50 | 21.75 | 21.25 | 20.00 | 19.75 | 21.00 | 24.25 |
| Jun-32 | 1 | 24.50 | 24.50 | 23.25 | 19.00 | 15.75 | 13.00 | 14.25 |
| Jul-32 | 1 | 17.25 | 17.00 | 15.50 | 10.00 | 6.75 | 3.25 | 3.50 |
| Aug-32 | 1 | 19.50 | 19.50 | 17.50 | 10.00 | 5.75 | 1.00 | 0.50 |
| Sep-32 | 1 | 32.50 | 32.25 | 28.75 | 14.75 | 7.00 | 0.00 | 0.00 |
| Oct-32 | 0 | 11.25 | 11.00 | 9.75 | 4.50 | 1.25 | 0.00 | 0.00 |
| Nov-32 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-32 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-33 | 0 | 2.00 | 4.75 | 8.25 | 17.75 | 33.50 | 42.25 | 53.00 |
| Feb-33 | 0 | 4.00 | 5.00 | 5.50 | 7.00 | 11.00 | 12.25 | 19.00 |
| Mar-33 | 0 | 5.75 | 5.75 | 5.00 | 3.50 | 3.25 | 3.00 | 4.50 |
| Apr-33 | 0 | 3.25 | 3.25 | 2.50 | 1.50 | 1.25 | 1.25 | 2.75 |
| May-33 | 0 | 3.50 | 3.50 | 2.50 | 0.75 | 0.00 | 0.00 | 1.25 |
| Jun-33 | 0 | 59.75 | 59.50 | 56.00 | 46.75 | 41.25 | 34.50 | 33.50 |
| Jul-33 | 0 | 48.75 | 48.75 | 47.50 | 42.75 | 39.75 | 35.50 | 35.00 |
| Aug-33 | 0 | 48.75 | 48.75 | 47.00 | 40.75 | 36.75 | 30.50 | 29.75 |
| Sep-33 | 0 | 34.75 | 34.50 | 30.00 | 13.50 | 5.50 | 0.00 | 0.00 |
| Oct-33 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-33 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-33 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-34 | 0 | 2.00 | 4.75 | 8.25 | 16.75 | 31.75 | 38.00 | 50.25 |
| Feb-34 | 0 | 2.25 | 3.50 | 4.50 | 7.50 | 11.75 | 12.00 | 19.75 |
| Mar-34 | 0 | 2.25 | 2.75 | 2.50 | 2.25 | 3.75 | 4.00 | 7.00 |
| Apr-34 | 0 | 3.75 | 3.75 | 2.50 | 0.50 | 0.00 | 0.00 | 1.50 |
| May-34 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.50 |
| Jun-34 | 0 | 64.50 | 64.25 | 60.50 | 49.50 | 43.00 | 34.75 | 33.50 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jul-34 | 0 | 47.00 | 47.00 | 45.75 | 40.75 | 37.25 | 32.50 | 31.75 |
| Aug-34 | 0 | 39.25 | 39.00 | 34.75 | 18.75 | 9.75 | 0.50 | 0.00 |
| Sep-34 | 0 | 41.50 | 41.50 | 38.50 | 24.00 | 13.50 | 1.25 | 0.25 |
| Oct-34 | 0 | 3.25 | 3.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-34 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-34 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-35 | 0 | 2.00 | 5.00 | 9.00 | 20.00 | 37.25 | 47.00 | 59.50 |
| Feb-35 | 0 | 2.25 | 3.50 | 4.50 | 7.75 | 13.25 | 16.75 | 23.50 |
| Mar-35 | 0 | 2.00 | 5.25 | 9.75 | 25.50 | 41.75 | 52.75 | 69.25 |
| Apr-35 | 0 | 2.00 | 7.50 | 15.75 | 44.50 | 74.75 | 99.75 | 127.50 |
| May-35 | 1 | 20.00 | 20.50 | 20.00 | 21.00 | 23.75 | 28.25 | 31.75 |
| Jun-35 | 1 | 25.00 | 25.00 | 23.25 | 19.00 | 16.25 | 14.75 | 16.00 |
| Jul-35 | 1 | 17.25 | 17.25 | 15.50 | 10.00 | 6.75 | 3.50 | 3.75 |
| Aug-35 | 1 | 66.75 | 66.75 | 63.50 | 51.50 | 44.25 | 33.50 | 32.00 |
| Sep-35 | 1 | 44.50 | 44.50 | 43.25 | 38.25 | 34.50 | 29.00 | 28.50 |
| Oct-35 | 0 | 19.75 | 19.50 | 16.50 | 6.50 | 1.50 | 0.00 | 0.00 |
| Nov-35 | 0 | 14.75 | 14.75 | 13.25 | 7.50 | 3.50 | 0.00 | 0.00 |
| Dec-35 | 0 | 3.50 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jan-36 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.75 |
| Feb-36 | 0 | 2.00 | 11.00 | 24.75 | 71.75 | 121.00 | 152.75 | 192.50 |
| Mar-36 | 0 | 2.00 | 3.50 | 5.25 | 12.00 | 21.50 | 31.50 | 40.00 |
| Apr-36 | 0 | 2.00 | 3.50 | 4.75 | 10.50 | 15.25 | 18.50 | 25.75 |
| May-36 | 0 | 3.25 | 3.25 | 2.50 | 1.50 | 1.25 | 1.50 | 3.25 |
| Jun-36 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.50 |
| Jul-36 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-36 | 0 | 40.75 | 40.25 | 35.00 | 17.25 | 9.00 | 0.25 | 0.00 |
| Sep-36 | 0 | 6.75 | 6.75 | 5.50 | 0.75 | 0.00 | 0.00 | 0.00 |
| Oct-36 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-36 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-36 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-37 | 0 | 2.00 | 3.25 | 4.50 | 6.25 | 12.00 | 11.50 | 16.00 |
| Feb-37 | 0 | 2.50 | 22.00 | 52.75 | 160.75 | 304.75 | 441.25 | 534.75 |
| Mar-37 | 1 | 82.50 | 97.25 | 120.00 | 205.50 | 303.00 | 396.75 | 471.50 |
| Apr-37 | 1 | 280.75 | 284.50 | 289.00 | 307.25 | 331.00 | 362.25 | 384.00 |
| May-37 | 1 | 18.25 | 19.00 | 20.00 | 23.50 | 28.00 | 36.00 | 39.50 |
| Jun-37 | 1 | 20.50 | 20.75 | 20.25 | 19.00 | 19.00 | 21.25 | 22.75 |
| Jul-37 | 1 | 15.00 | 15.00 | 14.00 | 10.00 | 8.25 | 6.50 | 7.75 |
| Aug-37 | 1 | 18.50 | 18.25 | 16.75 | 10.00 | 6.75 | 2.75 | 2.25 |
| Sep-37 | 1 | 20.00 | 19.75 | 17.75 | 10.00 | 6.25 | 1.50 | 1.00 |
| Oct-37 | 0 | 7.50 | 7.50 | 6.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Nov-37 | 0 | 14.75 | 14.75 | 12.75 | 6.25 | 3.00 | 0.00 | 0.00 |
| Dec-37 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 0.75 | 0.00 | 1.00 |
| Jan-38 | 0 | 20.75 | 20.75 | 19.00 | 14.00 | 11.00 | 6.00 | 6.50 |
| Feb-38 | 0 | 553.50 | 570.50 | 595.25 | 691.25 | 823.50 | 959.25 | 1044.25 |
| Mar-38 | 1 | 3013.50 | 3047.50 | 3106.25 | 3345.25 | 3501.00 | 3601.25 | 3827.25 |
| Apr-38 | 1 | 263.75 | 267.50 | 273.50 | 295.75 | 323.50 | 358.75 | 380.50 |
| May-38 | 1 | 36.50 | 36.50 | 36.25 | 35.50 | 34.50 | 36.00 | 37.75 |
| Jun-38 | 1 | 18.75 | 19.00 | 19.00 | 19.50 | 21.75 | 26.50 | 28.00 |
| Jul-38 | 1 | 12.75 | 13.00 | 12.25 | 10.00 | 10.25 | 10.75 | 12.25 |
| Aug-38 | 1 | 17.50 | 17.50 | 16.00 | 10.00 | 7.50 | 4.00 | 5.00 |
| Sep-38 | 1 | 18.75 | 18.50 | 16.75 | 10.00 | 7.00 | 2.75 | 3.75 |
| Oct-38 | 0 | 7.00 | 6.75 | 5.50 | 1.50 | 0.00 | 0.00 | 0.00 |
| Nov-38 | 0 | 7.25 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.00 |
| Dec-38 | 0 | 5.50 | 5.75 | 5.00 | 2.75 | 2.50 | 0.75 | 3.25 |
| Jan-39 | 0 | 20.75 | 21.25 | 20.50 | 19.00 | 21.00 | 20.25 | 24.00 |
| Feb-39 | 0 | 23.00 | 24.00 | 24.25 | 26.00 | 31.00 | 34.75 | 41.75 |
| Mar-39 | 0 | 20.75 | 22.50 | 24.00 | 30.75 | 41.00 | 52.25 | 61.75 |
| Apr-39 | 0 | 4.00 | 4.50 | 5.00 | 7.00 | 10.00 | 14.00 | 19.00 |
| May-39 | 0 | 5.50 | 5.50 | 5.00 | 3.75 | 3.25 | 3.50 | 5.25 |
| Jun-39 | 0 | 6.25 | 6.25 | 5.00 | 2.50 | 1.25 | 0.25 | 1.75 |
| Jul-39 | 0 | 58.00 | 58.00 | 54.75 | 45.00 | 39.75 | 33.00 | 32.00 |
| Aug-39 | 0 | 49.50 | 49.50 | 48.00 | 43.00 | 39.75 | 34.75 | 34.00 |
| Sep-39 | 0 | 51.00 | 51.00 | 49.25 | 42.75 | 39.00 | 32.75 | 31.75 |
| Oct-39 | 0 | 6.75 | 6.50 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Nov-39 | 0 | 7.00 | 6.75 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-39 | 0 | 6.75 | 6.50 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Jan-40 | 0 | 5.50 | 5.75 | 5.00 | 2.75 | 3.00 | 1.25 | 3.50 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Feb-40 | 0 | 2.75 | 4.25 | 5.25 | 8.75 | 16.25 | 20.50 | 27.25 |
| Mar-40 | 0 | 3.25 | 4.25 | 5.00 | 7.00 | 12.00 | 15.75 | 22.25 |
| Apr-40 | 0 | 5.00 | 5.50 | 5.00 | 5.00 | 6.50 | 8.25 | 11.75 |
| May-40 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.75 | 1.25 | 2.75 |
| Jun-40 | 0 | 6.75 | 6.50 | 5.00 | 1.50 | 0.25 | 0.00 | 0.50 |
| Jul-40 | 0 | 64.25 | 64.00 | 60.50 | 48.50 | 42.25 | 33.25 | 31.75 |
| Aug-40 | 0 | 49.25 | 49.00 | 47.75 | 42.25 | 38.50 | 33.00 | 32.25 |
| Sep-40 | 0 | 33.75 | 33.25 | 29.25 | 14.25 | 6.75 | 0.00 | 0.00 |
| Oct-40 | 0 | 25.00 | 24.75 | 22.50 | 12.00 | 5.25 | 0.00 | 0.00 |
| Nov-40 | 0 | 3.25 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-40 | 0 | 2.25 | 4.25 | 6.75 | 13.00 | 22.50 | 25.50 | 37.25 |
| Jan-41 | 0 | 2.50 | 9.50 | 20.50 | 55.00 | 103.50 | 147.25 | 189.25 |
| Feb-41 | 0 | 966.50 | 1013.25 | 1088.50 | 1335.75 | 1526.00 | 1593.75 | 1940.75 |
| Mar-41 | 1 | 3096.75 | 3152.25 | 3248.25 | 3617.00 | 3936.00 | 4199.75 | 4506.75 |
| Apr-41 | 1 | 1997.75 | 2025.25 | 2070.75 | 2249.25 | 2384.00 | 2476.00 | 2638.25 |
| May-41 | 1 | 294.25 | 298.50 | 306.00 | 327.50 | 355.25 | 387.25 | 414.75 |
| Jun-41 | 1 | 48.25 | 49.75 | 51.25 | 55.25 | 62.00 | 69.50 | 81.50 |
| Jul-41 | 1 | 8.00 | 9.00 | 10.00 | 12.00 | 16.75 | 21.25 | 29.25 |
| Aug-41 | 1 | 11.25 | 11.75 | 11.75 | 10.00 | 11.75 | 12.00 | 18.25 |
| Sep-41 | 1 | 14.50 | 14.75 | 14.00 | 10.00 | 9.75 | 8.00 | 12.50 |
| Oct-41 | 0 | 5.00 | 5.25 | 5.00 | 3.00 | 3.50 | 2.50 | 7.25 |
| Nov-41 | 0 | 5.00 | 5.50 | 5.00 | 3.25 | 4.00 | 3.25 | 8.00 |
| Dec-41 | 0 | 2.75 | 8.50 | 17.25 | 36.00 | 63.25 | 78.25 | 133.50 |
| Jan-42 | 0 | 3.75 | 6.75 | 10.75 | 20.00 | 34.25 | 45.25 | 72.50 |
| Feb-42 | 0 | 5.75 | 7.25 | 8.75 | 13.00 | 19.00 | 24.25 | 40.75 |
| Mar-42 | 0 | 6.50 | 9.50 | 13.25 | 23.25 | 37.00 | 48.25 | 78.00 |
| Apr-42 | 0 | 104.50 | 106.50 | 107.75 | 114.50 | 124.50 | 137.00 | 155.75 |
| May-42 | 0 | 7.00 | 8.00 | 9.00 | 12.25 | 16.75 | 22.75 | 31.25 |
| Jun-42 | 0 | 6.00 | 6.50 | 6.25 | 6.00 | 7.00 | 8.25 | 13.25 |
| Jul-42 | 0 | 5.50 | 5.75 | 5.00 | 2.50 | 1.75 | 0.75 | 3.75 |
| Aug-42 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.50 | 0.00 | 2.75 |
| Sep-42 | 0 | 18.25 | 18.00 | 14.75 | 4.00 | 0.50 | 0.00 | 1.00 |
| Oct-42 | 0 | 6.00 | 6.00 | 5.00 | 0.75 | 0.00 | 0.00 | 1.00 |
| Nov-42 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.25 | 0.00 | 2.75 |
| Dec-42 | 0 | 5.75 | 5.75 | 5.00 | 2.00 | 0.50 | 0.00 | 2.75 |
| Jan-43 | 0 | 733.75 | 748.00 | 766.75 | 855.00 | 933.75 | 982.75 | 1029.75 |
| Feb-43 | 1 | 514.25 | 521.00 | 532.75 | 572.00 | 617.50 | 671.50 | 706.75 |
| Mar-43 | 1 | 1065.75 | 1081.50 | 1107.00 | 1211.75 | 1301.25 | 1383.00 | 1447.25 |
| Apr-43 | 1 | 170.50 | 173.25 | 177.50 | 191.75 | 208.50 | 230.75 | 247.00 |
| May-43 | 1 | 18.25 | 19.00 | 20.00 | 23.25 | 27.50 | 34.00 | 40.75 |
| Jun-43 | 1 | 19.75 | 20.00 | 19.75 | 19.00 | 20.00 | 22.50 | 26.00 |
| Jul-43 | 1 | 13.75 | 13.75 | 13.00 | 10.00 | 9.00 | 8.25 | 11.25 |
| Aug-43 | 1 | 17.75 | 17.50 | 16.00 | 10.00 | 7.50 | 4.00 | 5.25 |
| Sep-43 | 1 | 18.75 | 18.75 | 16.75 | 10.00 | 7.00 | 2.75 | 3.75 |
| Oct-43 | 0 | 6.50 | 6.25 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Nov-43 | 0 | 6.50 | 6.50 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Dec-43 | 0 | 5.00 | 5.25 | 5.00 | 3.25 | 3.50 | 1.50 | 5.75 |
| Jan-44 | 0 | 4.00 | 4.75 | 5.00 | 5.25 | 7.75 | 8.25 | 14.50 |
| Feb-44 | 0 | 288.00 | 302.00 | 321.75 | 397.00 | 463.75 | 501.75 | 574.00 |
| Mar-44 | 1 | 578.25 | 585.50 | 597.00 | 637.00 | 676.75 | 717.00 | 758.25 |
| Apr-44 | 1 | 77.50 | 79.25 | 81.75 | 90.25 | 100.50 | 115.00 | 125.75 |
| May-44 | 1 | 17.75 | 18.75 | 20.00 | 24.25 | 30.25 | 38.75 | 45.75 |
| Jun-44 | 1 | 20.00 | 20.25 | 20.00 | 19.00 | 19.75 | 22.00 | 25.25 |
| Jul-44 | 1 | 15.25 | 15.25 | 14.00 | 10.00 | 8.00 | 6.25 | 7.50 |
| Aug-44 | 1 | 18.00 | 17.75 | 16.25 | 10.00 | 7.25 | 3.50 | 4.50 |
| Sep-44 | 1 | 19.50 | 19.25 | 17.50 | 10.00 | 6.25 | 1.50 | 1.00 |
| Oct-44 | 0 | 7.25 | 7.25 | 6.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Nov-44 | 0 | 5.00 | 5.50 | 5.00 | 3.50 | 4.50 | 2.75 | 5.50 |
| Dec-44 | 0 | 5.50 | 5.75 | 5.00 | 2.75 | 2.25 | 0.75 | 3.50 |
| Jan-45 | 0 | 5.25 | 5.50 | 5.00 | 3.25 | 3.25 | 2.00 | 5.00 |
| Feb-45 | 0 | 3.50 | 8.50 | 15.50 | 43.75 | 81.00 | 120.00 | 135.50 |
| Mar-45 | 0 | 67.75 | 70.00 | 71.50 | 82.00 | 90.50 | 97.50 | 107.25 |
| Apr-45 | 1 | 43.00 | 44.00 | 44.75 | 50.50 | 58.50 | 71.00 | 75.00 |
| May-45 | 1 | 20.00 | 20.25 | 20.00 | 20.25 | 21.25 | 25.00 | 26.50 |
| Jun-45 | 1 | 24.75 | 24.50 | 23.00 | 19.00 | 16.25 | 15.00 | 14.75 |
| Jul-45 | 1 | 16.75 | 16.50 | 15.00 | 10.00 | 7.25 | 4.50 | 4.00 |
| Aug-45 | 1 | 19.25 | 19.25 | 17.25 | 10.00 | 6.50 | 2.00 | 1.50 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Sep-45 | 1 | 20.75 | 20.50 | 18.50 | 10.00 | 5.75 | 0.75 | 0.25 |
| Oct-45 | 0 | 21.25 | 21.00 | 18.00 | 7.50 | 2.50 | 0.00 | 0.00 |
| Nov-45 | 0 | 12.25 | 12.00 | 10.75 | 5.75 | 2.50 | 0.00 | 0.00 |
| Dec-45 | 0 | 2.75 | 4.00 | 5.00 | 8.50 | 15.50 | 18.75 | 20.25 |
| Jan-46 | 0 | 5.50 | 5.75 | 5.00 | 3.50 | 3.25 | 2.00 | 3.25 |
| Feb-46 | 0 | 5.50 | 6.00 | 5.50 | 5.25 | 6.50 | 7.50 | 9.00 |
| Mar-46 | 0 | 3.25 | 4.50 | 5.50 | 10.00 | 11.00 | 8.25 | 21.00 |
| Apr-46 | 0 | 5.50 | 7.00 | 8.00 | 14.50 | 24.50 | 36.50 | 41.75 |
| May-46 | 1 | 23.50 | 23.75 | 22.25 | 20.00 | 19.50 | 20.50 | 21.75 |
| Jun-46 | 1 | 25.50 | 25.50 | 23.75 | 19.00 | 16.00 | 13.50 | 15.00 |
| Jul-46 | 1 | 56.50 | 56.25 | 53.75 | 45.00 | 39.75 | 33.25 | 32.50 |
| Aug-46 | 1 | 49.50 | 49.50 | 48.25 | 43.25 | 40.00 | 35.25 | 34.75 |
| Sep-46 | 1 | 51.00 | 51.00 | 49.50 | 43.00 | 39.25 | 33.25 | 32.25 |
| Oct-46 | 0 | 49.50 | 49.25 | 47.75 | 41.25 | 37.25 | 31.25 | 30.25 |
| Nov-46 | 0 | 5.25 | 5.75 | 5.00 | 3.00 | 4.00 | 3.00 | 5.50 |
| Dec-46 | 0 | 5.00 | 5.50 | 5.00 | 3.25 | 4.25 | 3.75 | 6.75 |
| Jan-47 | 0 | 6.00 | 6.00 | 5.00 | 2.25 | 1.50 | 0.50 | 2.00 |
| Feb-47 | 0 | 6.00 | 6.25 | 5.50 | 3.50 | 3.75 | 3.25 | 6.50 |
| Mar-47 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 2.75 | 2.75 | 4.50 |
| Apr-47 | 0 | 6.25 | 6.25 | 5.00 | 2.75 | 1.75 | 1.25 | 2.75 |
| May-47 | 0 | 56.00 | 55.75 | 53.00 | 46.00 | 41.25 | 37.25 | 36.75 |
| Jun-47 | 0 | 51.00 | 51.00 | 50.00 | 46.25 | 43.75 | 41.50 | 41.00 |
| Jul-47 | 0 | 49.25 | 49.25 | 47.75 | 42.75 | 40.00 | 36.25 | 35.50 |
| Aug-47 | 0 | 49.25 | 49.00 | 47.25 | 40.75 | 37.00 | 31.50 | 30.50 |
| Sep-47 | 0 | 50.75 | 50.75 | 48.75 | 41.00 | 36.75 | 30.00 | 28.75 |
| Oct-47 | 0 | 47.50 | 47.25 | 45.25 | 38.00 | 33.75 | 27.00 | 26.00 |
| Nov-47 | 0 | 24.50 | 24.00 | 19.75 | 7.00 | 1.75 | 0.00 | 0.00 |
| Dec-47 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-48 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-48 | 0 | 4.00 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Mar-48 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Apr-48 | 0 | 4.00 | 4.00 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| May-48 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jun-48 | 0 | 13.25 | 13.00 | 10.50 | 4.25 | 1.50 | 0.00 | 0.00 |
| Jul-48 | 0 | 20.50 | 20.25 | 16.50 | 5.25 | 1.00 | 0.00 | 0.00 |
| Aug-48 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-48 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-48 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-48 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-48 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-49 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-49 | 0 | 4.50 | 4.50 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-49 | 0 | 30.00 | 31.75 | 31.75 | 24.00 | 25.75 | 13.50 | 31.25 |
| Apr-49 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-49 | 0 | 29.75 | 29.50 | 26.25 | 13.25 | 6.75 | 0.00 | 0.00 |
| Jun-49 | 0 | 5.00 | 5.00 | 4.00 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jul-49 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-49 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-49 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-49 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-49 | 0 | 4.50 | 4.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-49 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-50 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-50 | 0 | 33.25 | 34.25 | 33.00 | 19.75 | 17.00 | 3.50 | 10.00 |
| Mar-50 | 0 | 3.25 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-50 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-50 | 0 | 52.00 | 51.50 | 47.25 | 28.00 | 17.00 | 0.75 | 0.00 |
| Jun-50 | 0 | 3.25 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-50 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-50 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-50 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-50 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-50 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-50 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Apr-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-51 | 0 | 14.25 | 13.75 | 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jun-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-51 | 0 | 3.75 | 3.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-51 | 0 | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-51 | 0 | 0.50 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-52 | 0 | 2.00 | 25.50 | 58.00 | 181.75 | 307.50 | 429.25 | 535.50 |
| Feb-52 | 1 | 35.75 | 37.25 | 33.75 | 25.50 | 31.75 | 17.50 | 22.00 |
| Mar-52 | 1 | 3.00 | 25.25 | 60.25 | 155.00 | 307.00 | 443.25 | 584.75 |
| Apr-52 | 1 | 111.50 | 114.25 | 115.75 | 117.25 | 137.00 | 149.25 | 154.00 |
| May-52 | 1 | 18.00 | 19.00 | 20.00 | 21.50 | 27.25 | 32.00 | 32.75 |
| Jun-52 | 1 | 23.50 | 23.75 | 23.00 | 19.00 | 16.50 | 12.50 | 12.25 |
| Jul-52 | 1 | 15.25 | 15.25 | 14.50 | 10.00 | 8.25 | 5.00 | 5.00 |
| Aug-52 | 1 | 17.25 | 17.50 | 16.00 | 10.00 | 7.75 | 3.75 | 4.00 |
| Sep-52 | 1 | 28.00 | 28.00 | 25.00 | 11.75 | 5.25 | 0.00 | 0.00 |
| Oct-52 | 0 | 15.25 | 15.25 | 14.25 | 8.50 | 5.25 | 0.50 | 1.00 |
| Nov-52 | 0 | 5.00 | 5.25 | 5.00 | 2.75 | 1.75 | 0.00 | 3.50 |
| Dec-52 | 0 | 2.75 | 5.75 | 10.25 | 17.50 | 29.00 | 29.75 | 60.00 |
| Jan-53 | 0 | 30.75 | 33.25 | 35.50 | 42.50 | 54.75 | 62.75 | 80.00 |
| Feb-53 | 0 | 4.25 | 5.00 | 5.50 | 7.25 | 10.25 | 13.75 | 17.25 |
| Mar-53 | 0 | 4.75 | 5.25 | 5.00 | 5.25 | 6.00 | 7.75 | 9.50 |
| Apr-53 | 0 | 5.25 | 5.50 | 5.00 | 4.75 | 4.00 | 3.50 | 6.00 |
| May-53 | 0 | 6.00 | 6.00 | 5.00 | 2.75 | 1.00 | 0.25 | 0.75 |
| Jun-53 | 0 | 6.50 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 0.50 |
| Jul-53 | 0 | 63.50 | 63.25 | 60.00 | 49.00 | 42.75 | 34.50 | 33.00 |
| Aug-53 | 0 | 49.50 | 49.50 | 48.25 | 43.00 | 39.00 | 33.50 | 32.50 |
| Sep-53 | 0 | 40.50 | 40.25 | 38.75 | 32.50 | 28.50 | 22.00 | 21.00 |
| Oct-53 | 0 | 35.50 | 35.25 | 31.00 | 15.50 | 6.75 | 0.00 | 0.00 |
| Nov-53 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Dec-53 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Jan-54 | 0 | 10.25 | 11.00 | 11.00 | 12.00 | 13.00 | 9.50 | 10.50 |
| Feb-54 | 0 | 23.00 | 23.75 | 23.50 | 22.50 | 23.25 | 20.25 | 24.75 |
| Mar-54 | 0 | 2.75 | 5.50 | 9.50 | 19.50 | 33.25 | 41.50 | 64.00 |
| Apr-54 | 0 | 3.75 | 4.50 | 5.00 | 8.00 | 12.75 | 17.75 | 21.00 |
| May-54 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 0.75 | 0.00 | 0.00 |
| Jun-54 | 0 | 6.25 | 6.25 | 5.00 | 2.25 | 1.00 | 0.00 | 1.25 |
| Jul-54 | 0 | 67.50 | 67.25 | 63.75 | 51.75 | 44.50 | 34.25 | 32.50 |
| Aug-54 | 0 | 45.25 | 45.25 | 44.00 | 38.50 | 34.50 | 28.50 | 27.75 |
| Sep-54 | 0 | 51.00 | 50.75 | 46.25 | 27.75 | 16.25 | 2.75 | 1.50 |
| Oct-54 | 0 | 30.75 | 30.75 | 28.50 | 18.25 | 9.25 | 0.25 | 0.00 |
| Nov-54 | 0 | 13.50 | 13.50 | 12.50 | 8.00 | 3.75 | 0.00 | 0.00 |
| Dec-54 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-55 | 0 | 2.00 | 2.50 | 2.75 | 2.75 | 1.75 | 0.00 | 4.50 |
| Feb-55 | 0 | 3.00 | 3.25 | 2.75 | 1.75 | 1.25 | 0.00 | 2.75 |
| Mar-55 | 0 | 3.25 | 3.25 | 2.50 | 1.25 | 0.75 | 0.00 | 1.00 |
| Apr-55 | 0 | 3.50 | 3.50 | 2.50 | 1.00 | 0.25 | 0.00 | 1.50 |
| May-55 | 0 | 3.00 | 3.25 | 2.50 | 1.50 | 1.75 | 1.00 | 2.00 |
| Jun-55 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-55 | 0 | 34.25 | 34.00 | 29.25 | 15.50 | 8.00 | 0.00 | 0.00 |
| Aug-55 | 0 | 50.75 | 50.50 | 47.00 | 31.00 | 19.75 | 3.75 | 1.50 |
| Sep-55 | 0 | 8.75 | 8.75 | 7.75 | 3.00 | 0.00 | 0.00 | 0.00 |
| Oct-55 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-55 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-55 | 0 | 2.00 | 12.50 | 28.50 | 58.00 | 101.50 | 109.75 | 209.00 |
| Jan-56 | 0 | 2.00 | 15.50 | 37.25 | 87.00 | 136.25 | 145.00 | 261.50 |
| Feb-56 | 0 | 2.00 | 4.25 | 7.00 | 14.00 | 23.25 | 30.00 | 49.25 |
| Mar-56 | 0 | 2.00 | 3.00 | 3.75 | 6.50 | 10.00 | 13.50 | 21.75 |
| Apr-56 | 0 | 2.00 | 3.50 | 5.25 | 10.75 | 16.00 | 19.25 | 31.75 |
| May-56 | 0 | 2.00 | 2.75 | 3.00 | 5.25 | 8.75 | 13.75 | 18.50 |
| Jun-56 | 0 | 3.50 | 3.50 | 2.50 | 1.00 | 0.25 | 0.00 | 1.50 |
| Jul-56 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.25 | 0.00 | 1.25 |
| Aug-56 | 0 | 31.00 | 30.75 | 26.00 | 11.25 | 4.75 | 0.00 | 0.00 |
| Sep-56 | 0 | 18.75 | 18.75 | 16.00 | 5.50 | 0.50 | 0.00 | 0.00 |
| Oct-56 | 0 | 3.75 | 3.75 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Nov-56 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-56 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-57 | 0 | 3.25 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 0.75 |
| Feb-57 | 0 | 2.25 | 3.00 | 3.00 | 2.50 | 3.25 | 0.25 | 6.25 |
| Mar-57 | 0 | 2.00 | 2.50 | 2.50 | 2.25 | 3.50 | 1.75 | 4.25 |
| Apr-57 | 0 | 3.00 | 3.25 | 2.50 | 1.50 | 1.50 | 0.25 | 1.50 |
| May-57 | 0 | 3.25 | 3.25 | 2.50 | 1.00 | 0.75 | 0.00 | 1.25 |
| Jun-57 | 0 | 70.75 | 70.50 | 66.50 | 54.50 | 47.00 | 35.25 | 33.25 |
| Jul-57 | 0 | 12.75 | 12.75 | 11.25 | 5.75 | 2.50 | 0.00 | 0.00 |
| Aug-57 | 0 | 48.25 | 47.75 | 44.00 | 27.25 | 16.75 | 2.75 | 1.50 |
| Sep-57 | 0 | 13.50 | 13.50 | 12.25 | 6.25 | 1.75 | 0.00 | 0.00 |
| Oct-57 | 0 | 4.25 | 4.25 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-57 | 0 | 5.25 | 5.00 | 3.75 | 0.25 | 0.00 | 0.00 | 0.00 |
| Dec-57 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-58 | 0 | 2.00 | 2.75 | 3.00 | 3.25 | 4.25 | 1.00 | 5.00 |
| Feb-58 | 0 | 2.25 | 15.00 | 35.00 | 87.25 | 161.00 | 209.25 | 304.50 |
| Mar-58 | 1 | 3.00 | 20.00 | 48.00 | 136.25 | 255.25 | 369.00 | 482.25 |
| Apr-58 | 1 | 534.25 | 561.75 | 605.25 | 776.50 | 972.00 | 1171.75 | 1313.75 |
| May-58 | 1 | 145.00 | 148.75 | 154.75 | 176.00 | 200.00 | 231.25 | 245.75 |
| Jun-58 | 1 | 16.25 | 17.50 | 19.00 | 23.50 | 30.25 | 39.50 | 46.50 |
| Jul-58 | 1 | 12.25 | 12.50 | 12.25 | 10.00 | 8.75 | 6.50 | 9.50 |
| Aug-58 | 1 | 17.00 | 17.00 | 15.50 | 10.00 | 7.25 | 3.25 | 4.50 |
| Sep-58 | 1 | 18.75 | 18.75 | 17.00 | 10.00 | 6.50 | 2.25 | 3.25 |
| Oct-58 | 0 | 7.00 | 6.75 | 5.75 | 1.50 | 0.00 | 0.00 | 1.00 |
| Nov-58 | 0 | 7.25 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 1.00 |
| Dec-58 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.00 | 0.00 | 1.00 |
| Jan-59 | 0 | 5.00 | 5.25 | 5.00 | 3.50 | 3.75 | 1.75 | 4.50 |
| Feb-59 | 0 | 34.00 | 37.50 | 41.50 | 53.50 | 73.50 | 86.75 | 111.25 |
| Mar-59 | 0 | 3.75 | 4.50 | 5.00 | 6.75 | 9.50 | 12.00 | 16.75 |
| Apr-59 | 0 | 5.00 | 5.50 | 5.00 | 4.75 | 4.00 | 2.75 | 6.00 |
| May-59 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 1.75 | 0.75 | 2.25 |
| Jun-59 | 0 | 6.25 | 6.25 | 5.00 | 2.50 | 1.25 | 0.50 | 2.00 |
| Jul-59 | 0 | 62.75 | 62.50 | 59.25 | 48.50 | 42.50 | 33.75 | 32.50 |
| Aug-59 | 0 | 49.50 | 49.50 | 48.25 | 42.75 | 39.25 | 33.75 | 33.00 |
| Sep-59 | 0 | 36.00 | 35.75 | 31.75 | 16.75 | 8.50 | 0.00 | 0.00 |
| Oct-59 | 0 | 28.00 | 27.75 | 25.50 | 15.00 | 7.25 | 0.00 | 0.00 |
| Nov-59 | 0 | 16.00 | 15.75 | 14.75 | 9.75 | 5.25 | 0.25 | 0.00 |
| Dec-59 | 0 | 6.00 | 5.75 | 5.00 | 2.25 | 0.25 | 0.00 | 0.00 |
| Jan-60 | 0 | 5.75 | 5.75 | 5.00 | 2.75 | 1.00 | 0.00 | 0.75 |
| Feb-60 | 0 | 32.50 | 33.25 | 32.50 | 30.75 | 29.25 | 22.00 | 30.25 |
| Mar-60 | 0 | 5.75 | 5.75 | 5.00 | 3.25 | 1.50 | 0.00 | 1.25 |
| Apr-60 | 0 | 5.00 | 5.50 | 5.00 | 4.50 | 3.75 | 1.75 | 7.00 |
| May-60 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 1.25 |
| Jun-60 | 0 | 6.50 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 0.00 |
| Jul-60 | 0 | 6.50 | 6.50 | 5.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| Aug-60 | 0 | 45.00 | 44.50 | 39.50 | 21.50 | 12.25 | 0.50 | 0.00 |
| Sep-60 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-60 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-60 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.75 |
| Dec-60 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 1.50 |
| Jan-61 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-61 | 0 | 4.25 | 4.00 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-61 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.25 |
| Apr-61 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-61 | 0 | 28.75 | 28.50 | 24.50 | 11.75 | 4.50 | 0.00 | 0.00 |
| Jun-61 | 0 | 5.50 | 5.25 | 4.25 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jul-61 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-61 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-61 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-61 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-61 | 0 | 5.25 | 5.00 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-61 | 0 | 2.25 | 2.75 | 2.50 | 0.25 | 0.00 | 0.00 | 2.00 |
| Jan-62 | 0 | 2.00 | 2.75 | 2.75 | 0.75 | 0.00 | 0.00 | 7.25 |
| Feb-62 | 0 | 2.50 | 50.00 | 127.50 | 348.50 | 618.25 | 842.50 | 1177.75 |
| Mar-62 | 1 | 28.50 | 36.25 | 48.00 | 79.00 | 122.25 | 136.75 | 197.50 |
| Apr-62 | 1 | 29.75 | 31.50 | 33.00 | 39.00 | 47.25 | 49.25 | 59.50 |
| May-62 | 1 | 19.50 | 20.00 | 20.00 | 20.25 | 20.50 | 18.25 | 23.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jun-62 | 1 | 24.25 | 24.25 | 23.00 | 19.00 | 15.50 | 10.50 | 12.00 |
| Jul-62 | 1 | 16.50 | 16.50 | 15.00 | 10.00 | 7.00 | 2.75 | 4.00 |
| Aug-62 | 1 | 19.25 | 19.00 | 17.25 | 10.00 | 5.75 | 0.75 | 0.25 |
| Sep-62 | 1 | 29.00 | 28.75 | 25.50 | 12.50 | 5.25 | 0.00 | 0.00 |
| Oct-62 | 0 | 6.00 | 6.00 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Nov-62 | 0 | 6.50 | 6.25 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Dec-62 | 0 | 6.25 | 6.00 | 5.00 | 1.25 | 0.00 | 0.00 | 0.50 |
| Jan-63 | 0 | 5.75 | 6.00 | 5.00 | 2.00 | 0.25 | 0.00 | 1.00 |
| Feb-63 | 0 | 2.75 | 5.75 | 9.50 | 15.00 | 23.00 | 16.50 | 48.00 |
| Mar-63 | 0 | 2.75 | 5.00 | 7.75 | 12.50 | 19.25 | 16.25 | 42.50 |
| Apr-63 | 0 | 2.75 | 4.00 | 5.00 | 6.75 | 9.50 | 7.50 | 22.25 |
| May-63 | 0 | 5.00 | 5.25 | 5.00 | 4.00 | 4.00 | 2.25 | 8.25 |
| Jun-63 | 0 | 6.00 | 6.25 | 5.00 | 2.50 | 1.50 | 0.00 | 3.00 |
| Jul-63 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 1.25 |
| Aug-63 | 0 | 38.75 | 38.50 | 33.75 | 17.50 | 8.75 | 0.00 | 0.00 |
| Sep-63 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-63 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-63 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-63 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-64 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-64 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-64 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-64 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| May-64 | 0 | 31.50 | 31.00 | 27.25 | 14.25 | 6.25 | 0.00 | 0.00 |
| Jun-64 | 0 | 6.00 | 6.00 | 5.00 | 1.25 | 0.00 | 0.00 | 0.00 |
| Jul-64 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-64 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-64 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-64 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-64 | 0 | 4.50 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-64 | 0 | 4.25 | 4.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-65 | 0 | 2.00 | 2.75 | 3.00 | 0.75 | 0.25 | 0.00 | 5.50 |
| Feb-65 | 0 | 4.00 | 4.00 | 2.75 | 0.00 | 0.00 | 0.00 | 0.50 |
| Mar-65 | 0 | 3.25 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 1.25 |
| Apr-65 | 0 | 2.00 | 6.25 | 12.00 | 21.50 | 34.25 | 21.25 | 45.75 |
| May-65 | 0 | 3.00 | 3.25 | 2.50 | 0.25 | 0.00 | 0.00 | 1.25 |
| Jun-65 | 0 | 67.25 | 66.75 | 61.25 | 38.50 | 25.00 | 4.00 | 3.75 |
| Jul-65 | 0 | 47.50 | 47.25 | 45.25 | 32.00 | 20.50 | 4.00 | 2.75 |
| Aug-65 | 0 | 18.50 | 18.25 | 16.75 | 8.00 | 1.50 | 0.00 | 0.00 |
| Sep-65 | 0 | 6.50 | 6.25 | 5.50 | 1.00 | 0.00 | 0.00 | 0.00 |
| Oct-65 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-65 | 0 | 2.00 | 6.25 | 12.25 | 18.50 | 27.75 | 15.25 | 59.50 |
| Dec-65 | 0 | 2.00 | 6.00 | 11.75 | 20.75 | 34.00 | 31.50 | 70.25 |
| Jan-66 | 1 | 2.25 | 7.00 | 14.00 | 31.50 | 56.00 | 71.00 | 108.75 |
| Feb-66 | 1 | 21.50 | 24.00 | 26.50 | 32.00 | 40.75 | 44.75 | 69.50 |
| Mar-66 | 1 | 47.00 | 48.00 | 48.00 | 49.25 | 51.75 | 54.50 | 63.00 |
| Apr-66 | 1 | 36.00 | 36.25 | 35.00 | 33.00 | 29.25 | 26.50 | 29.25 |
| May-66 | 1 | 22.50 | 22.75 | 22.00 | 20.00 | 18.00 | 17.00 | 20.00 |
| Jun-66 | 1 | 24.00 | 24.00 | 22.75 | 19.00 | 16.00 | 14.00 | 15.25 |
| Jul-66 | 1 | 16.75 | 16.75 | 15.25 | 10.00 | 6.75 | 3.25 | 3.50 |
| Aug-66 | 1 | 67.75 | 67.50 | 64.75 | 52.50 | 44.75 | 33.75 | 32.00 |
| Sep-66 | 1 | 50.50 | 50.25 | 49.25 | 44.00 | 40.00 | 34.00 | 33.25 |
| Oct-66 | 0 | 48.75 | 48.75 | 47.25 | 41.50 | 37.25 | 31.00 | 30.25 |
| Nov-66 | 0 | 50.50 | 50.25 | 48.75 | 43.00 | 38.75 | 32.50 | 31.75 |
| Dec-66 | 0 | 2.25 | 5.00 | 8.50 | 21.25 | 40.25 | 58.00 | 65.50 |
| Jan-67 | 1 | 2.50 | 12.25 | 27.00 | 71.75 | 135.50 | 195.25 | 259.00 |
| Feb-67 | 1 | 17.75 | 21.50 | 26.50 | 50.75 | 74.00 | 98.50 | 106.75 |
| Mar-67 | 1 | 270.00 | 272.00 | 272.75 | 285.25 | 292.50 | 303.25 | 310.00 |
| Apr-67 | 1 | 893.00 | 896.00 | 899.50 | 918.25 | 925.00 | 935.75 | 951.00 |
| May-67 | 1 | 326.75 | 330.75 | 336.75 | 363.75 | 385.00 | 409.50 | 417.00 |
| Jun-67 | 1 | 18.25 | 18.75 | 19.00 | 20.00 | 20.25 | 20.75 | 24.00 |
| Jul-67 | 1 | 15.25 | 15.00 | 14.00 | 10.00 | 7.50 | 5.25 | 4.75 |
| Aug-67 | 1 | 59.50 | 59.25 | 56.75 | 47.25 | 43.50 | 37.25 | 36.00 |
| Sep-67 | 1 | 45.25 | 45.00 | 44.00 | 39.50 | 37.00 | 33.00 | 32.25 |
| Oct-67 | 0 | 7.00 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 0.00 |
| Nov-67 | 0 | 7.50 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.25 |
| Dec-67 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 1.00 | 0.00 | 1.25 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Jan-68 | 0 | 5.75 | 6.00 | 5.00 | 2.50 | 1.75 | 0.25 | 1.50 |
| Feb-68 | 0 | 5.75 | 6.00 | 5.25 | 4.00 | 4.50 | 4.00 | 5.25 |
| Mar-68 | 0 | 30.75 | 31.25 | 30.50 | 29.75 | 31.75 | 33.25 | 36.00 |
| Apr-68 | 0 | 5.25 | 5.50 | 5.00 | 5.00 | 5.75 | 7.00 | 8.50 |
| May-68 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 1.00 | 0.25 | 0.00 |
| Jun-68 | 0 | 57.75 | 57.75 | 54.75 | 46.75 | 41.75 | 36.25 | 35.25 |
| Jul-68 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.25 | 0.00 | 0.00 |
| Aug-68 | 0 | 17.00 | 16.75 | 13.75 | 4.00 | 0.75 | 0.00 | 0.00 |
| Sep-68 | 0 | 36.50 | 36.25 | 33.00 | 18.50 | 10.25 | 0.25 | 0.00 |
| Oct-68 | 0 | 24.25 | 24.00 | 22.00 | 12.75 | 6.00 | 0.00 | 0.00 |
| Nov-68 | 0 | 12.00 | 12.00 | 11.00 | 6.75 | 3.25 | 0.00 | 0.00 |
| Dec-68 | 0 | 6.00 | 5.75 | 5.00 | 2.25 | 0.25 | 0.00 | 0.00 |
| Jan-69 | 0 | 2045.75 | 2078.75 | 2128.25 | 2364.25 | 2649.00 | 2969.00 | 3101.25 |
| Feb-69 | 1 | 3348.00 | 3392.25 | 3468.25 | 3818.50 | 4145.25 | 4492.50 | 4642.25 |
| Mar-69 | 1 | 1257.00 | 1272.00 | 1296.50 | 1407.50 | 1543.75 | 1713.50 | 1758.75 |
| Apr-69 | 1 | 296.00 | 301.25 | 309.75 | 338.50 | 359.75 | 375.00 | 406.00 |
| May-69 | 1 | 89.25 | 91.50 | 94.50 | 106.50 | 119.50 | 135.25 | 145.50 |
| Jun-69 | 1 | 16.50 | 17.75 | 19.00 | 23.50 | 29.50 | 36.25 | 43.00 |
| Jul-69 | 1 | 13.00 | 13.25 | 12.50 | 10.00 | 8.50 | 6.75 | 9.25 |
| Aug-69 | 1 | 16.50 | 16.50 | 15.00 | 10.00 | 7.75 | 4.50 | 5.75 |
| Sep-69 | 1 | 18.25 | 18.00 | 16.50 | 10.00 | 7.50 | 3.50 | 4.50 |
| Oct-69 | 0 | 6.50 | 6.50 | 5.25 | 1.50 | 0.25 | 0.00 | 1.25 |
| Nov-69 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 1.75 | 0.25 | 1.50 |
| Dec-69 | 0 | 5.50 | 5.75 | 5.00 | 2.50 | 1.75 | 0.25 | 3.00 |
| Jan-70 | 0 | 4.50 | 5.00 | 5.00 | 5.00 | 7.25 | 8.50 | 11.25 |
| Feb-70 | 0 | 4.75 | 5.25 | 5.50 | 6.75 | 10.50 | 14.50 | 17.75 |
| Mar-70 | 0 | 32.50 | 35.50 | 39.00 | 55.00 | 73.50 | 91.00 | 103.25 |
| Apr-70 | 0 | 5.50 | 5.75 | 5.25 | 4.75 | 4.00 | 3.75 | 5.25 |
| May-70 | 0 | 6.00 | 6.00 | 5.00 | 3.00 | 1.50 | 0.75 | 0.75 |
| Jun-70 | 0 | 6.50 | 6.25 | 5.00 | 2.25 | 0.75 | 0.00 | 0.00 |
| Jul-70 | 0 | 58.50 | 58.25 | 55.00 | 44.75 | 39.50 | 33.00 | 31.50 |
| Aug-70 | 0 | 49.50 | 49.50 | 48.00 | 43.00 | 39.75 | 35.00 | 34.25 |
| Sep-70 | 0 | 18.50 | 18.25 | 15.00 | 4.50 | 0.75 | 0.00 | 0.00 |
| Oct-70 | 0 | 25.00 | 24.75 | 22.00 | 11.00 | 4.75 | 0.00 | 0.00 |
| Nov-70 | 0 | 14.50 | 14.50 | 13.50 | 9.75 | 7.00 | 2.00 | 1.00 |
| Dec-70 | 0 | 2.75 | 4.00 | 5.50 | 10.75 | 14.50 | 12.00 | 16.75 |
| Jan-71 | 0 | 4.50 | 5.00 | 5.00 | 5.25 | 7.00 | 7.25 | 10.00 |
| Feb-71 | 0 | 5.50 | 6.00 | 5.50 | 4.50 | 4.50 | 3.75 | 7.25 |
| Mar-71 | 0 | 5.50 | 5.50 | 5.00 | 4.00 | 3.25 | 2.25 | 3.75 |
| Apr-71 | 0 | 6.00 | 6.00 | 5.00 | 3.50 | 2.25 | 1.25 | 2.75 |
| May-71 | 0 | 6.25 | 6.00 | 5.00 | 2.50 | 1.00 | 0.00 | 0.00 |
| Jun-71 | 0 | 57.75 | 57.50 | 54.50 | 46.25 | 41.00 | 35.75 | 34.50 |
| Jul-71 | 0 | 49.50 | 49.50 | 48.25 | 43.75 | 41.00 | 37.50 | 37.00 |
| Aug-71 | 0 | 49.50 | 49.50 | 47.75 | 41.75 | 38.25 | 32.75 | 32.00 |
| Sep-71 | 0 | 32.75 | 32.25 | 28.00 | 12.75 | 5.75 | 0.00 | 0.00 |
| Oct-71 | 0 | 24.75 | 24.50 | 22.00 | 11.50 | 5.00 | 0.00 | 0.00 |
| Nov-71 | 0 | 13.75 | 13.75 | 12.50 | 7.50 | 3.75 | 0.00 | 0.00 |
| Dec-71 | 0 | 2.50 | 4.00 | 5.75 | 11.50 | 19.25 | 22.75 | 24.75 |
| Jan-72 | 0 | 5.25 | 5.50 | 5.00 | 4.00 | 4.00 | 3.50 | 4.25 |
| Feb-72 | 0 | 5.75 | 6.00 | 5.25 | 4.00 | 3.50 | 3.00 | 4.25 |
| Mar-72 | 0 | 6.00 | 6.00 | 5.00 | 2.75 | 1.25 | 0.25 | 0.00 |
| Apr-72 | 0 | 6.25 | 6.25 | 5.00 | 2.75 | 1.25 | 0.50 | 0.25 |
| May-72 | 0 | 55.75 | 55.50 | 52.75 | 46.50 | 42.00 | 37.75 | 36.50 |
| Jun-72 | 0 | 50.75 | 50.75 | 49.75 | 46.50 | 44.25 | 42.00 | 41.50 |
| Jul-72 | 0 | 6.25 | 6.25 | 5.00 | 1.25 | 0.00 | 0.00 | 0.00 |
| Aug-72 | 0 | 22.25 | 22.00 | 18.75 | 7.00 | 2.00 | 0.00 | 0.00 |
| Sep-72 | 0 | 39.75 | 39.50 | 36.00 | 21.00 | 12.00 | 0.75 | 0.00 |
| Oct-72 | 0 | 26.00 | 26.00 | 23.75 | 14.25 | 7.00 | 0.00 | 0.00 |
| Nov-72 | 0 | 2.50 | 2.75 | 2.50 | 1.50 | 0.75 | 0.00 | 1.75 |
| Dec-72 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.00 |
| Jan-73 | 0 | 2.00 | 10.75 | 24.75 | 60.50 | 99.25 | 111.25 | 177.75 |
| Feb-73 | 0 | 2.50 | 24.00 | 59.00 | 180.25 | 334.75 | 485.00 | 607.00 |
| Mar-73 | 1 | 240.00 | 246.25 | 254.50 | 283.50 | 310.50 | 330.50 | 375.50 |
| Apr-73 | 1 | 126.00 | 128.50 | 132.00 | 144.50 | 159.50 | 180.00 | 194.25 |
| May-73 | 1 | 18.00 | 19.00 | 20.00 | 24.00 | 26.50 | 30.00 | 35.00 |
| Jun-73 | 1 | 20.75 | 21.00 | 20.50 | 19.00 | 17.50 | 16.50 | 19.50 |
| Jul-73 | 1 | 15.75 | 15.75 | 14.50 | 10.00 | 7.50 | 5.00 | 6.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Aug-73 | 1 | 18.25 | 18.25 | 16.50 | 10.00 | 7.00 | 2.75 | 3.00 |
| Sep-73 | 1 | 19.50 | 19.25 | 17.50 | 10.00 | 6.25 | 1.50 | 1.00 |
| Oct-73 | 0 | 7.50 | 7.25 | 6.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Nov-73 | 0 | 13.25 | 13.00 | 11.25 | 5.25 | 2.25 | 0.00 | 0.25 |
| Dec-73 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.50 | 0.00 | 1.00 |
| Jan-74 | 0 | 2.75 | 9.00 | 18.25 | 43.75 | 81.25 | 107.50 | 150.50 |
| Feb-74 | 0 | 4.25 | 5.00 | 5.50 | 7.25 | 10.75 | 13.75 | 19.25 |
| Mar-74 | 0 | 5.50 | 7.25 | 9.00 | 14.75 | 23.00 | 29.75 | 44.50 |
| Apr-74 | 0 | 7.00 | 7.75 | 8.00 | 9.75 | 13.00 | 17.00 | 23.75 |
| May-74 | 1 | 22.50 | 22.75 | 21.75 | 20.00 | 19.75 | 20.75 | 23.75 |
| Jun-74 | 1 | 25.25 | 25.25 | 23.50 | 19.00 | 16.00 | 13.75 | 15.00 |
| Jul-74 | 1 | 17.00 | 17.00 | 15.25 | 10.00 | 7.00 | 3.75 | 4.00 |
| Aug-74 | 1 | 19.25 | 19.25 | 17.25 | 10.00 | 6.25 | 1.50 | 1.75 |
| Sep-74 | 1 | 74.00 | 73.75 | 70.50 | 57.00 | 48.25 | 34.75 | 32.75 |
| Oct-74 | 0 | 6.00 | 6.00 | 5.00 | 1.25 | 0.00 | 0.00 | 0.50 |
| Nov-74 | 0 | 11.00 | 11.00 | 9.50 | 4.50 | 1.50 | 0.00 | 0.25 |
| Dec-74 | 0 | 2.75 | 5.25 | 8.50 | 13.50 | 22.00 | 21.25 | 46.00 |
| Jan-75 | 0 | 5.25 | 5.50 | 5.00 | 3.75 | 3.50 | 2.25 | 5.25 |
| Feb-75 | 0 | 34.00 | 41.25 | 51.25 | 77.25 | 115.25 | 142.00 | 204.25 |
| Mar-75 | 0 | 33.75 | 46.50 | 67.25 | 121.50 | 196.25 | 257.75 | 367.75 |
| Apr-75 | 1 | 81.25 | 83.25 | 85.50 | 93.75 | 104.75 | 118.25 | 134.00 |
| May-75 | 1 | 17.75 | 19.00 | 20.00 | 24.25 | 30.00 | 38.25 | 45.25 |
| Jun-75 | 1 | 20.75 | 21.25 | 20.75 | 19.00 | 17.50 | 16.00 | 20.75 |
| Jul-75 | 1 | 15.00 | 15.00 | 14.00 | 10.00 | 7.75 | 5.00 | 6.50 |
| Aug-75 | 1 | 18.25 | 18.25 | 16.50 | 10.00 | 7.00 | 3.00 | 4.00 |
| Sep-75 | 1 | 19.50 | 19.25 | 17.50 | 10.00 | 6.25 | 1.50 | 1.75 |
| Oct-75 | 0 | 6.25 | 6.00 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Nov-75 | 0 | 6.50 | 6.25 | 5.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Dec-75 | 0 | 6.25 | 6.25 | 5.00 | 1.25 | 0.00 | 0.00 | 1.00 |
| Jan-76 | 0 | 6.25 | 6.00 | 5.00 | 1.75 | 0.25 | 0.00 | 1.25 |
| Feb-76 | 0 | 32.75 | 33.75 | 33.50 | 32.25 | 34.50 | 30.75 | 40.25 |
| Mar-76 | 0 | 5.00 | 5.25 | 5.00 | 4.50 | 4.50 | 3.75 | 6.75 |
| Apr-76 | 0 | 5.50 | 5.75 | 5.00 | 4.00 | 3.50 | 2.25 | 5.75 |
| May-76 | 0 | 6.00 | 6.00 | 5.00 | 3.00 | 1.50 | 0.25 | 1.75 |
| Jun-76 | 0 | 57.75 | 57.75 | 54.75 | 47.00 | 41.75 | 35.75 | 34.75 |
| Jul-76 | 0 | 49.50 | 49.50 | 48.25 | 44.00 | 41.25 | 37.00 | 36.50 |
| Aug-76 | 0 | 41.50 | 41.25 | 39.75 | 34.25 | 30.75 | 25.25 | 24.50 |
| Sep-76 | 0 | 40.50 | 40.00 | 35.25 | 18.25 | 9.75 | 0.25 | 0.00 |
| Oct-76 | 0 | 17.00 | 17.00 | 15.00 | 6.50 | 1.25 | 0.00 | 0.00 |
| Nov-76 | 0 | 6.00 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.00 |
| Dec-76 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.00 | 0.00 | 0.00 |
| Jan-77 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 0.25 | 0.00 | 0.75 |
| Feb-77 | 0 | 6.75 | 6.75 | 5.50 | 2.50 | 0.50 | 0.00 | 1.00 |
| Mar-77 | 0 | 6.00 | 6.00 | 5.00 | 2.50 | 0.75 | 0.00 | 1.25 |
| Apr-77 | 0 | 3.50 | 3.50 | 2.50 | 0.75 | 0.00 | 0.00 | 0.00 |
| May-77 | 0 | 3.50 | 3.50 | 2.50 | 0.50 | 0.00 | 0.00 | 1.00 |
| Jun-77 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-77 | 0 | 44.75 | 44.50 | 39.25 | 23.50 | 15.00 | 1.25 | 0.00 |
| Aug-77 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-77 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-77 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-77 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-77 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-78 | 0 | 2.00 | 11.25 | 24.75 | 52.00 | 86.25 | 85.50 | 155.25 |
| Feb-78 | 0 | 149.00 | 187.50 | 249.25 | 435.75 | 693.50 | 923.50 | 1197.00 |
| Mar-78 | 1 | 2331.75 | 2368.25 | 2428.25 | 2661.50 | 2950.75 | 3269.00 | 3464.50 |
| Apr-78 | 1 | 581.50 | 592.75 | 612.00 | 675.00 | 753.25 | 842.75 | 910.75 |
| May-78 | 1 | 118.25 | 120.75 | 124.50 | 138.00 | 155.50 | 178.50 | 194.00 |
| Jun-78 | 1 | 16.25 | 17.50 | 19.00 | 24.25 | 30.00 | 36.50 | 43.25 |
| Jul-78 | 1 | 9.50 | 10.00 | 10.25 | 10.00 | 11.50 | 12.50 | 17.00 |
| Aug-78 | 1 | 15.00 | 15.25 | 14.25 | 10.00 | 9.25 | 7.25 | 10.00 |
| Sep-78 | 1 | 18.00 | 18.00 | 16.50 | 10.00 | 7.25 | 2.75 | 4.00 |
| Oct-78 | 0 | 5.75 | 5.75 | 5.00 | 1.75 | 0.50 | 0.00 | 2.50 |
| Nov-78 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.50 | 0.00 | 2.75 |
| Dec-78 | 0 | 5.50 | 5.75 | 5.00 | 2.50 | 2.00 | 0.25 | 3.00 |
| Jan-79 | 0 | 2.75 | 5.00 | 8.25 | 16.00 | 29.00 | 37.00 | 54.50 |
| Feb-79 | 0 | 5.25 | 10.50 | 18.00 | 39.50 | 70.75 | 97.25 | 135.75 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Mar-79 | 0 | 339.25 | 344.50 | 350.25 | 371.00 | 401.75 | 431.25 | 474.75 |
| Apr-79 | 1 | 181.50 | 185.00 | 190.75 | 210.75 | 234.75 | 266.00 | 282.50 |
| May-79 | 1 | 17.75 | 18.75 | 20.00 | 24.50 | 30.25 | 38.25 | 45.25 |
| Jun-79 | 1 | 19.25 | 19.75 | 19.50 | 19.00 | 18.75 | 18.50 | 23.25 |
| Jul-79 | 1 | 15.00 | 15.00 | 14.00 | 10.00 | 7.75 | 4.75 | 6.25 |
| Aug-79 | 1 | 18.50 | 18.25 | 16.75 | 10.00 | 6.75 | 2.25 | 2.50 |
| Sep-79 | 1 | 19.75 | 19.50 | 17.75 | 10.00 | 6.00 | 1.00 | 1.00 |
| Oct-79 | 0 | 14.00 | 14.00 | 12.25 | 6.00 | 2.75 | 0.00 | 0.25 |
| Nov-79 | 0 | 11.00 | 11.00 | 9.50 | 4.50 | 1.50 | 0.00 | 0.25 |
| Dec-79 | 0 | 5.75 | 5.75 | 5.00 | 2.25 | 0.50 | 0.00 | 1.25 |
| Jan-80 | 0 | 2.75 | 4.50 | 6.75 | 13.00 | 23.25 | 28.25 | 38.50 |
| Feb-80 | 0 | 1150.00 | 1175.50 | 1213.00 | 1357.50 | 1548.75 | 1738.00 | 1888.75 |
| Mar-80 | 1 | 652.75 | 664.50 | 684.75 | 753.00 | 837.00 | 933.75 | 1001.75 |
| Apr-80 | 1 | 115.25 | 117.50 | 120.25 | 131.00 | 144.00 | 162.50 | 175.25 |
| May-80 | 1 | 16.75 | 18.25 | 20.00 | 27.25 | 34.00 | 42.50 | 49.25 |
| Jun-80 | 1 | 18.00 | 18.75 | 19.00 | 20.25 | 21.25 | 22.25 | 27.00 |
| Jul-80 | 1 | 14.00 | 14.00 | 13.25 | 10.00 | 8.25 | 5.75 | 8.25 |
| Aug-80 | 1 | 18.50 | 18.25 | 16.50 | 10.00 | 7.00 | 3.00 | 3.25 |
| Sep-80 | 1 | 19.50 | 19.50 | 17.50 | 10.00 | 6.50 | 1.50 | 1.75 |
| Oct-80 | 0 | 7.25 | 7.00 | 5.75 | 1.50 | 0.00 | 0.00 | 0.25 |
| Nov-80 | 0 | 7.25 | 7.25 | 5.75 | 1.50 | 0.00 | 0.00 | 0.25 |
| Dec-80 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 0.00 | 0.00 | 1.00 |
| Jan-81 | 0 | 4.75 | 5.25 | 5.00 | 3.75 | 4.50 | 2.25 | 6.50 |
| Feb-81 | 0 | 4.50 | 5.25 | 5.50 | 6.50 | 9.75 | 10.75 | 15.50 |
| Mar-81 | 0 | 30.75 | 39.25 | 51.50 | 89.00 | 143.25 | 190.25 | 249.75 |
| Apr-81 | 0 | 2.75 | 4.00 | 5.50 | 10.50 | 17.50 | 25.50 | 34.00 |
| May-81 | 0 | 4.75 | 5.25 | 5.00 | 4.75 | 5.75 | 7.50 | 10.75 |
| Jun-81 | 0 | 5.75 | 6.00 | 5.00 | 3.25 | 2.75 | 2.50 | 4.00 |
| Jul-81 | 0 | 7.00 | 6.75 | 5.25 | 1.50 | 0.25 | 0.00 | 0.50 |
| Aug-81 | 0 | 20.00 | 19.75 | 16.25 | 5.25 | 1.25 | 0.00 | 0.25 |
| Sep-81 | 0 | 38.50 | 38.25 | 34.75 | 20.00 | 11.50 | 0.25 | 0.00 |
| Oct-81 | 0 | 25.25 | 25.00 | 23.00 | 13.75 | 6.75 | 0.00 | 0.00 |
| Nov-81 | 0 | 12.75 | 12.50 | 11.50 | 7.25 | 3.75 | 0.00 | 0.00 |
| Dec-81 | 0 | 5.75 | 5.75 | 5.00 | 2.25 | 0.50 | 0.00 | 0.75 |
| Jan-82 | 0 | 5.50 | 5.50 | 5.00 | 3.25 | 2.00 | 0.00 | 2.25 |
| Feb-82 | 0 | 6.25 | 6.25 | 5.50 | 3.75 | 2.75 | 0.50 | 1.75 |
| Mar-82 | 0 | 30.75 | 31.75 | 31.75 | 34.75 | 39.25 | 41.25 | 43.75 |
| Apr-82 | 0 | 2.75 | 5.75 | 10.00 | 27.00 | 49.00 | 72.50 | 83.25 |
| May-82 | 0 | 4.75 | 5.00 | 5.00 | 5.50 | 6.50 | 8.00 | 9.50 |
| Jun-82 | 0 | 6.25 | 6.25 | 5.00 | 2.25 | 0.75 | 0.00 | 0.50 |
| Jul-82 | 0 | 59.75 | 59.50 | 56.25 | 46.50 | 41.25 | 34.00 | 32.75 |
| Aug-82 | 0 | 49.50 | 49.50 | 48.25 | 43.25 | 40.00 | 34.75 | 34.25 |
| Sep-82 | 0 | 51.00 | 51.00 | 49.50 | 43.00 | 39.00 | 32.75 | 32.00 |
| Oct-82 | 0 | 6.75 | 6.50 | 5.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Nov-82 | 0 | 6.25 | 6.25 | 5.00 | 1.50 | 1.00 | 0.00 | 1.00 |
| Dec-82 | 0 | 2.50 | 6.00 | 10.25 | 27.25 | 48.75 | 65.25 | 70.50 |
| Jan-83 | 0 | 204.75 | 222.50 | 249.00 | 324.00 | 434.50 | 527.00 | 667.00 |
| Feb-83 | 1 | 1008.50 | 1032.75 | 1072.75 | 1195.50 | 1354.75 | 1512.50 | 1686.00 |
| Mar-83 | 1 | 3169.00 | 3194.00 | 3236.00 | 3430.50 | 3549.00 | 3638.50 | 3800.25 |
| Apr-83 | 1 | 933.75 | 948.25 | 972.50 | 1060.50 | 1126.00 | 1169.50 | 1257.25 |
| May-83 | 1 | 469.50 | 477.75 | 491.00 | 544.00 | 591.50 | 635.50 | 666.75 |
| Jun-83 | 1 | 83.00 | 85.75 | 89.75 | 103.00 | 122.25 | 145.50 | 160.00 |
| Jul-83 | 1 | 7.75 | 9.00 | 10.00 | 12.50 | 17.50 | 22.50 | 30.50 |
| Aug-83 | 1 | 10.00 | 10.50 | 10.75 | 10.00 | 12.75 | 14.50 | 19.25 |
| Sep-83 | 1 | 14.75 | 15.00 | 14.00 | 10.00 | 9.75 | 8.25 | 11.25 |
| Oct-83 | 0 | 4.00 | 4.75 | 5.00 | 4.75 | 7.75 | 9.25 | 13.75 |
| Nov-83 | 0 | 5.50 | 5.75 | 5.00 | 3.00 | 2.75 | 1.50 | 6.25 |
| Dec-83 | 0 | 210.25 | 213.00 | 213.75 | 215.00 | 226.25 | 233.25 | 255.75 |
| Jan-84 | 0 | 77.00 | 78.50 | 80.25 | 86.25 | 92.75 | 102.25 | 110.75 |
| Feb-84 | 0 | 28.25 | 29.25 | 30.25 | 34.75 | 39.50 | 47.75 | 53.25 |
| Mar-84 | 0 | 7.00 | 7.50 | 8.25 | 11.50 | 15.25 | 21.75 | 25.25 |
| Apr-84 | 1 | 33.25 | 33.75 | 33.00 | 33.50 | 32.75 | 34.00 | 37.50 |
| May-84 | 1 | 22.50 | 22.75 | 21.75 | 20.00 | 17.75 | 17.25 | 18.75 |
| Jun-84 | 1 | 24.25 | 24.25 | 22.75 | 19.00 | 16.00 | 14.50 | 15.00 |
| Jul-84 | 1 | 16.25 | 16.25 | 14.75 | 10.00 | 7.25 | 4.50 | 4.00 |
| Aug-84 | 1 | 19.00 | 19.00 | 17.00 | 10.00 | 6.75 | 2.25 | 1.75 |
| Sep-84 | 1 | 20.50 | 20.25 | 18.00 | 10.00 | 6.00 | 0.75 | 0.25 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| Oct-84 | 0 | 17.25 | 17.00 | 14.25 | 5.00 | 1.00 | 0.00 | 0.00 |
| Nov-84 | 0 | 11.50 | 11.25 | 10.00 | 5.00 | 2.00 | 0.00 | 0.25 |
| Dec-84 | 0 | 4.50 | 5.00 | 5.00 | 3.75 | 4.00 | 1.25 | 6.25 |
| Jan-85 | 0 | 5.75 | 5.75 | 5.00 | 2.75 | 1.75 | 0.25 | 1.50 |
| Feb-85 | 0 | 5.75 | 6.00 | 5.50 | 4.25 | 4.25 | 2.75 | 6.00 |
| Mar-85 | 0 | 5.25 | 5.50 | 5.00 | 4.00 | 3.75 | 3.00 | 6.00 |
| Apr-85 | 0 | 6.00 | 6.00 | 5.00 | 3.25 | 2.50 | 1.75 | 3.00 |
| May-85 | 0 | 6.25 | 6.25 | 5.00 | 2.50 | 1.00 | 0.00 | 0.00 |
| Jun-85 | 0 | 57.75 | 57.50 | 54.25 | 46.00 | 41.00 | 35.25 | 34.00 |
| Jul-85 | 0 | 49.25 | 49.25 | 48.00 | 43.50 | 41.00 | 37.00 | 36.50 |
| Aug-85 | 0 | 11.25 | 11.25 | 9.25 | 3.25 | 0.75 | 0.00 | 0.00 |
| Sep-85 | 0 | 38.00 | 37.75 | 33.25 | 16.75 | 9.00 | 0.00 | 0.00 |
| Oct-85 | 0 | 18.25 | 18.25 | 16.00 | 7.25 | 2.25 | 0.00 | 0.00 |
| Nov-85 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.00 | 0.00 | 0.00 |
| Dec-85 | 0 | 3.25 | 3.25 | 2.50 | 0.50 | 0.00 | 0.00 | 0.50 |
| Jan-86 | 0 | 2.50 | 2.75 | 2.50 | 1.50 | 1.50 | 0.00 | 1.75 |
| Feb-86 | 0 | 2.50 | 13.75 | 31.50 | 78.50 | 143.25 | 185.75 | 271.50 |
| Mar-86 | 1 | 23.50 | 33.00 | 48.00 | 84.50 | 135.75 | 172.25 | 262.25 |
| Apr-86 | 1 | 31.75 | 32.75 | 33.00 | 36.00 | 40.00 | 46.00 | 53.00 |
| May-86 | 1 | 19.50 | 20.00 | 20.00 | 20.75 | 20.75 | 20.50 | 25.25 |
| Jun-86 | 1 | 23.25 | 23.25 | 22.25 | 19.00 | 17.25 | 17.00 | 18.50 |
| Jul-86 | 1 | 16.50 | 16.50 | 15.00 | 10.00 | 7.25 | 4.25 | 4.00 |
| Aug-86 | 1 | 19.25 | 19.00 | 17.00 | 10.00 | 6.50 | 2.00 | 1.50 |
| Sep-86 | 1 | 20.50 | 20.50 | 18.25 | 10.00 | 5.75 | 0.75 | 0.25 |
| Oct-86 | 0 | 18.00 | 18.00 | 15.00 | 5.50 | 1.25 | 0.00 | 0.00 |
| Nov-86 | 0 | 6.25 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Dec-86 | 0 | 6.00 | 6.00 | 5.00 | 1.75 | 0.25 | 0.00 | 1.00 |
| Jan-87 | 0 | 5.75 | 5.75 | 5.00 | 2.75 | 1.25 | 0.00 | 2.50 |
| Feb-87 | 0 | 6.75 | 6.75 | 5.50 | 2.50 | 0.75 | 0.00 | 1.25 |
| Mar-87 | 0 | 30.75 | 31.75 | 31.50 | 30.75 | 31.25 | 26.25 | 38.00 |
| Apr-87 | 0 | 6.00 | 6.00 | 5.00 | 3.25 | 1.75 | 0.50 | 1.75 |
| May-87 | 0 | 6.00 | 6.00 | 5.00 | 2.75 | 1.00 | 0.00 | 0.50 |
| Jun-87 | 0 | 6.25 | 6.25 | 5.00 | 2.00 | 0.50 | 0.00 | 0.00 |
| Jul-87 | 0 | 6.50 | 6.50 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Aug-87 | 0 | 33.00 | 32.75 | 28.25 | 13.75 | 7.00 | 0.00 | 0.00 |
| Sep-87 | 0 | 30.75 | 30.50 | 27.50 | 15.00 | 7.50 | 0.00 | 0.00 |
| Oct-87 | 0 | 6.00 | 5.75 | 5.00 | 1.25 | 0.00 | 0.00 | 0.00 |
| Nov-87 | 0 | 6.25 | 6.25 | 5.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| Dec-87 | 0 | 6.25 | 6.00 | 5.00 | 1.50 | 0.00 | 0.00 | 0.25 |
| Jan-88 | 0 | 5.25 | 5.50 | 5.00 | 3.00 | 2.25 | 0.00 | 1.75 |
| Feb-88 | 0 | 6.25 | 6.25 | 5.25 | 2.75 | 1.25 | 0.00 | 1.00 |
| Mar-88 | 0 | 30.50 | 31.25 | 31.00 | 32.75 | 38.25 | 38.75 | 38.50 |
| Apr-88 | 0 | 5.00 | 5.25 | 5.00 | 5.00 | 5.75 | 5.25 | 7.00 |
| May-88 | 0 | 5.75 | 5.75 | 5.00 | 3.00 | 1.75 | 0.00 | 1.50 |
| Jun-88 | 0 | 58.50 | 58.25 | 55.50 | 47.50 | 42.25 | 34.50 | 33.25 |
| Jul-88 | 0 | 3.50 | 3.25 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug-88 | 0 | 32.50 | 32.25 | 28.25 | 14.00 | 7.00 | 0.00 | 0.00 |
| Sep-88 | 0 | 39.50 | 39.25 | 36.00 | 22.00 | 12.75 | 0.75 | 0.00 |
| Oct-88 | 0 | 5.00 | 5.00 | 4.25 | 1.00 | 0.00 | 0.00 | 0.00 |
| Nov-88 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-88 | 0 | 3.50 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-89 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-89 | 0 | 3.75 | 3.75 | 2.75 | 0.75 | 0.25 | 0.00 | 0.00 |
| Mar-89 | 0 | 3.50 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Apr-89 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| May-89 | 0 | 3.75 | 3.75 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jun-89 | 0 | 15.00 | 14.75 | 12.25 | 6.25 | 3.00 | 0.00 | 0.00 |
| Jul-89 | 0 | 36.50 | 36.00 | 31.75 | 17.75 | 10.25 | 0.50 | 0.00 |
| Aug-89 | 0 | 11.50 | 11.25 | 9.75 | 4.00 | 0.75 | 0.00 | 0.00 |
| Sep-89 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-89 | 0 | 4.00 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-89 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-89 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-90 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-90 | 0 | 4.50 | 4.50 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-90 | 0 | 4.00 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-90 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |

1) Rounded to nearest 0.25 cfs

**Table A-2**

**Simulated Monthly Average Flows[1)] in Santa Ynez River under Alternative 5C**

**Based on SYRHM , WY 1918-1993**

| | Indicator | Cachuma | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River | Santa Ynez River |
|---|---|---|---|---|---|---|---|---|
| | that 3A2 | Total Discharges | Below | at 154 | above Alisal | near | above Salsipuedes | at Lompoc |
| MONTH | in effect | Downstream | Hilton Creek | Bridge | Bridge | Buellton | Creek Confluence | Narrows |
| | (1=yes) | cfs | cfs | cfs | cfs | cfs | cfs | cfs |
| May-90 | 0 | 22.50 | 22.25 | 18.00 | 5.00 | 0.50 | 0.00 | 0.00 |
| Jun-90 | 0 | 3.75 | 3.50 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jul-90 | 0 | 8.00 | 7.75 | 6.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Aug-90 | 0 | 5.25 | 5.00 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sep-90 | 0 | 5.25 | 5.00 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct-90 | 0 | 7.25 | 7.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov-90 | 0 | 5.50 | 5.25 | 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-90 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Jan-91 | 0 | 4.25 | 4.00 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-91 | 0 | 4.50 | 4.50 | 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-91 | 0 | 2.00 | 11.50 | 25.75 | 57.25 | 110.25 | 146.25 | 208.25 |
| Apr-91 | 1 | 31.75 | 33.25 | 33.25 | 33.00 | 41.50 | 40.50 | 38.25 |
| May-91 | 1 | 25.50 | 26.00 | 24.75 | 20.00 | 19.00 | 14.75 | 11.75 |
| Jun-91 | 1 | 33.25 | 33.00 | 30.25 | 19.00 | 11.75 | 3.00 | 0.00 |
| Jul-91 | 1 | 26.00 | 25.75 | 23.50 | 13.25 | 6.50 | 0.00 | 0.00 |
| Aug-91 | 1 | 39.75 | 39.50 | 36.75 | 22.75 | 13.00 | 1.25 | 0.00 |
| Sep-91 | 1 | 18.50 | 18.50 | 17.00 | 10.00 | 4.75 | 0.00 | 0.00 |
| Oct-91 | 0 | 5.50 | 5.25 | 4.25 | 0.50 | 0.00 | 0.00 | 0.00 |
| Nov-91 | 0 | 3.75 | 3.75 | 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec-91 | 0 | 3.25 | 3.50 | 2.50 | 0.25 | 0.00 | 0.00 | 0.00 |
| Jan-92 | 0 | 2.00 | 2.50 | 2.50 | 2.00 | 3.25 | 1.25 | 0.25 |
| Feb-92 | 0 | 2.25 | 18.00 | 42.75 | 127.25 | 244.00 | 352.00 | 430.50 |
| Mar-92 | 1 | 38.00 | 42.50 | 48.00 | 69.75 | 100.25 | 133.50 | 152.25 |
| Apr-92 | 1 | 29.00 | 31.00 | 33.00 | 43.75 | 57.25 | 75.50 | 78.75 |
| May-92 | 1 | 19.25 | 19.75 | 20.00 | 22.00 | 25.00 | 30.25 | 33.25 |
| Jun-92 | 1 | 21.75 | 22.00 | 21.25 | 19.00 | 18.50 | 19.50 | 20.75 |
| Jul-92 | 1 | 15.75 | 15.75 | 14.50 | 10.00 | 7.25 | 4.25 | 5.50 |
| Aug-92 | 1 | 65.75 | 65.50 | 62.75 | 51.00 | 44.00 | 34.00 | 32.50 |
| Sep-92 | 1 | 51.00 | 51.00 | 49.75 | 44.50 | 40.75 | 35.25 | 34.50 |
| Oct-92 | 0 | 16.50 | 16.25 | 14.50 | 7.50 | 3.50 | 0.00 | 0.00 |
| Nov-92 | 0 | 50.75 | 50.75 | 49.25 | 44.00 | 40.25 | 34.50 | 33.25 |
| Dec-92 | 0 | 6.00 | 6.00 | 5.00 | 2.00 | 0.50 | 0.00 | 2.50 |
| Jan-93 | 0 | 328.25 | 340.25 | 356.25 | 419.25 | 511.75 | 605.50 | 661.50 |
| Feb-93 | 1 | 2026.25 | 2050.50 | 2091.75 | 2237.50 | 2418.25 | 2619.50 | 2755.50 |
| Mar-93 | 1 | 1050.00 | 1063.50 | 1086.25 | 1178.75 | 1285.50 | 1412.50 | 1465.50 |
| Apr-93 | 1 | 476.00 | 482.25 | 491.75 | 532.50 | 583.75 | 651.00 | 670.75 |
| May-93 | 1 | 100.75 | 103.25 | 106.75 | 121.00 | 135.00 | 151.25 | 160.00 |
| Jun-93 | 1 | 16.25 | 17.50 | 19.00 | 25.00 | 31.00 | 37.00 | 42.00 |
| Jul-93 | 1 | 10.25 | 10.75 | 10.50 | 10.00 | 10.50 | 9.75 | 12.75 |
| Aug-93 | 1 | 15.75 | 15.75 | 14.75 | 10.00 | 9.00 | 7.00 | 8.00 |
| Sep-93 | 1 | 19.00 | 18.75 | 17.00 | 10.00 | 7.00 | 2.50 | 2.00 |

1) Rounded to nearest 0.25 cfs

# Appendix B

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-17 | 173,182 | 744.95 | 0.00 | | Oct-22 | 168,979 | 743.44 | 0.00 |
| Nov-17 | 171,008 | 744.17 | 0.00 | | Nov-22 | 167,657 | 742.96 | 0.00 |
| Dec-17 | 169,056 | 743.47 | 0.00 | | Dec-22 | 173,220 | 744.96 | 0.00 |
| Jan-18 | 167,446 | 742.89 | 0.00 | | Jan-23 | 174,527 | 745.42 | 0.00 |
| Feb-18 | 193,585 | 751.80 | 1.80 | | Feb-23 | 175,061 | 745.60 | 0.00 |
| Mar-18 | 193,585 | 751.80 | 1.80 | | Mar-23 | 172,939 | 744.86 | 0.00 |
| Apr-18 | 193,585 | 751.80 | 1.80 | | Apr-23 | 171,065 | 744.19 | 0.00 |
| May-18 | 193,585 | 751.80 | 1.80 | | May-23 | 167,658 | 742.96 | 0.00 |
| Jun-18 | 192,606 | 751.48 | 1.48 | | Jun-23 | 163,681 | 741.50 | 0.00 |
| Jul-18 | 187,091 | 749.69 | 0.00 | | Jul-23 | 158,580 | 739.60 | 0.00 |
| Aug-18 | 181,534 | 747.83 | 0.00 | | Aug-23 | 149,389 | 736.06 | 0.00 |
| Sep-18 | 177,486 | 746.45 | 0.00 | | Sep-23 | 143,001 | 733.50 | 0.00 |
| Oct-18 | 173,699 | 745.13 | 0.00 | | Oct-23 | 137,733 | 731.33 | 0.00 |
| Nov-18 | 172,967 | 744.87 | 0.00 | | Nov-23 | 135,661 | 730.46 | 0.00 |
| Dec-18 | 171,991 | 744.52 | 0.00 | | Dec-23 | 134,492 | 729.97 | 0.00 |
| Jan-19 | 171,014 | 744.17 | 0.00 | | Jan-24 | 133,175 | 729.41 | 0.00 |
| Feb-19 | 170,656 | 744.05 | 0.00 | | Feb-24 | 131,848 | 728.85 | 0.00 |
| Mar-19 | 168,677 | 743.33 | 0.00 | | Mar-24 | 132,595 | 729.17 | 0.00 |
| Apr-19 | 165,169 | 742.05 | 0.00 | | Apr-24 | 130,164 | 728.12 | 0.00 |
| May-19 | 161,485 | 740.69 | 0.00 | | May-24 | 126,415 | 726.49 | 0.00 |
| Jun-19 | 156,887 | 738.96 | 0.00 | | Jun-24 | 121,971 | 724.51 | 0.00 |
| Jul-19 | 147,642 | 735.37 | 0.00 | | Jul-24 | 116,754 | 722.13 | 0.00 |
| Aug-19 | 142,829 | 733.43 | 0.00 | | Aug-24 | 109,935 | 718.91 | 0.00 |
| Sep-19 | 136,823 | 730.95 | 0.00 | | Sep-24 | 104,465 | 716.23 | 0.00 |
| Oct-19 | 132,982 | 729.33 | 0.00 | | Oct-24 | 100,759 | 714.36 | 0.00 |
| Nov-19 | 130,937 | 728.46 | 0.00 | | Nov-24 | 98,885 | 713.40 | 0.00 |
| Dec-19 | 130,614 | 728.32 | 0.00 | | Dec-24 | 97,949 | 712.91 | 0.00 |
| Jan-20 | 129,099 | 727.66 | 0.00 | | Jan-25 | 96,696 | 712.26 | 0.00 |
| Feb-20 | 130,456 | 728.25 | 0.00 | | Feb-25 | 95,570 | 711.67 | 0.00 |
| Mar-20 | 139,478 | 732.05 | 0.00 | | Mar-25 | 95,015 | 711.37 | 0.00 |
| Apr-20 | 141,408 | 732.85 | 0.00 | | Apr-25 | 95,107 | 711.42 | 0.00 |
| May-20 | 138,600 | 731.69 | 0.00 | | May-25 | 92,392 | 709.97 | 0.00 |
| Jun-20 | 134,606 | 730.02 | 0.00 | | Jun-25 | 88,677 | 707.94 | 0.00 |
| Jul-20 | 125,570 | 726.12 | 0.00 | | Jul-25 | 82,694 | 704.55 | 0.00 |
| Aug-20 | 121,058 | 724.10 | 0.00 | | Aug-25 | 75,751 | 700.45 | 0.00 |
| Sep-20 | 114,637 | 721.14 | 0.00 | | Sep-25 | 72,193 | 698.24 | 0.00 |
| Oct-20 | 110,625 | 719.24 | 0.00 | | Oct-25 | 70,094 | 696.90 | 0.00 |
| Nov-20 | 108,351 | 718.14 | 0.00 | | Nov-25 | 68,588 | 695.93 | 0.00 |
| Dec-20 | 107,160 | 717.56 | 0.00 | | Dec-25 | 67,395 | 695.15 | 0.00 |
| Jan-21 | 107,999 | 717.97 | 0.00 | | Jan-26 | 66,432 | 694.52 | 0.00 |
| Feb-21 | 108,587 | 718.26 | 0.00 | | Feb-26 | 69,159 | 696.30 | 0.00 |
| Mar-21 | 110,545 | 719.20 | 0.00 | | Mar-26 | 69,786 | 696.70 | 0.00 |
| Apr-21 | 108,647 | 718.29 | 0.00 | | Apr-26 | 130,882 | 728.43 | 0.00 |
| May-21 | 106,090 | 717.04 | 0.00 | | May-26 | 131,842 | 728.84 | 0.00 |
| Jun-21 | 102,733 | 715.36 | 0.00 | | Jun-26 | 127,518 | 726.98 | 0.00 |
| Jul-21 | 97,989 | 712.94 | 0.00 | | Jul-26 | 121,406 | 724.25 | 0.00 |
| Aug-21 | 88,683 | 707.94 | 0.00 | | Aug-26 | 115,192 | 721.40 | 0.00 |
| Sep-21 | 83,439 | 704.98 | 0.00 | | Sep-26 | 109,371 | 718.64 | 0.00 |
| Oct-21 | 78,700 | 702.22 | 0.00 | | Oct-26 | 102,503 | 715.25 | 0.00 |
| Nov-21 | 76,459 | 700.88 | 0.00 | | Nov-26 | 104,742 | 716.37 | 0.00 |
| Dec-21 | 96,400 | 712.10 | 0.00 | | Dec-26 | 105,378 | 716.68 | 0.00 |
| Jan-22 | 112,914 | 720.33 | 0.00 | | Jan-27 | 106,940 | 717.45 | 0.00 |
| Feb-22 | 171,814 | 744.46 | 0.00 | | Feb-27 | 188,056 | 750.01 | 0.01 |
| Mar-22 | 193,585 | 751.80 | 1.80 | | Mar-27 | 193,585 | 751.80 | 1.80 |
| Apr-22 | 193,585 | 751.80 | 1.80 | | Apr-27 | 193,585 | 751.80 | 1.80 |
| May-22 | 193,585 | 751.80 | 1.80 | | May-27 | 191,010 | 750.97 | 0.97 |
| Jun-22 | 189,334 | 750.42 | 0.42 | | Jun-27 | 186,296 | 749.43 | 0.00 |
| Jul-22 | 183,123 | 748.37 | 0.00 | | Jul-27 | 180,022 | 747.32 | 0.00 |
| Aug-22 | 177,454 | 746.44 | 0.00 | | Aug-27 | 174,321 | 745.35 | 0.00 |
| Sep-22 | 172,686 | 744.77 | 0.00 | | Sep-27 | 169,529 | 743.64 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-27 | 166,554 | 742.56 | 0.00 | | Oct-32 | 113,705 | 720.70 | 0.00 |
| Nov-27 | 164,806 | 741.92 | 0.00 | | Nov-32 | 112,061 | 719.93 | 0.00 |
| Dec-27 | 164,067 | 741.65 | 0.00 | | Dec-32 | 110,520 | 719.19 | 0.00 |
| Jan-28 | 162,603 | 741.11 | 0.00 | | Jan-33 | 118,619 | 722.99 | 0.00 |
| Feb-28 | 169,335 | 743.57 | 0.00 | | Feb-33 | 120,616 | 723.90 | 0.00 |
| Mar-28 | 170,775 | 744.09 | 0.00 | | Mar-33 | 119,578 | 723.42 | 0.00 |
| Apr-28 | 167,555 | 742.93 | 0.00 | | Apr-33 | 117,274 | 722.37 | 0.00 |
| May-28 | 163,851 | 741.57 | 0.00 | | May-33 | 113,582 | 720.65 | 0.00 |
| Jun-28 | 159,735 | 740.04 | 0.00 | | Jun-33 | 105,922 | 716.95 | 0.00 |
| Jul-28 | 150,706 | 736.58 | 0.00 | | Jul-33 | 98,099 | 712.99 | 0.00 |
| Aug-28 | 142,957 | 733.48 | 0.00 | | Aug-33 | 90,989 | 709.21 | 0.00 |
| Sep-28 | 136,417 | 730.78 | 0.00 | | Sep-33 | 85,546 | 706.18 | 0.00 |
| Oct-28 | 131,036 | 728.50 | 0.00 | | Oct-33 | 83,188 | 704.84 | 0.00 |
| Nov-28 | 129,928 | 728.02 | 0.00 | | Nov-33 | 81,397 | 703.80 | 0.00 |
| Dec-28 | 129,298 | 727.75 | 0.00 | | Dec-33 | 80,853 | 703.49 | 0.00 |
| Jan-29 | 128,274 | 727.30 | 0.00 | | Jan-34 | 93,084 | 710.34 | 0.00 |
| Feb-29 | 128,567 | 727.43 | 0.00 | | Feb-34 | 97,139 | 712.49 | 0.00 |
| Mar-29 | 128,767 | 727.52 | 0.00 | | Mar-34 | 96,810 | 712.32 | 0.00 |
| Apr-29 | 127,602 | 727.01 | 0.00 | | Apr-34 | 94,096 | 710.88 | 0.00 |
| May-29 | 124,240 | 725.53 | 0.00 | | May-34 | 90,478 | 708.93 | 0.00 |
| Jun-29 | 116,279 | 721.91 | 0.00 | | Jun-34 | 82,757 | 704.59 | 0.00 |
| Jul-29 | 108,621 | 718.27 | 0.00 | | Jul-34 | 75,986 | 700.59 | 0.00 |
| Aug-29 | 102,626 | 715.31 | 0.00 | | Aug-34 | 69,287 | 696.38 | 0.00 |
| Sep-29 | 96,853 | 712.34 | 0.00 | | Sep-34 | 63,667 | 692.67 | 0.00 |
| Oct-29 | 92,834 | 710.21 | 0.00 | | Oct-34 | 61,725 | 691.34 | 0.00 |
| Nov-29 | 90,761 | 709.08 | 0.00 | | Nov-34 | 60,340 | 690.37 | 0.00 |
| Dec-29 | 89,365 | 708.32 | 0.00 | | Dec-34 | 59,341 | 689.67 | 0.00 |
| Jan-30 | 88,739 | 707.97 | 0.00 | | Jan-35 | 71,800 | 697.99 | 0.00 |
| Feb-30 | 87,307 | 707.17 | 0.00 | | Feb-35 | 74,070 | 699.41 | 0.00 |
| Mar-30 | 90,922 | 709.17 | 0.00 | | Mar-35 | 82,401 | 704.38 | 0.00 |
| Apr-30 | 88,793 | 708.00 | 0.00 | | Apr-35 | 97,601 | 712.73 | 0.00 |
| May-30 | 85,729 | 706.29 | 0.00 | | May-35 | 96,907 | 712.37 | 0.00 |
| Jun-30 | 81,940 | 704.12 | 0.00 | | Jun-35 | 92,696 | 710.13 | 0.00 |
| Jul-30 | 76,096 | 700.66 | 0.00 | | Jul-35 | 86,857 | 706.92 | 0.00 |
| Aug-30 | 70,248 | 697.00 | 0.00 | | Aug-35 | 77,456 | 701.48 | 0.00 |
| Sep-30 | 67,279 | 695.08 | 0.00 | | Sep-35 | 71,740 | 697.95 | 0.00 |
| Oct-30 | 64,918 | 693.51 | 0.00 | | Oct-35 | 68,299 | 695.74 | 0.00 |
| Nov-30 | 63,515 | 692.57 | 0.00 | | Nov-35 | 66,023 | 694.25 | 0.00 |
| Dec-30 | 62,307 | 691.74 | 0.00 | | Dec-35 | 64,916 | 693.51 | 0.00 |
| Jan-31 | 61,696 | 691.32 | 0.00 | | Jan-36 | 63,499 | 692.56 | 0.00 |
| Feb-31 | 60,872 | 690.75 | 0.00 | | Feb-36 | 86,832 | 706.91 | 0.00 |
| Mar-31 | 59,147 | 689.53 | 0.00 | | Mar-36 | 90,607 | 709.00 | 0.00 |
| Apr-31 | 57,118 | 688.07 | 0.00 | | Apr-36 | 92,394 | 709.97 | 0.00 |
| May-31 | 53,461 | 685.35 | 0.00 | | May-36 | 89,439 | 708.36 | 0.00 |
| Jun-31 | 50,456 | 683.05 | 0.00 | | Jun-36 | 85,626 | 706.23 | 0.00 |
| Jul-31 | 47,230 | 680.47 | 0.00 | | Jul-36 | 80,963 | 703.55 | 0.00 |
| Aug-31 | 44,028 | 677.82 | 0.00 | | Aug-36 | 74,098 | 699.43 | 0.00 |
| Sep-31 | 41,523 | 675.66 | 0.00 | | Sep-36 | 70,610 | 697.23 | 0.00 |
| Oct-31 | 39,648 | 674.00 | 0.00 | | Oct-36 | 68,522 | 695.89 | 0.00 |
| Nov-31 | 38,782 | 673.21 | 0.00 | | Nov-36 | 66,999 | 694.89 | 0.00 |
| Dec-31 | 46,267 | 679.69 | 0.00 | | Dec-36 | 70,175 | 696.95 | 0.00 |
| Jan-32 | 52,027 | 684.26 | 0.00 | | Jan-37 | 75,864 | 700.51 | 0.00 |
| Feb-32 | 139,788 | 732.18 | 0.00 | | Feb-37 | 143,641 | 733.76 | 0.00 |
| Mar-32 | 148,479 | 735.70 | 0.00 | | Mar-37 | 193,585 | 751.80 | 1.80 |
| Apr-32 | 145,587 | 734.55 | 0.00 | | Apr-37 | 193,585 | 751.80 | 1.80 |
| May-32 | 140,802 | 732.60 | 0.00 | | May-37 | 193,585 | 751.80 | 1.80 |
| Jun-32 | 135,760 | 730.50 | 0.00 | | Jun-37 | 190,129 | 750.68 | 0.68 |
| Jul-32 | 129,418 | 727.80 | 0.00 | | Jul-37 | 184,024 | 748.67 | 0.00 |
| Aug-32 | 122,959 | 724.96 | 0.00 | | Aug-37 | 178,289 | 746.72 | 0.00 |
| Sep-32 | 116,898 | 722.19 | 0.00 | | Sep-37 | 173,448 | 745.04 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-37 | 169,647 | 743.68 | 0.00 | | Oct-42 | 170,911 | 744.14 | 0.00 |
| Nov-37 | 166,766 | 742.64 | 0.00 | | Nov-42 | 168,932 | 743.42 | 0.00 |
| Dec-37 | 166,526 | 742.55 | 0.00 | | Dec-42 | 167,433 | 742.88 | 0.00 |
| Jan-38 | 165,391 | 742.13 | 0.00 | | Jan-43 | 193,585 | 751.80 | 1.80 |
| Feb-38 | 193,585 | 751.80 | 1.80 | | Feb-43 | 193,585 | 751.80 | 1.80 |
| Mar-38 | 193,585 | 751.80 | 1.80 | | Mar-43 | 193,585 | 751.80 | 1.80 |
| Apr-38 | 193,585 | 751.80 | 1.80 | | Apr-43 | 193,585 | 751.80 | 1.80 |
| May-38 | 193,585 | 751.80 | 1.80 | | May-43 | 193,293 | 751.71 | 1.71 |
| Jun-38 | 191,181 | 751.03 | 1.03 | | Jun-43 | 189,250 | 750.40 | 0.40 |
| Jul-38 | 185,932 | 749.31 | 0.00 | | Jul-43 | 183,357 | 748.45 | 0.00 |
| Aug-38 | 180,345 | 747.43 | 0.00 | | Aug-43 | 177,857 | 746.58 | 0.00 |
| Sep-38 | 175,790 | 745.86 | 0.00 | | Sep-43 | 173,296 | 744.99 | 0.00 |
| Oct-38 | 172,089 | 744.56 | 0.00 | | Oct-43 | 169,810 | 743.74 | 0.00 |
| Nov-38 | 170,156 | 743.87 | 0.00 | | Nov-43 | 167,923 | 743.06 | 0.00 |
| Dec-38 | 170,311 | 743.92 | 0.00 | | Dec-43 | 167,752 | 743.00 | 0.00 |
| Jan-39 | 172,931 | 744.86 | 0.00 | | Jan-44 | 167,675 | 742.97 | 0.00 |
| Feb-39 | 175,206 | 745.66 | 0.00 | | Feb-44 | 193,585 | 751.80 | 1.80 |
| Mar-39 | 182,335 | 748.10 | 0.00 | | Mar-44 | 193,585 | 751.80 | 1.80 |
| Apr-39 | 180,360 | 747.43 | 0.00 | | Apr-44 | 193,585 | 751.80 | 1.80 |
| May-39 | 176,929 | 746.26 | 0.00 | | May-44 | 192,542 | 751.46 | 1.46 |
| Jun-39 | 172,457 | 744.69 | 0.00 | | Jun-44 | 188,492 | 750.15 | 0.15 |
| Jul-39 | 163,411 | 741.40 | 0.00 | | Jul-44 | 182,435 | 748.14 | 0.00 |
| Aug-39 | 155,566 | 738.46 | 0.00 | | Aug-44 | 176,797 | 746.21 | 0.00 |
| Sep-39 | 149,072 | 735.94 | 0.00 | | Sep-44 | 172,080 | 744.55 | 0.00 |
| Oct-39 | 146,486 | 734.91 | 0.00 | | Oct-44 | 168,336 | 743.21 | 0.00 |
| Nov-39 | 144,452 | 734.09 | 0.00 | | Nov-44 | 168,358 | 743.22 | 0.00 |
| Dec-39 | 143,021 | 733.51 | 0.00 | | Dec-44 | 167,392 | 742.87 | 0.00 |
| Jan-40 | 143,705 | 733.79 | 0.00 | | Jan-45 | 166,432 | 742.51 | 0.00 |
| Feb-40 | 148,912 | 735.87 | 0.00 | | Feb-45 | 187,247 | 749.74 | 0.00 |
| Mar-40 | 151,229 | 736.78 | 0.00 | | Mar-45 | 193,585 | 751.80 | 1.80 |
| Apr-40 | 150,491 | 736.49 | 0.00 | | Apr-45 | 193,585 | 751.80 | 1.80 |
| May-40 | 146,937 | 735.09 | 0.00 | | May-45 | 190,688 | 750.86 | 0.86 |
| Jun-40 | 142,979 | 733.49 | 0.00 | | Jun-45 | 185,589 | 749.19 | 0.00 |
| Jul-40 | 133,838 | 729.69 | 0.00 | | Jul-45 | 179,075 | 747.00 | 0.00 |
| Aug-40 | 126,311 | 726.44 | 0.00 | | Aug-45 | 173,135 | 744.93 | 0.00 |
| Sep-40 | 120,844 | 724.00 | 0.00 | | Sep-45 | 167,326 | 742.84 | 0.00 |
| Oct-40 | 117,003 | 722.24 | 0.00 | | Oct-45 | 163,653 | 741.49 | 0.00 |
| Nov-40 | 115,477 | 721.53 | 0.00 | | Nov-45 | 161,364 | 740.64 | 0.00 |
| Dec-40 | 119,845 | 723.55 | 0.00 | | Dec-45 | 169,184 | 743.52 | 0.00 |
| Jan-41 | 147,446 | 735.29 | 0.00 | | Jan-46 | 168,926 | 743.42 | 0.00 |
| Feb-41 | 193,585 | 751.80 | 1.80 | | Feb-46 | 169,980 | 743.80 | 0.00 |
| Mar-41 | 193,585 | 751.80 | 1.80 | | Mar-46 | 186,714 | 749.56 | 0.00 |
| Apr-41 | 193,585 | 751.80 | 1.80 | | Apr-46 | 193,520 | 751.78 | 1.78 |
| May-41 | 193,585 | 751.80 | 1.80 | | May-46 | 190,291 | 750.74 | 0.74 |
| Jun-41 | 193,585 | 751.80 | 1.80 | | Jun-46 | 184,618 | 748.87 | 0.00 |
| Jul-41 | 191,089 | 751.00 | 1.00 | | Jul-46 | 174,606 | 745.44 | 0.00 |
| Aug-41 | 187,026 | 749.67 | 0.00 | | Aug-46 | 166,667 | 742.60 | 0.00 |
| Sep-41 | 183,472 | 748.49 | 0.00 | | Sep-46 | 159,997 | 740.13 | 0.00 |
| Oct-41 | 180,787 | 747.58 | 0.00 | | Oct-46 | 154,497 | 738.05 | 0.00 |
| Nov-41 | 179,626 | 747.18 | 0.00 | | Nov-46 | 156,051 | 738.64 | 0.00 |
| Dec-41 | 185,562 | 749.18 | 0.00 | | Dec-46 | 161,273 | 740.61 | 0.00 |
| Jan-42 | 189,931 | 750.62 | 0.62 | | Jan-47 | 162,370 | 741.02 | 0.00 |
| Feb-42 | 191,420 | 751.10 | 1.10 | | Feb-47 | 161,991 | 740.88 | 0.00 |
| Mar-42 | 193,585 | 751.80 | 1.80 | | Mar-47 | 161,383 | 740.65 | 0.00 |
| Apr-42 | 193,585 | 751.80 | 1.80 | | Apr-47 | 158,548 | 739.59 | 0.00 |
| May-42 | 192,343 | 751.40 | 1.40 | | May-47 | 151,189 | 736.77 | 0.00 |
| Jun-42 | 188,737 | 750.23 | 0.23 | | Jun-47 | 144,451 | 734.09 | 0.00 |
| Jul-42 | 183,424 | 748.47 | 0.00 | | Jul-47 | 136,398 | 730.77 | 0.00 |
| Aug-42 | 178,407 | 746.77 | 0.00 | | Aug-47 | 128,681 | 727.48 | 0.00 |
| Sep-42 | 173,377 | 745.01 | 0.00 | | Sep-47 | 122,174 | 724.60 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-47 | 116,893 | 722.19 | 0.00 | | Oct-52 | 170,247 | 743.90 | 0.00 |
| Nov-47 | 113,830 | 720.76 | 0.00 | | Nov-52 | 169,773 | 743.73 | 0.00 |
| Dec-47 | 112,830 | 720.29 | 0.00 | | Dec-52 | 172,000 | 744.52 | 0.00 |
| Jan-48 | 111,621 | 719.72 | 0.00 | | Jan-53 | 177,527 | 746.46 | 0.00 |
| Feb-48 | 110,768 | 719.31 | 0.00 | | Feb-53 | 176,429 | 746.08 | 0.00 |
| Mar-48 | 109,657 | 718.77 | 0.00 | | Mar-53 | 175,267 | 745.68 | 0.00 |
| Apr-48 | 107,540 | 717.75 | 0.00 | | Apr-53 | 172,954 | 744.86 | 0.00 |
| May-48 | 104,199 | 716.10 | 0.00 | | May-53 | 169,203 | 743.52 | 0.00 |
| Jun-48 | 99,227 | 713.57 | 0.00 | | Jun-53 | 164,890 | 741.95 | 0.00 |
| Jul-48 | 93,266 | 710.44 | 0.00 | | Jul-53 | 155,691 | 738.51 | 0.00 |
| Aug-48 | 88,858 | 708.04 | 0.00 | | Aug-53 | 147,917 | 735.48 | 0.00 |
| Sep-48 | 85,324 | 706.06 | 0.00 | | Sep-53 | 141,974 | 733.08 | 0.00 |
| Oct-48 | 82,723 | 704.57 | 0.00 | | Oct-53 | 137,229 | 731.12 | 0.00 |
| Nov-48 | 80,909 | 703.52 | 0.00 | | Nov-53 | 136,112 | 730.65 | 0.00 |
| Dec-48 | 80,141 | 703.07 | 0.00 | | Dec-53 | 134,520 | 729.98 | 0.00 |
| Jan-49 | 79,141 | 702.48 | 0.00 | | Jan-54 | 136,792 | 730.94 | 0.00 |
| Feb-49 | 78,033 | 701.82 | 0.00 | | Feb-54 | 139,032 | 731.87 | 0.00 |
| Mar-49 | 76,892 | 701.14 | 0.00 | | Mar-54 | 144,181 | 733.98 | 0.00 |
| Apr-49 | 72,997 | 698.74 | 0.00 | | Apr-54 | 145,846 | 734.65 | 0.00 |
| May-49 | 68,613 | 695.94 | 0.00 | | May-54 | 142,590 | 733.33 | 0.00 |
| Jun-49 | 65,141 | 693.66 | 0.00 | | Jun-54 | 138,260 | 731.55 | 0.00 |
| Jul-49 | 61,392 | 691.11 | 0.00 | | Jul-54 | 128,899 | 727.58 | 0.00 |
| Aug-49 | 57,656 | 688.46 | 0.00 | | Aug-54 | 121,437 | 724.27 | 0.00 |
| Sep-49 | 54,778 | 686.34 | 0.00 | | Sep-54 | 114,949 | 721.29 | 0.00 |
| Oct-49 | 52,628 | 684.72 | 0.00 | | Oct-54 | 110,495 | 719.18 | 0.00 |
| Nov-49 | 51,324 | 683.72 | 0.00 | | Nov-54 | 108,412 | 718.17 | 0.00 |
| Dec-49 | 50,356 | 682.97 | 0.00 | | Dec-54 | 107,645 | 717.80 | 0.00 |
| Jan-50 | 49,487 | 682.28 | 0.00 | | Jan-55 | 107,556 | 717.75 | 0.00 |
| Feb-50 | 50,470 | 683.06 | 0.00 | | Feb-55 | 107,111 | 717.54 | 0.00 |
| Mar-50 | 47,423 | 680.63 | 0.00 | | Mar-55 | 105,737 | 716.86 | 0.00 |
| Apr-50 | 45,923 | 679.40 | 0.00 | | Apr-55 | 103,731 | 715.86 | 0.00 |
| May-50 | 40,591 | 674.84 | 0.00 | | May-55 | 101,707 | 714.84 | 0.00 |
| Jun-50 | 38,013 | 672.49 | 0.00 | | Jun-55 | 98,253 | 713.07 | 0.00 |
| Jul-50 | 35,213 | 669.81 | 0.00 | | Jul-55 | 91,321 | 709.39 | 0.00 |
| Aug-50 | 32,380 | 666.95 | 0.00 | | Aug-55 | 83,924 | 705.26 | 0.00 |
| Sep-50 | 30,202 | 664.63 | 0.00 | | Sep-55 | 80,241 | 703.13 | 0.00 |
| Oct-50 | 28,625 | 662.90 | 0.00 | | Oct-55 | 77,662 | 701.60 | 0.00 |
| Nov-50 | 27,811 | 661.98 | 0.00 | | Nov-55 | 76,328 | 700.80 | 0.00 |
| Dec-50 | 27,138 | 661.20 | 0.00 | | Dec-55 | 80,502 | 703.28 | 0.00 |
| Jan-51 | 26,590 | 660.56 | 0.00 | | Jan-56 | 90,586 | 708.99 | 0.00 |
| Feb-51 | 25,975 | 659.84 | 0.00 | | Feb-56 | 92,738 | 710.15 | 0.00 |
| Mar-51 | 24,991 | 658.66 | 0.00 | | Mar-56 | 92,049 | 709.78 | 0.00 |
| Apr-51 | 23,647 | 657.03 | 0.00 | | Apr-56 | 93,027 | 710.31 | 0.00 |
| May-51 | 21,347 | 654.14 | 0.00 | | May-56 | 92,512 | 710.03 | 0.00 |
| Jun-51 | 19,552 | 651.80 | 0.00 | | Jun-56 | 89,817 | 708.56 | 0.00 |
| Jul-51 | 17,442 | 648.93 | 0.00 | | Jul-56 | 85,622 | 706.23 | 0.00 |
| Aug-51 | 15,479 | 646.06 | 0.00 | | Aug-56 | 79,408 | 702.64 | 0.00 |
| Sep-51 | 13,816 | 643.41 | 0.00 | | Sep-56 | 75,370 | 700.21 | 0.00 |
| Oct-51 | 12,841 | 641.76 | 0.00 | | Oct-56 | 73,160 | 698.85 | 0.00 |
| Nov-51 | 12,275 | 640.75 | 0.00 | | Nov-56 | 71,765 | 697.97 | 0.00 |
| Dec-51 | 12,030 | 640.30 | 0.00 | | Dec-56 | 70,309 | 697.04 | 0.00 |
| Jan-52 | 112,132 | 719.96 | 0.00 | | Jan-57 | 70,144 | 696.93 | 0.00 |
| Feb-52 | 119,701 | 723.48 | 0.00 | | Feb-57 | 70,128 | 696.92 | 0.00 |
| Mar-52 | 190,701 | 750.87 | 0.87 | | Mar-57 | 69,917 | 696.79 | 0.00 |
| Apr-52 | 193,585 | 751.80 | 1.80 | | Apr-57 | 68,682 | 695.99 | 0.00 |
| May-52 | 193,585 | 751.80 | 1.80 | | May-57 | 66,880 | 694.81 | 0.00 |
| Jun-52 | 190,357 | 750.76 | 0.76 | | Jun-57 | 60,039 | 690.16 | 0.00 |
| Jul-52 | 184,942 | 748.98 | 0.00 | | Jul-57 | 55,842 | 687.13 | 0.00 |
| Aug-52 | 179,108 | 747.01 | 0.00 | | Aug-57 | 49,749 | 682.49 | 0.00 |
| Sep-52 | 173,537 | 745.07 | 0.00 | | Sep-57 | 46,654 | 680.01 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-57 | 45,027 | 678.66 | 0.00 | | Oct-62 | 146,837 | 735.05 | 0.00 |
| Nov-57 | 43,684 | 677.53 | 0.00 | | Nov-62 | 144,661 | 734.17 | 0.00 |
| Dec-57 | 44,401 | 678.13 | 0.00 | | Dec-62 | 143,336 | 733.64 | 0.00 |
| Jan-58 | 44,627 | 678.32 | 0.00 | | Jan-63 | 142,199 | 733.17 | 0.00 |
| Feb-58 | 76,911 | 701.15 | 0.00 | | Feb-63 | 142,300 | 733.21 | 0.00 |
| Mar-58 | 122,188 | 724.61 | 0.00 | | Mar-63 | 141,481 | 732.88 | 0.00 |
| Apr-58 | 193,585 | 751.80 | 1.80 | | Apr-63 | 139,726 | 732.16 | 0.00 |
| May-58 | 193,585 | 751.80 | 1.80 | | May-63 | 136,904 | 730.99 | 0.00 |
| Jun-58 | 191,747 | 751.21 | 1.21 | | Jun-63 | 132,883 | 729.29 | 0.00 |
| Jul-58 | 186,688 | 749.56 | 0.00 | | Jul-63 | 127,606 | 727.01 | 0.00 |
| Aug-58 | 181,332 | 747.76 | 0.00 | | Aug-63 | 120,317 | 723.76 | 0.00 |
| Sep-58 | 176,714 | 746.18 | 0.00 | | Sep-63 | 117,130 | 722.30 | 0.00 |
| Oct-58 | 172,807 | 744.81 | 0.00 | | Oct-63 | 114,690 | 721.17 | 0.00 |
| Nov-58 | 170,536 | 744.00 | 0.00 | | Nov-63 | 113,437 | 720.58 | 0.00 |
| Dec-58 | 168,409 | 743.23 | 0.00 | | Dec-63 | 112,060 | 719.93 | 0.00 |
| Jan-59 | 168,663 | 743.33 | 0.00 | | Jan-64 | 111,246 | 719.54 | 0.00 |
| Feb-59 | 180,846 | 747.60 | 0.00 | | Feb-64 | 109,780 | 718.83 | 0.00 |
| Mar-59 | 179,309 | 747.08 | 0.00 | | Mar-64 | 108,081 | 718.01 | 0.00 |
| Apr-59 | 177,188 | 746.34 | 0.00 | | Apr-64 | 105,877 | 716.93 | 0.00 |
| May-59 | 173,318 | 744.99 | 0.00 | | May-64 | 100,592 | 714.28 | 0.00 |
| Jun-59 | 169,224 | 743.53 | 0.00 | | Jun-64 | 96,294 | 712.05 | 0.00 |
| Jul-59 | 159,836 | 740.07 | 0.00 | | Jul-64 | 91,541 | 709.51 | 0.00 |
| Aug-59 | 152,057 | 737.11 | 0.00 | | Aug-64 | 86,894 | 706.94 | 0.00 |
| Sep-59 | 146,370 | 734.86 | 0.00 | | Sep-64 | 83,335 | 704.92 | 0.00 |
| Oct-59 | 141,884 | 733.04 | 0.00 | | Oct-64 | 80,840 | 703.48 | 0.00 |
| Nov-59 | 139,044 | 731.88 | 0.00 | | Nov-64 | 79,445 | 702.66 | 0.00 |
| Dec-59 | 138,132 | 731.50 | 0.00 | | Dec-64 | 78,462 | 702.08 | 0.00 |
| Jan-60 | 137,756 | 731.34 | 0.00 | | Jan-65 | 77,692 | 701.62 | 0.00 |
| Feb-60 | 136,925 | 730.99 | 0.00 | | Feb-65 | 76,642 | 700.99 | 0.00 |
| Mar-60 | 133,421 | 729.52 | 0.00 | | Mar-65 | 75,206 | 700.11 | 0.00 |
| Apr-60 | 130,979 | 728.47 | 0.00 | | Apr-65 | 84,381 | 705.52 | 0.00 |
| May-60 | 127,277 | 726.87 | 0.00 | | May-65 | 82,248 | 704.30 | 0.00 |
| Jun-60 | 122,898 | 724.93 | 0.00 | | Jun-65 | 75,617 | 700.36 | 0.00 |
| Jul-60 | 117,569 | 722.50 | 0.00 | | Jul-65 | 69,038 | 696.22 | 0.00 |
| Aug-60 | 110,032 | 718.96 | 0.00 | | Aug-65 | 64,345 | 693.13 | 0.00 |
| Sep-60 | 106,536 | 717.25 | 0.00 | | Sep-65 | 61,143 | 690.94 | 0.00 |
| Oct-60 | 103,858 | 715.93 | 0.00 | | Oct-65 | 59,165 | 689.54 | 0.00 |
| Nov-60 | 102,994 | 715.49 | 0.00 | | Nov-65 | 80,635 | 703.36 | 0.00 |
| Dec-60 | 101,838 | 714.91 | 0.00 | | Dec-65 | 109,940 | 718.91 | 0.00 |
| Jan-61 | 101,059 | 714.51 | 0.00 | | Jan-66 | 127,341 | 726.90 | 0.00 |
| Feb-61 | 99,726 | 713.83 | 0.00 | | Feb-66 | 134,517 | 729.98 | 0.00 |
| Mar-61 | 97,823 | 712.85 | 0.00 | | Mar-66 | 135,289 | 730.31 | 0.00 |
| Apr-61 | 95,146 | 711.44 | 0.00 | | Apr-66 | 131,008 | 728.49 | 0.00 |
| May-61 | 90,025 | 708.68 | 0.00 | | May-66 | 125,691 | 726.17 | 0.00 |
| Jun-61 | 85,817 | 706.34 | 0.00 | | Jun-66 | 121,021 | 724.08 | 0.00 |
| Jul-61 | 81,230 | 703.71 | 0.00 | | Jul-66 | 115,099 | 721.36 | 0.00 |
| Aug-61 | 76,789 | 701.08 | 0.00 | | Aug-66 | 105,452 | 716.72 | 0.00 |
| Sep-61 | 73,331 | 698.95 | 0.00 | | Sep-66 | 99,253 | 713.59 | 0.00 |
| Oct-61 | 70,915 | 697.42 | 0.00 | | Oct-66 | 93,800 | 710.72 | 0.00 |
| Nov-61 | 69,404 | 696.46 | 0.00 | | Nov-66 | 89,873 | 708.59 | 0.00 |
| Dec-61 | 68,492 | 695.87 | 0.00 | | Dec-66 | 137,164 | 731.09 | 0.00 |
| Jan-62 | 67,390 | 695.15 | 0.00 | | Jan-67 | 168,455 | 743.25 | 0.00 |
| Feb-62 | 162,147 | 740.94 | 0.00 | | Feb-67 | 182,772 | 748.25 | 0.00 |
| Mar-62 | 176,603 | 746.14 | 0.00 | | Mar-67 | 193,585 | 751.80 | 1.80 |
| Apr-62 | 176,732 | 746.19 | 0.00 | | Apr-67 | 193,585 | 751.80 | 1.80 |
| May-62 | 172,795 | 744.81 | 0.00 | | May-67 | 193,585 | 751.80 | 1.80 |
| Jun-62 | 168,092 | 743.12 | 0.00 | | Jun-67 | 193,585 | 751.80 | 1.80 |
| Jul-62 | 161,645 | 740.75 | 0.00 | | Jul-67 | 189,831 | 750.59 | 0.59 |
| Aug-62 | 154,863 | 738.19 | 0.00 | | Aug-67 | 181,562 | 747.84 | 0.00 |
| Sep-62 | 149,433 | 736.08 | 0.00 | | Sep-67 | 175,477 | 745.75 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-67 | 172,738 | 744.79 | 0.00 | | Oct-72 | 103,031 | 715.51 | 0.00 |
| Nov-67 | 171,770 | 744.44 | 0.00 | | Nov-72 | 102,724 | 715.36 | 0.00 |
| Dec-67 | 170,618 | 744.03 | 0.00 | | Dec-72 | 101,617 | 714.80 | 0.00 |
| Jan-68 | 169,649 | 743.68 | 0.00 | | Jan-73 | 114,342 | 721.00 | 0.00 |
| Feb-68 | 169,661 | 743.69 | 0.00 | | Feb-73 | 182,566 | 748.18 | 0.00 |
| Mar-68 | 171,531 | 744.36 | 0.00 | | Mar-73 | 193,585 | 751.80 | 1.80 |
| Apr-68 | 168,359 | 743.22 | 0.00 | | Apr-73 | 193,585 | 751.80 | 1.80 |
| May-68 | 164,887 | 741.95 | 0.00 | | May-73 | 192,769 | 751.54 | 1.54 |
| Jun-68 | 157,151 | 739.06 | 0.00 | | Jun-73 | 188,462 | 750.14 | 0.14 |
| Jul-68 | 152,500 | 737.28 | 0.00 | | Jul-73 | 182,247 | 748.07 | 0.00 |
| Aug-68 | 146,641 | 734.97 | 0.00 | | Aug-73 | 176,464 | 746.09 | 0.00 |
| Sep-68 | 140,878 | 732.63 | 0.00 | | Sep-73 | 171,724 | 744.43 | 0.00 |
| Oct-68 | 137,150 | 731.09 | 0.00 | | Oct-73 | 167,970 | 743.08 | 0.00 |
| Nov-68 | 134,854 | 730.12 | 0.00 | | Nov-73 | 165,510 | 742.18 | 0.00 |
| Dec-68 | 133,622 | 729.60 | 0.00 | | Dec-73 | 164,810 | 741.92 | 0.00 |
| Jan-69 | 193,585 | 751.80 | 1.80 | | Jan-74 | 184,788 | 748.93 | 0.00 |
| Feb-69 | 193,585 | 751.80 | 1.80 | | Feb-74 | 186,257 | 749.41 | 0.00 |
| Mar-69 | 193,585 | 751.80 | 1.80 | | Mar-74 | 192,887 | 751.58 | 1.58 |
| Apr-69 | 193,585 | 751.80 | 1.80 | | Apr-74 | 192,369 | 751.41 | 1.41 |
| May-69 | 193,585 | 751.80 | 1.80 | | May-74 | 189,196 | 750.38 | 0.38 |
| Jun-69 | 193,069 | 751.63 | 1.63 | | Jun-74 | 184,073 | 748.69 | 0.00 |
| Jul-69 | 188,947 | 750.30 | 0.30 | | Jul-74 | 177,350 | 746.40 | 0.00 |
| Aug-69 | 184,040 | 748.68 | 0.00 | | Aug-74 | 171,520 | 744.35 | 0.00 |
| Sep-69 | 179,620 | 747.18 | 0.00 | | Sep-74 | 165,506 | 742.18 | 0.00 |
| Oct-69 | 175,823 | 745.87 | 0.00 | | Oct-74 | 161,666 | 740.76 | 0.00 |
| Nov-69 | 174,537 | 745.42 | 0.00 | | Nov-74 | 159,957 | 740.12 | 0.00 |
| Dec-69 | 173,105 | 744.92 | 0.00 | | Dec-74 | 161,574 | 740.72 | 0.00 |
| Jan-70 | 173,838 | 745.18 | 0.00 | | Jan-75 | 160,649 | 740.38 | 0.00 |
| Feb-70 | 176,676 | 746.17 | 0.00 | | Feb-75 | 168,157 | 743.14 | 0.00 |
| Mar-70 | 191,322 | 751.07 | 1.07 | | Mar-75 | 193,585 | 751.80 | 1.80 |
| Apr-70 | 187,634 | 749.87 | 0.00 | | Apr-75 | 193,585 | 751.80 | 1.80 |
| May-70 | 184,026 | 748.67 | 0.00 | | May-75 | 192,405 | 751.42 | 1.42 |
| Jun-70 | 180,152 | 747.36 | 0.00 | | Jun-75 | 188,063 | 750.01 | 0.01 |
| Jul-70 | 171,085 | 744.20 | 0.00 | | Jul-75 | 181,814 | 747.93 | 0.00 |
| Aug-70 | 163,180 | 741.32 | 0.00 | | Aug-75 | 176,167 | 745.99 | 0.00 |
| Sep-70 | 158,278 | 739.49 | 0.00 | | Sep-75 | 171,448 | 744.33 | 0.00 |
| Oct-70 | 154,150 | 737.92 | 0.00 | | Oct-75 | 167,844 | 743.03 | 0.00 |
| Nov-70 | 155,427 | 738.40 | 0.00 | | Nov-75 | 165,853 | 742.30 | 0.00 |
| Dec-70 | 166,666 | 742.60 | 0.00 | | Dec-75 | 164,043 | 741.64 | 0.00 |
| Jan-71 | 172,975 | 744.87 | 0.00 | | Jan-76 | 162,100 | 740.92 | 0.00 |
| Feb-71 | 174,273 | 745.33 | 0.00 | | Feb-76 | 164,677 | 741.87 | 0.00 |
| Mar-71 | 174,174 | 745.29 | 0.00 | | Mar-76 | 162,305 | 741.00 | 0.00 |
| Apr-71 | 171,661 | 744.40 | 0.00 | | Apr-76 | 160,200 | 740.21 | 0.00 |
| May-71 | 168,879 | 743.40 | 0.00 | | May-76 | 156,622 | 738.86 | 0.00 |
| Jun-71 | 161,680 | 740.76 | 0.00 | | Jun-76 | 148,875 | 735.86 | 0.00 |
| Jul-71 | 153,750 | 737.76 | 0.00 | | Jul-76 | 140,874 | 732.63 | 0.00 |
| Aug-71 | 145,823 | 734.64 | 0.00 | | Aug-76 | 133,225 | 729.43 | 0.00 |
| Sep-71 | 140,258 | 732.38 | 0.00 | | Sep-76 | 128,148 | 727.25 | 0.00 |
| Oct-71 | 136,367 | 730.76 | 0.00 | | Oct-76 | 124,657 | 725.71 | 0.00 |
| Nov-71 | 134,025 | 729.77 | 0.00 | | Nov-76 | 123,051 | 725.00 | 0.00 |
| Dec-71 | 142,334 | 733.23 | 0.00 | | Dec-76 | 121,761 | 724.42 | 0.00 |
| Jan-72 | 143,140 | 733.56 | 0.00 | | Jan-77 | 121,467 | 724.28 | 0.00 |
| Feb-72 | 142,494 | 733.29 | 0.00 | | Feb-77 | 120,054 | 723.64 | 0.00 |
| Mar-72 | 140,310 | 732.40 | 0.00 | | Mar-77 | 118,424 | 722.90 | 0.00 |
| Apr-72 | 137,405 | 731.19 | 0.00 | | Apr-77 | 115,751 | 721.66 | 0.00 |
| May-72 | 130,198 | 728.14 | 0.00 | | May-77 | 113,006 | 720.37 | 0.00 |
| Jun-72 | 123,633 | 725.26 | 0.00 | | Jun-77 | 109,067 | 718.49 | 0.00 |
| Jul-72 | 118,903 | 723.12 | 0.00 | | Jul-77 | 101,193 | 714.58 | 0.00 |
| Aug-72 | 112,564 | 720.16 | 0.00 | | Aug-77 | 96,482 | 712.15 | 0.00 |
| Sep-72 | 106,862 | 717.41 | 0.00 | | Sep-77 | 93,023 | 710.31 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-77 | 90,338 | 708.85 | 0.00 | | Oct-82 | 137,965 | 731.43 | 0.00 |
| Nov-77 | 88,405 | 707.78 | 0.00 | | Nov-82 | 137,783 | 731.35 | 0.00 |
| Dec-77 | 87,804 | 707.45 | 0.00 | | Dec-82 | 152,166 | 737.15 | 0.00 |
| Jan-78 | 106,400 | 717.19 | 0.00 | | Jan-83 | 193,585 | 751.80 | 1.80 |
| Feb-78 | 193,585 | 751.80 | 1.80 | | Feb-83 | 193,585 | 751.80 | 1.80 |
| Mar-78 | 193,585 | 751.80 | 1.80 | | Mar-83 | 193,585 | 751.80 | 1.80 |
| Apr-78 | 193,585 | 751.80 | 1.80 | | Apr-83 | 193,585 | 751.80 | 1.80 |
| May-78 | 193,585 | 751.80 | 1.80 | | May-83 | 193,585 | 751.80 | 1.80 |
| Jun-78 | 192,431 | 751.43 | 1.43 | | Jun-83 | 193,585 | 751.80 | 1.80 |
| Jul-78 | 187,704 | 749.89 | 0.00 | | Jul-83 | 192,061 | 751.31 | 1.31 |
| Aug-78 | 182,958 | 748.31 | 0.00 | | Aug-83 | 189,084 | 750.34 | 0.34 |
| Sep-78 | 179,090 | 747.00 | 0.00 | | Sep-83 | 185,795 | 749.26 | 0.00 |
| Oct-78 | 175,286 | 745.68 | 0.00 | | Oct-83 | 186,375 | 749.45 | 0.00 |
| Nov-78 | 173,811 | 745.17 | 0.00 | | Nov-83 | 189,595 | 750.51 | 0.51 |
| Dec-78 | 172,650 | 744.76 | 0.00 | | Dec-83 | 193,585 | 751.80 | 1.80 |
| Jan-79 | 179,235 | 747.05 | 0.00 | | Jan-84 | 193,585 | 751.80 | 1.80 |
| Feb-79 | 193,585 | 751.80 | 1.80 | | Feb-84 | 193,585 | 751.80 | 1.80 |
| Mar-79 | 193,585 | 751.80 | 1.80 | | Mar-84 | 192,719 | 751.52 | 1.52 |
| Apr-79 | 193,585 | 751.80 | 1.80 | | Apr-84 | 190,191 | 750.70 | 0.70 |
| May-79 | 192,931 | 751.59 | 1.59 | | May-84 | 184,871 | 748.95 | 0.00 |
| Jun-79 | 188,592 | 750.18 | 0.18 | | Jun-84 | 179,634 | 747.19 | 0.00 |
| Jul-79 | 182,634 | 748.20 | 0.00 | | Jul-84 | 173,091 | 744.91 | 0.00 |
| Aug-79 | 176,857 | 746.23 | 0.00 | | Aug-84 | 167,429 | 742.88 | 0.00 |
| Sep-79 | 171,866 | 744.48 | 0.00 | | Sep-84 | 161,825 | 740.82 | 0.00 |
| Oct-79 | 167,469 | 742.89 | 0.00 | | Oct-84 | 157,813 | 739.31 | 0.00 |
| Nov-79 | 165,325 | 742.11 | 0.00 | | Nov-84 | 156,106 | 738.66 | 0.00 |
| Dec-79 | 164,279 | 741.72 | 0.00 | | Dec-84 | 156,460 | 738.80 | 0.00 |
| Jan-80 | 166,737 | 742.63 | 0.00 | | Jan-85 | 155,815 | 738.55 | 0.00 |
| Feb-80 | 193,585 | 751.80 | 1.80 | | Feb-85 | 155,528 | 738.44 | 0.00 |
| Mar-80 | 193,585 | 751.80 | 1.80 | | Mar-85 | 154,362 | 738.00 | 0.00 |
| Apr-80 | 193,585 | 751.80 | 1.80 | | Apr-85 | 151,793 | 737.01 | 0.00 |
| May-80 | 193,585 | 751.80 | 1.80 | | May-85 | 147,878 | 735.46 | 0.00 |
| Jun-80 | 190,491 | 750.80 | 0.80 | | Jun-85 | 140,061 | 732.29 | 0.00 |
| Jul-80 | 185,328 | 749.11 | 0.00 | | Jul-85 | 132,162 | 728.98 | 0.00 |
| Aug-80 | 179,650 | 747.19 | 0.00 | | Aug-85 | 126,747 | 726.64 | 0.00 |
| Sep-80 | 174,855 | 745.53 | 0.00 | | Sep-85 | 121,070 | 724.10 | 0.00 |
| Oct-80 | 170,879 | 744.13 | 0.00 | | Oct-85 | 117,668 | 722.55 | 0.00 |
| Nov-80 | 168,626 | 743.31 | 0.00 | | Nov-85 | 117,050 | 722.26 | 0.00 |
| Dec-80 | 166,916 | 742.69 | 0.00 | | Dec-85 | 115,796 | 721.68 | 0.00 |
| Jan-81 | 166,971 | 742.71 | 0.00 | | Jan-86 | 115,388 | 721.49 | 0.00 |
| Feb-81 | 167,468 | 742.89 | 0.00 | | Feb-86 | 158,936 | 739.74 | 0.00 |
| Mar-81 | 185,396 | 749.13 | 0.00 | | Mar-86 | 192,313 | 751.39 | 1.39 |
| Apr-81 | 184,628 | 748.87 | 0.00 | | Apr-86 | 193,585 | 751.80 | 1.80 |
| May-81 | 181,476 | 747.81 | 0.00 | | May-86 | 190,701 | 750.87 | 0.87 |
| Jun-81 | 177,003 | 746.28 | 0.00 | | Jun-86 | 186,020 | 749.33 | 0.00 |
| Jul-81 | 171,555 | 744.37 | 0.00 | | Jul-86 | 179,511 | 747.14 | 0.00 |
| Aug-81 | 165,139 | 742.04 | 0.00 | | Aug-86 | 173,503 | 745.06 | 0.00 |
| Sep-81 | 159,237 | 739.85 | 0.00 | | Sep-86 | 168,113 | 743.13 | 0.00 |
| Oct-81 | 155,254 | 738.34 | 0.00 | | Oct-86 | 164,145 | 741.67 | 0.00 |
| Nov-81 | 153,162 | 737.53 | 0.00 | | Nov-86 | 162,411 | 741.03 | 0.00 |
| Dec-81 | 151,833 | 737.02 | 0.00 | | Dec-86 | 160,758 | 740.42 | 0.00 |
| Jan-82 | 151,138 | 736.75 | 0.00 | | Jan-87 | 159,365 | 739.90 | 0.00 |
| Feb-82 | 150,021 | 736.31 | 0.00 | | Feb-87 | 158,146 | 739.44 | 0.00 |
| Mar-82 | 152,206 | 737.16 | 0.00 | | Mar-87 | 157,402 | 739.16 | 0.00 |
| Apr-82 | 167,900 | 743.05 | 0.00 | | Apr-87 | 153,130 | 737.52 | 0.00 |
| May-82 | 166,287 | 742.46 | 0.00 | | May-87 | 149,120 | 735.96 | 0.00 |
| Jun-82 | 163,042 | 741.27 | 0.00 | | Jun-87 | 144,524 | 734.12 | 0.00 |
| Jul-82 | 154,305 | 737.98 | 0.00 | | Jul-87 | 139,232 | 731.95 | 0.00 |
| Aug-82 | 146,588 | 734.95 | 0.00 | | Aug-87 | 132,092 | 728.95 | 0.00 |
| Sep-82 | 140,237 | 732.37 | 0.00 | | Sep-87 | 127,452 | 726.95 | 0.00 |

**Table B-1**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5B**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-87 | 125,379 | 726.03 | 0.00 | | Oct-92 | 140,311 | 732.40 | 0.00 |
| Nov-87 | 123,734 | 725.30 | 0.00 | | Nov-92 | 137,785 | 731.35 | 0.00 |
| Dec-87 | 122,873 | 724.92 | 0.00 | | Dec-92 | 137,377 | 731.18 | 0.00 |
| Jan-88 | 122,508 | 724.75 | 0.00 | | Jan-93 | 193,585 | 751.80 | 1.80 |
| Feb-88 | 121,925 | 724.49 | 0.00 | | Feb-93 | 193,585 | 751.80 | 1.80 |
| Mar-88 | 124,564 | 725.67 | 0.00 | | Mar-93 | 193,585 | 751.80 | 1.80 |
| Apr-88 | 122,128 | 724.58 | 0.00 | | Apr-93 | 193,585 | 751.80 | 1.80 |
| May-88 | 118,763 | 723.05 | 0.00 | | May-93 | 193,585 | 751.80 | 1.80 |
| Jun-88 | 111,288 | 719.56 | 0.00 | | Jun-93 | 192,891 | 751.58 | 1.58 |
| Jul-88 | 104,220 | 716.11 | 0.00 | | Jul-93 | 188,635 | 750.20 | 0.20 |
| Aug-88 | 98,408 | 713.15 | 0.00 | | Aug-93 | 183,774 | 748.59 | 0.00 |
| Sep-88 | 93,157 | 710.38 | 0.00 | | Sep-93 | 179,262 | 747.06 | 0.00 |
| Oct-88 | 90,841 | 709.13 | 0.00 | | | | | |
| Nov-88 | 89,250 | 708.25 | 0.00 | | | | | |
| Dec-88 | 88,422 | 707.79 | 0.00 | | | | | |
| Jan-89 | 87,301 | 707.17 | 0.00 | | | | | |
| Feb-89 | 87,281 | 707.16 | 0.00 | | | | | |
| Mar-89 | 85,821 | 706.34 | 0.00 | | | | | |
| Apr-89 | 83,290 | 704.90 | 0.00 | | | | | |
| May-89 | 80,278 | 703.15 | 0.00 | | | | | |
| Jun-89 | 75,665 | 700.39 | 0.00 | | | | | |
| Jul-89 | 69,612 | 696.59 | 0.00 | | | | | |
| Aug-89 | 65,409 | 693.84 | 0.00 | | | | | |
| Sep-89 | 62,572 | 691.93 | 0.00 | | | | | |
| Oct-89 | 60,589 | 690.55 | 0.00 | | | | | |
| Nov-89 | 59,024 | 689.44 | 0.00 | | | | | |
| Dec-89 | 57,681 | 688.48 | 0.00 | | | | | |
| Jan-90 | 56,885 | 687.90 | 0.00 | | | | | |
| Feb-90 | 56,065 | 687.30 | 0.00 | | | | | |
| Mar-90 | 54,493 | 686.13 | 0.00 | | | | | |
| Apr-90 | 52,302 | 684.47 | 0.00 | | | | | |
| May-90 | 48,565 | 681.55 | 0.00 | | | | | |
| Jun-90 | 46,294 | 679.71 | 0.00 | | | | | |
| Jul-90 | 42,814 | 676.78 | 0.00 | | | | | |
| Aug-90 | 39,921 | 674.24 | 0.00 | | | | | |
| Sep-90 | 37,943 | 672.43 | 0.00 | | | | | |
| Oct-90 | 36,279 | 670.85 | 0.00 | | | | | |
| Nov-90 | 35,182 | 669.78 | 0.00 | | | | | |
| Dec-90 | 34,553 | 669.16 | 0.00 | | | | | |
| Jan-91 | 33,881 | 668.49 | 0.00 | | | | | |
| Feb-91 | 33,398 | 668.00 | 0.00 | | | | | |
| Mar-91 | 67,616 | 695.30 | 0.00 | | | | | |
| Apr-91 | 76,258 | 700.75 | 0.00 | | | | | |
| May-91 | 73,454 | 699.03 | 0.00 | | | | | |
| Jun-91 | 68,700 | 696.00 | 0.00 | | | | | |
| Jul-91 | 63,175 | 692.34 | 0.00 | | | | | |
| Aug-91 | 57,616 | 688.43 | 0.00 | | | | | |
| Sep-91 | 54,961 | 686.48 | 0.00 | | | | | |
| Oct-91 | 52,210 | 684.40 | 0.00 | | | | | |
| Nov-91 | 50,914 | 683.40 | 0.00 | | | | | |
| Dec-91 | 50,771 | 683.29 | 0.00 | | | | | |
| Jan-92 | 51,436 | 683.81 | 0.00 | | | | | |
| Feb-92 | 137,141 | 731.08 | 0.00 | | | | | |
| Mar-92 | 164,131 | 741.67 | 0.00 | | | | | |
| Apr-92 | 171,637 | 744.40 | 0.00 | | | | | |
| May-92 | 169,943 | 743.79 | 0.00 | | | | | |
| Jun-92 | 165,907 | 742.32 | 0.00 | | | | | |
| Jul-92 | 159,909 | 740.10 | 0.00 | | | | | |
| Aug-92 | 150,196 | 736.38 | 0.00 | | | | | |
| Sep-92 | 143,694 | 733.78 | 0.00 | | | | | |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-17 | 173,182 | 744.95 | 0.00 | | Oct-22 | 172,588 | 744.73 | 0.00 |
| Nov-17 | 171,008 | 744.17 | 0.00 | | Nov-22 | 171,265 | 744.26 | 0.00 |
| Dec-17 | 169,056 | 743.47 | 0.00 | | Dec-22 | 176,857 | 746.23 | 0.00 |
| Jan-18 | 167,446 | 742.89 | 0.00 | | Jan-23 | 178,169 | 746.68 | 0.00 |
| Feb-18 | 197,343 | 753.00 | 3.00 | | Feb-23 | 178,700 | 746.87 | 0.00 |
| Mar-18 | 197,343 | 753.00 | 3.00 | | Mar-23 | 176,562 | 746.13 | 0.00 |
| Apr-18 | 197,343 | 753.00 | 3.00 | | Apr-23 | 174,679 | 745.47 | 0.00 |
| May-18 | 197,343 | 753.00 | 3.00 | | May-23 | 171,247 | 744.26 | 0.00 |
| Jun-18 | 196,339 | 752.68 | 2.68 | | Jun-23 | 167,246 | 742.81 | 0.00 |
| Jul-18 | 190,796 | 750.90 | 0.90 | | Jul-23 | 162,120 | 740.93 | 0.00 |
| Aug-18 | 185,209 | 749.07 | 0.00 | | Aug-23 | 152,903 | 737.43 | 0.00 |
| Sep-18 | 181,147 | 747.70 | 0.00 | | Sep-23 | 146,496 | 734.91 | 0.00 |
| Oct-18 | 177,340 | 746.40 | 0.00 | | Oct-23 | 141,134 | 732.74 | 0.00 |
| Nov-18 | 176,616 | 746.15 | 0.00 | | Nov-23 | 139,066 | 731.88 | 0.00 |
| Dec-18 | 175,637 | 745.81 | 0.00 | | Dec-23 | 137,893 | 731.40 | 0.00 |
| Jan-19 | 174,659 | 745.46 | 0.00 | | Jan-24 | 136,574 | 730.85 | 0.00 |
| Feb-19 | 174,302 | 745.34 | 0.00 | | Feb-24 | 135,240 | 730.29 | 0.00 |
| Mar-19 | 172,311 | 744.63 | 0.00 | | Mar-24 | 135,996 | 730.60 | 0.00 |
| Apr-19 | 168,785 | 743.37 | 0.00 | | Apr-24 | 133,553 | 729.57 | 0.00 |
| May-19 | 165,085 | 742.02 | 0.00 | | May-24 | 129,784 | 727.96 | 0.00 |
| Jun-19 | 160,464 | 740.31 | 0.00 | | Jun-24 | 125,316 | 726.01 | 0.00 |
| Jul-19 | 151,190 | 736.77 | 0.00 | | Jul-24 | 120,069 | 723.65 | 0.00 |
| Aug-19 | 146,350 | 734.85 | 0.00 | | Aug-24 | 113,230 | 720.48 | 0.00 |
| Sep-19 | 140,328 | 732.40 | 0.00 | | Sep-24 | 107,732 | 717.84 | 0.00 |
| Oct-19 | 136,475 | 730.81 | 0.00 | | Oct-24 | 104,014 | 716.01 | 0.00 |
| Nov-19 | 134,421 | 729.94 | 0.00 | | Nov-24 | 101,975 | 714.98 | 0.00 |
| Dec-19 | 134,106 | 729.81 | 0.00 | | Dec-24 | 101,039 | 714.50 | 0.00 |
| Jan-20 | 132,586 | 729.16 | 0.00 | | Jan-25 | 99,783 | 713.86 | 0.00 |
| Feb-20 | 133,957 | 729.74 | 0.00 | | Feb-25 | 98,655 | 713.28 | 0.00 |
| Mar-20 | 142,985 | 733.49 | 0.00 | | Mar-25 | 98,108 | 713.00 | 0.00 |
| Apr-20 | 144,903 | 734.27 | 0.00 | | Apr-25 | 98,194 | 713.04 | 0.00 |
| May-20 | 142,067 | 733.12 | 0.00 | | May-25 | 95,405 | 711.58 | 0.00 |
| Jun-20 | 138,052 | 731.46 | 0.00 | | Jun-25 | 91,601 | 709.54 | 0.00 |
| Jul-20 | 128,999 | 727.62 | 0.00 | | Jul-25 | 85,602 | 706.22 | 0.00 |
| Aug-20 | 124,463 | 725.63 | 0.00 | | Aug-25 | 78,553 | 702.13 | 0.00 |
| Sep-20 | 118,023 | 722.71 | 0.00 | | Sep-25 | 74,831 | 699.88 | 0.00 |
| Oct-20 | 114,000 | 720.84 | 0.00 | | Oct-25 | 72,678 | 698.54 | 0.00 |
| Nov-20 | 111,722 | 719.76 | 0.00 | | Nov-25 | 71,139 | 697.57 | 0.00 |
| Dec-20 | 110,529 | 719.19 | 0.00 | | Dec-25 | 69,917 | 696.79 | 0.00 |
| Jan-21 | 111,388 | 719.60 | 0.00 | | Jan-26 | 68,930 | 696.15 | 0.00 |
| Feb-21 | 111,976 | 719.89 | 0.00 | | Feb-26 | 71,638 | 697.89 | 0.00 |
| Mar-21 | 113,930 | 720.81 | 0.00 | | Mar-26 | 72,220 | 698.25 | 0.00 |
| Apr-21 | 112,017 | 719.91 | 0.00 | | Apr-26 | 133,282 | 729.46 | 0.00 |
| May-21 | 109,448 | 718.67 | 0.00 | | May-26 | 134,229 | 729.86 | 0.00 |
| Jun-21 | 106,066 | 717.02 | 0.00 | | Jun-26 | 129,889 | 728.01 | 0.00 |
| Jul-21 | 101,295 | 714.63 | 0.00 | | Jul-26 | 123,760 | 725.31 | 0.00 |
| Aug-21 | 91,965 | 709.74 | 0.00 | | Aug-26 | 117,544 | 722.49 | 0.00 |
| Sep-21 | 86,713 | 706.84 | 0.00 | | Sep-26 | 111,709 | 719.76 | 0.00 |
| Oct-21 | 81,960 | 704.13 | 0.00 | | Oct-26 | 104,831 | 716.41 | 0.00 |
| Nov-21 | 79,709 | 702.82 | 0.00 | | Nov-26 | 107,079 | 717.52 | 0.00 |
| Dec-21 | 99,695 | 713.82 | 0.00 | | Dec-26 | 107,713 | 717.83 | 0.00 |
| Jan-22 | 116,225 | 721.88 | 0.00 | | Jan-27 | 109,275 | 718.59 | 0.00 |
| Feb-22 | 175,141 | 745.63 | 0.00 | | Feb-27 | 190,438 | 750.78 | 0.78 |
| Mar-22 | 197,343 | 753.00 | 3.00 | | Mar-27 | 197,343 | 753.00 | 3.00 |
| Apr-22 | 197,343 | 753.00 | 3.00 | | Apr-27 | 197,343 | 753.00 | 3.00 |
| May-22 | 197,343 | 753.00 | 3.00 | | May-27 | 194,748 | 752.17 | 2.17 |
| Jun-22 | 193,048 | 751.63 | 1.63 | | Jun-27 | 190,008 | 750.64 | 0.64 |
| Jul-22 | 186,805 | 749.59 | 0.00 | | Jul-27 | 183,701 | 748.56 | 0.00 |
| Aug-22 | 181,103 | 747.69 | 0.00 | | Aug-27 | 177,968 | 746.61 | 0.00 |
| Sep-22 | 176,311 | 746.04 | 0.00 | | Sep-27 | 173,151 | 744.93 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-27 | 170,173 | 743.87 | 0.00 | | Oct-32 | 115,255 | 721.43 | 0.00 |
| Nov-27 | 168,419 | 743.24 | 0.00 | | Nov-32 | 113,607 | 720.66 | 0.00 |
| Dec-27 | 167,686 | 742.97 | 0.00 | | Dec-32 | 112,064 | 719.93 | 0.00 |
| Jan-28 | 166,218 | 742.44 | 0.00 | | Jan-33 | 120,178 | 723.70 | 0.00 |
| Feb-28 | 172,960 | 744.87 | 0.00 | | Feb-33 | 122,172 | 724.60 | 0.00 |
| Mar-28 | 174,400 | 745.37 | 0.00 | | Mar-33 | 121,129 | 724.13 | 0.00 |
| Apr-28 | 171,161 | 744.23 | 0.00 | | Apr-33 | 118,658 | 723.00 | 0.00 |
| May-28 | 167,437 | 742.88 | 0.00 | | May-33 | 114,954 | 721.29 | 0.00 |
| Jun-28 | 163,300 | 741.36 | 0.00 | | Jun-33 | 107,309 | 717.63 | 0.00 |
| Jul-28 | 154,244 | 737.95 | 0.00 | | Jul-33 | 99,473 | 713.70 | 0.00 |
| Aug-28 | 146,469 | 734.90 | 0.00 | | Aug-33 | 91,962 | 709.73 | 0.00 |
| Sep-28 | 139,912 | 732.23 | 0.00 | | Sep-33 | 86,526 | 706.74 | 0.00 |
| Oct-28 | 134,518 | 729.98 | 0.00 | | Oct-33 | 84,164 | 705.40 | 0.00 |
| Nov-28 | 133,411 | 729.51 | 0.00 | | Nov-33 | 82,370 | 704.37 | 0.00 |
| Dec-28 | 132,794 | 729.25 | 0.00 | | Dec-33 | 81,832 | 704.06 | 0.00 |
| Jan-29 | 131,770 | 728.81 | 0.00 | | Jan-34 | 94,065 | 710.87 | 0.00 |
| Feb-29 | 132,062 | 728.94 | 0.00 | | Feb-34 | 98,121 | 713.00 | 0.00 |
| Mar-29 | 132,258 | 729.02 | 0.00 | | Mar-34 | 97,788 | 712.83 | 0.00 |
| Apr-29 | 131,083 | 728.52 | 0.00 | | Apr-34 | 95,069 | 711.40 | 0.00 |
| May-29 | 127,700 | 727.05 | 0.00 | | May-34 | 91,419 | 709.44 | 0.00 |
| Jun-29 | 119,715 | 723.49 | 0.00 | | Jun-34 | 83,672 | 705.12 | 0.00 |
| Jul-29 | 112,082 | 719.94 | 0.00 | | Jul-34 | 76,246 | 700.75 | 0.00 |
| Aug-29 | 106,055 | 717.02 | 0.00 | | Aug-34 | 69,611 | 696.59 | 0.00 |
| Sep-29 | 100,262 | 714.11 | 0.00 | | Sep-34 | 63,988 | 692.89 | 0.00 |
| Oct-29 | 96,228 | 712.01 | 0.00 | | Oct-34 | 62,027 | 691.55 | 0.00 |
| Nov-29 | 94,145 | 710.91 | 0.00 | | Nov-34 | 60,629 | 690.58 | 0.00 |
| Dec-29 | 92,743 | 710.16 | 0.00 | | Dec-34 | 59,618 | 689.87 | 0.00 |
| Jan-30 | 92,132 | 709.83 | 0.00 | | Jan-35 | 72,067 | 698.16 | 0.00 |
| Feb-30 | 90,694 | 709.05 | 0.00 | | Feb-35 | 74,325 | 699.57 | 0.00 |
| Mar-30 | 94,321 | 711.00 | 0.00 | | Mar-35 | 82,641 | 704.52 | 0.00 |
| Apr-30 | 92,177 | 709.85 | 0.00 | | Apr-35 | 97,822 | 712.85 | 0.00 |
| May-30 | 89,021 | 708.13 | 0.00 | | May-35 | 97,119 | 712.48 | 0.00 |
| Jun-30 | 85,125 | 705.95 | 0.00 | | Jun-35 | 92,898 | 710.24 | 0.00 |
| Jul-30 | 79,152 | 702.49 | 0.00 | | Jul-35 | 87,047 | 707.03 | 0.00 |
| Aug-30 | 73,181 | 698.86 | 0.00 | | Aug-35 | 77,636 | 701.58 | 0.00 |
| Sep-30 | 70,120 | 696.92 | 0.00 | | Sep-35 | 71,827 | 698.01 | 0.00 |
| Oct-30 | 67,694 | 695.35 | 0.00 | | Oct-35 | 68,393 | 695.80 | 0.00 |
| Nov-30 | 66,251 | 694.40 | 0.00 | | Nov-35 | 66,103 | 694.30 | 0.00 |
| Dec-30 | 64,999 | 693.57 | 0.00 | | Dec-35 | 64,993 | 693.56 | 0.00 |
| Jan-31 | 64,363 | 693.14 | 0.00 | | Jan-36 | 63,572 | 692.61 | 0.00 |
| Feb-31 | 63,509 | 692.56 | 0.00 | | Feb-36 | 86,903 | 706.95 | 0.00 |
| Mar-31 | 61,725 | 691.34 | 0.00 | | Mar-36 | 90,673 | 709.03 | 0.00 |
| Apr-31 | 59,628 | 689.87 | 0.00 | | Apr-36 | 92,454 | 710.00 | 0.00 |
| May-31 | 55,857 | 687.14 | 0.00 | | May-36 | 89,488 | 708.38 | 0.00 |
| Jun-31 | 52,718 | 684.79 | 0.00 | | Jun-36 | 85,662 | 706.25 | 0.00 |
| Jul-31 | 49,331 | 682.16 | 0.00 | | Jul-36 | 80,983 | 703.56 | 0.00 |
| Aug-31 | 45,979 | 679.45 | 0.00 | | Aug-36 | 74,106 | 699.43 | 0.00 |
| Sep-31 | 43,359 | 677.25 | 0.00 | | Sep-36 | 70,606 | 697.23 | 0.00 |
| Oct-31 | 41,400 | 675.55 | 0.00 | | Oct-36 | 68,510 | 695.88 | 0.00 |
| Nov-31 | 40,487 | 674.75 | 0.00 | | Nov-36 | 66,981 | 694.88 | 0.00 |
| Dec-31 | 47,940 | 681.05 | 0.00 | | Dec-36 | 70,152 | 696.94 | 0.00 |
| Jan-32 | 53,659 | 685.50 | 0.00 | | Jan-37 | 75,835 | 700.50 | 0.00 |
| Feb-32 | 141,394 | 732.84 | 0.00 | | Feb-37 | 143,608 | 733.75 | 0.00 |
| Mar-32 | 150,088 | 736.34 | 0.00 | | Mar-37 | 197,343 | 753.00 | 3.00 |
| Apr-32 | 147,178 | 735.18 | 0.00 | | Apr-37 | 197,343 | 753.00 | 3.00 |
| May-32 | 142,383 | 733.25 | 0.00 | | May-37 | 197,343 | 753.00 | 3.00 |
| Jun-32 | 137,331 | 731.16 | 0.00 | | Jun-37 | 193,842 | 751.88 | 1.88 |
| Jul-32 | 130,976 | 728.47 | 0.00 | | Jul-37 | 187,706 | 749.89 | 0.00 |
| Aug-32 | 124,509 | 725.65 | 0.00 | | Aug-37 | 181,938 | 747.97 | 0.00 |
| Sep-32 | 118,446 | 722.91 | 0.00 | | Sep-37 | 177,072 | 746.30 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-37 | 173,253 | 744.97 | 0.00 | | Oct-42 | 174,523 | 745.42 | 0.00 |
| Nov-37 | 170,345 | 743.93 | 0.00 | | Nov-42 | 172,535 | 744.71 | 0.00 |
| Dec-37 | 170,114 | 743.85 | 0.00 | | Dec-42 | 171,034 | 744.18 | 0.00 |
| Jan-38 | 168,980 | 743.44 | 0.00 | | Jan-43 | 197,343 | 753.00 | 3.00 |
| Feb-38 | 197,343 | 753.00 | 3.00 | | Feb-43 | 197,343 | 753.00 | 3.00 |
| Mar-38 | 197,343 | 753.00 | 3.00 | | Mar-43 | 197,343 | 753.00 | 3.00 |
| Apr-38 | 197,343 | 753.00 | 3.00 | | Apr-43 | 197,343 | 753.00 | 3.00 |
| May-38 | 197,343 | 753.00 | 3.00 | | May-43 | 197,031 | 752.90 | 2.90 |
| Jun-38 | 194,915 | 752.23 | 2.23 | | Jun-43 | 192,964 | 751.60 | 1.60 |
| Jul-38 | 189,636 | 750.52 | 0.52 | | Jul-43 | 187,042 | 749.67 | 0.00 |
| Aug-38 | 184,018 | 748.67 | 0.00 | | Aug-43 | 181,510 | 747.82 | 0.00 |
| Sep-38 | 179,440 | 747.12 | 0.00 | | Sep-43 | 176,926 | 746.25 | 0.00 |
| Oct-38 | 175,721 | 745.84 | 0.00 | | Oct-43 | 173,425 | 745.03 | 0.00 |
| Nov-38 | 173,777 | 745.15 | 0.00 | | Nov-43 | 171,527 | 744.36 | 0.00 |
| Dec-38 | 173,950 | 745.21 | 0.00 | | Dec-43 | 171,371 | 744.30 | 0.00 |
| Jan-39 | 176,580 | 746.13 | 0.00 | | Jan-44 | 171,296 | 744.27 | 0.00 |
| Feb-39 | 178,851 | 746.92 | 0.00 | | Feb-44 | 197,343 | 753.00 | 3.00 |
| Mar-39 | 185,986 | 749.32 | 0.00 | | Mar-44 | 197,343 | 753.00 | 3.00 |
| Apr-39 | 183,991 | 748.66 | 0.00 | | Apr-44 | 197,343 | 753.00 | 3.00 |
| May-39 | 180,535 | 747.49 | 0.00 | | May-44 | 196,280 | 752.66 | 2.66 |
| Jun-39 | 176,031 | 745.94 | 0.00 | | Jun-44 | 192,204 | 751.36 | 1.36 |
| Jul-39 | 166,956 | 742.71 | 0.00 | | Jul-44 | 186,116 | 749.37 | 0.00 |
| Aug-39 | 159,087 | 739.79 | 0.00 | | Aug-44 | 180,447 | 747.46 | 0.00 |
| Sep-39 | 152,574 | 737.31 | 0.00 | | Sep-44 | 175,706 | 745.83 | 0.00 |
| Oct-39 | 149,972 | 736.29 | 0.00 | | Oct-44 | 171,944 | 744.50 | 0.00 |
| Nov-39 | 147,929 | 735.48 | 0.00 | | Nov-44 | 171,973 | 744.51 | 0.00 |
| Dec-39 | 146,499 | 734.91 | 0.00 | | Dec-44 | 171,005 | 744.17 | 0.00 |
| Jan-40 | 147,197 | 735.19 | 0.00 | | Jan-45 | 170,040 | 743.82 | 0.00 |
| Feb-40 | 152,413 | 737.24 | 0.00 | | Feb-45 | 190,872 | 750.92 | 0.92 |
| Mar-40 | 154,722 | 738.14 | 0.00 | | Mar-45 | 197,343 | 753.00 | 3.00 |
| Apr-40 | 153,971 | 737.85 | 0.00 | | Apr-45 | 197,343 | 753.00 | 3.00 |
| May-40 | 150,392 | 736.46 | 0.00 | | May-45 | 194,424 | 752.07 | 2.07 |
| Jun-40 | 146,408 | 734.88 | 0.00 | | Jun-45 | 189,299 | 750.41 | 0.41 |
| Jul-40 | 137,244 | 731.13 | 0.00 | | Jul-45 | 182,750 | 748.24 | 0.00 |
| Aug-40 | 129,692 | 727.92 | 0.00 | | Aug-45 | 176,777 | 746.20 | 0.00 |
| Sep-40 | 124,207 | 725.51 | 0.00 | | Sep-45 | 170,943 | 744.15 | 0.00 |
| Oct-40 | 120,355 | 723.78 | 0.00 | | Oct-45 | 167,260 | 742.82 | 0.00 |
| Nov-40 | 118,815 | 723.08 | 0.00 | | Nov-45 | 164,965 | 741.98 | 0.00 |
| Dec-40 | 123,204 | 725.07 | 0.00 | | Dec-45 | 172,809 | 744.81 | 0.00 |
| Jan-41 | 150,825 | 736.63 | 0.00 | | Jan-46 | 172,545 | 744.72 | 0.00 |
| Feb-41 | 197,343 | 753.00 | 3.00 | | Feb-46 | 173,599 | 745.09 | 0.00 |
| Mar-41 | 197,343 | 753.00 | 3.00 | | Mar-46 | 190,353 | 750.76 | 0.76 |
| Apr-41 | 197,343 | 753.00 | 3.00 | | Apr-46 | 197,141 | 752.94 | 2.94 |
| May-41 | 197,343 | 753.00 | 3.00 | | May-46 | 193,892 | 751.90 | 1.90 |
| Jun-41 | 197,343 | 753.00 | 3.00 | | Jun-46 | 188,192 | 750.05 | 0.05 |
| Jul-41 | 194,822 | 752.20 | 2.20 | | Jul-46 | 178,146 | 746.68 | 0.00 |
| Aug-41 | 190,733 | 750.88 | 0.88 | | Aug-46 | 170,178 | 743.87 | 0.00 |
| Sep-41 | 187,158 | 749.71 | 0.00 | | Sep-46 | 163,490 | 741.43 | 0.00 |
| Oct-41 | 184,458 | 748.82 | 0.00 | | Oct-46 | 157,978 | 739.37 | 0.00 |
| Nov-41 | 183,289 | 748.42 | 0.00 | | Nov-46 | 159,544 | 739.96 | 0.00 |
| Dec-41 | 189,248 | 750.40 | 0.40 | | Dec-46 | 164,771 | 741.91 | 0.00 |
| Jan-42 | 193,615 | 751.81 | 1.81 | | Jan-47 | 165,864 | 742.31 | 0.00 |
| Feb-42 | 195,099 | 752.28 | 2.28 | | Feb-47 | 165,480 | 742.17 | 0.00 |
| Mar-42 | 197,336 | 753.00 | 3.00 | | Mar-47 | 164,870 | 741.94 | 0.00 |
| Apr-42 | 197,343 | 753.00 | 3.00 | | Apr-47 | 162,022 | 740.89 | 0.00 |
| May-42 | 196,081 | 752.60 | 2.60 | | May-47 | 154,641 | 738.10 | 0.00 |
| Jun-42 | 192,451 | 751.43 | 1.43 | | Jun-47 | 147,876 | 735.46 | 0.00 |
| Jul-42 | 187,108 | 749.69 | 0.00 | | Jul-47 | 139,798 | 732.19 | 0.00 |
| Aug-42 | 182,060 | 748.01 | 0.00 | | Aug-47 | 132,058 | 728.94 | 0.00 |
| Sep-42 | 177,005 | 746.28 | 0.00 | | Sep-47 | 125,528 | 726.10 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-47 | 120,126 | 723.67 | 0.00 | | Oct-52 | 173,561 | 745.08 | 0.00 |
| Nov-47 | 117,067 | 722.27 | 0.00 | | Nov-52 | 173,093 | 744.91 | 0.00 |
| Dec-47 | 116,063 | 721.81 | 0.00 | | Dec-52 | 175,342 | 745.70 | 0.00 |
| Jan-48 | 114,849 | 721.24 | 0.00 | | Jan-53 | 180,865 | 747.61 | 0.00 |
| Feb-48 | 113,995 | 720.84 | 0.00 | | Feb-53 | 179,757 | 747.23 | 0.00 |
| Mar-48 | 112,889 | 720.32 | 0.00 | | Mar-53 | 178,582 | 746.83 | 0.00 |
| Apr-48 | 110,765 | 719.31 | 0.00 | | Apr-53 | 176,253 | 746.02 | 0.00 |
| May-48 | 107,405 | 717.68 | 0.00 | | May-53 | 172,475 | 744.69 | 0.00 |
| Jun-48 | 102,415 | 715.20 | 0.00 | | Jun-53 | 168,136 | 743.14 | 0.00 |
| Jul-48 | 96,422 | 712.12 | 0.00 | | Jul-53 | 158,913 | 739.73 | 0.00 |
| Aug-48 | 91,989 | 709.75 | 0.00 | | Aug-53 | 151,112 | 736.74 | 0.00 |
| Sep-48 | 88,438 | 707.80 | 0.00 | | Sep-53 | 145,218 | 734.40 | 0.00 |
| Oct-48 | 85,823 | 706.34 | 0.00 | | Oct-53 | 140,460 | 732.46 | 0.00 |
| Nov-48 | 84,002 | 705.31 | 0.00 | | Nov-53 | 139,342 | 732.00 | 0.00 |
| Dec-48 | 83,240 | 704.87 | 0.00 | | Dec-53 | 137,745 | 731.34 | 0.00 |
| Jan-49 | 82,241 | 704.29 | 0.00 | | Jan-54 | 140,028 | 732.28 | 0.00 |
| Feb-49 | 81,129 | 703.65 | 0.00 | | Feb-54 | 142,272 | 733.20 | 0.00 |
| Mar-49 | 79,991 | 702.98 | 0.00 | | Mar-54 | 147,429 | 735.28 | 0.00 |
| Apr-49 | 76,077 | 700.64 | 0.00 | | Apr-54 | 149,077 | 735.94 | 0.00 |
| May-49 | 71,585 | 697.85 | 0.00 | | May-54 | 145,800 | 734.63 | 0.00 |
| Jun-49 | 67,991 | 695.54 | 0.00 | | Jun-54 | 141,449 | 732.87 | 0.00 |
| Jul-49 | 64,092 | 692.96 | 0.00 | | Jul-54 | 132,061 | 728.94 | 0.00 |
| Aug-49 | 60,213 | 690.29 | 0.00 | | Aug-54 | 124,587 | 725.68 | 0.00 |
| Sep-49 | 57,228 | 688.15 | 0.00 | | Sep-54 | 118,078 | 722.74 | 0.00 |
| Oct-49 | 55,002 | 686.51 | 0.00 | | Oct-54 | 113,609 | 720.66 | 0.00 |
| Nov-49 | 53,651 | 685.50 | 0.00 | | Nov-54 | 111,522 | 719.67 | 0.00 |
| Dec-49 | 52,645 | 684.73 | 0.00 | | Dec-54 | 110,759 | 719.30 | 0.00 |
| Jan-50 | 51,739 | 684.04 | 0.00 | | Jan-55 | 110,681 | 719.27 | 0.00 |
| Feb-50 | 52,683 | 684.76 | 0.00 | | Feb-55 | 110,235 | 719.05 | 0.00 |
| Mar-50 | 49,574 | 682.35 | 0.00 | | Mar-55 | 108,850 | 718.38 | 0.00 |
| Apr-50 | 47,994 | 681.09 | 0.00 | | Apr-55 | 106,839 | 717.40 | 0.00 |
| May-50 | 42,537 | 676.54 | 0.00 | | May-55 | 104,800 | 716.40 | 0.00 |
| Jun-50 | 39,816 | 674.15 | 0.00 | | Jun-55 | 101,321 | 714.65 | 0.00 |
| Jul-50 | 36,846 | 671.39 | 0.00 | | Jul-55 | 94,363 | 711.03 | 0.00 |
| Aug-50 | 33,853 | 668.46 | 0.00 | | Aug-55 | 86,942 | 706.97 | 0.00 |
| Sep-50 | 31,555 | 666.08 | 0.00 | | Sep-55 | 83,243 | 704.87 | 0.00 |
| Oct-50 | 29,895 | 664.30 | 0.00 | | Oct-55 | 80,650 | 703.37 | 0.00 |
| Nov-50 | 29,025 | 663.34 | 0.00 | | Nov-55 | 79,314 | 702.58 | 0.00 |
| Dec-50 | 28,296 | 662.53 | 0.00 | | Dec-55 | 83,518 | 705.03 | 0.00 |
| Jan-51 | 27,699 | 661.85 | 0.00 | | Jan-56 | 93,609 | 710.62 | 0.00 |
| Feb-51 | 27,035 | 661.09 | 0.00 | | Feb-56 | 95,756 | 711.76 | 0.00 |
| Mar-51 | 25,981 | 659.85 | 0.00 | | Mar-56 | 95,056 | 711.39 | 0.00 |
| Apr-51 | 24,549 | 658.13 | 0.00 | | Apr-56 | 96,031 | 711.91 | 0.00 |
| May-51 | 22,126 | 655.13 | 0.00 | | May-56 | 95,440 | 711.60 | 0.00 |
| Jun-51 | 20,194 | 652.64 | 0.00 | | Jun-56 | 92,653 | 710.11 | 0.00 |
| Jul-51 | 17,919 | 649.59 | 0.00 | | Jul-56 | 88,351 | 707.75 | 0.00 |
| Aug-51 | 15,797 | 646.54 | 0.00 | | Aug-56 | 82,035 | 704.17 | 0.00 |
| Sep-51 | 14,015 | 643.74 | 0.00 | | Sep-56 | 77,917 | 701.75 | 0.00 |
| Oct-51 | 12,955 | 641.96 | 0.00 | | Oct-56 | 75,652 | 700.39 | 0.00 |
| Nov-51 | 12,331 | 640.85 | 0.00 | | Nov-56 | 74,212 | 699.50 | 0.00 |
| Dec-51 | 12,030 | 640.30 | 0.00 | | Dec-56 | 72,721 | 698.57 | 0.00 |
| Jan-52 | 112,079 | 719.93 | 0.00 | | Jan-57 | 72,537 | 698.45 | 0.00 |
| Feb-52 | 119,648 | 723.46 | 0.00 | | Feb-57 | 72,498 | 698.43 | 0.00 |
| Mar-52 | 190,708 | 750.87 | 0.87 | | Mar-57 | 72,244 | 698.27 | 0.00 |
| Apr-52 | 197,343 | 753.00 | 3.00 | | Apr-57 | 70,954 | 697.45 | 0.00 |
| May-52 | 197,343 | 753.00 | 3.00 | | May-57 | 69,063 | 696.24 | 0.00 |
| Jun-52 | 194,051 | 751.95 | 1.95 | | Jun-57 | 62,111 | 691.61 | 0.00 |
| Jul-52 | 188,561 | 750.17 | 0.17 | | Jul-57 | 57,779 | 688.55 | 0.00 |
| Aug-52 | 182,502 | 748.16 | 0.00 | | Aug-57 | 51,563 | 683.91 | 0.00 |
| Sep-52 | 176,927 | 746.25 | 0.00 | | Sep-57 | 48,373 | 681.40 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-57 | 46,681 | 680.03 | 0.00 | | Oct-62 | 149,223 | 736.00 | 0.00 |
| Nov-57 | 45,293 | 678.88 | 0.00 | | Nov-62 | 147,039 | 735.13 | 0.00 |
| Dec-57 | 45,980 | 679.45 | 0.00 | | Dec-62 | 145,712 | 734.60 | 0.00 |
| Jan-58 | 46,169 | 679.61 | 0.00 | | Jan-63 | 144,572 | 734.14 | 0.00 |
| Feb-58 | 78,433 | 702.06 | 0.00 | | Feb-63 | 144,681 | 734.18 | 0.00 |
| Mar-58 | 123,667 | 725.27 | 0.00 | | Mar-63 | 143,865 | 733.85 | 0.00 |
| Apr-58 | 197,343 | 753.00 | 3.00 | | Apr-63 | 142,106 | 733.13 | 0.00 |
| May-58 | 197,343 | 753.00 | 3.00 | | May-63 | 139,275 | 731.97 | 0.00 |
| Jun-58 | 195,479 | 752.41 | 2.41 | | Jun-63 | 135,242 | 730.29 | 0.00 |
| Jul-58 | 190,391 | 750.77 | 0.77 | | Jul-63 | 129,949 | 728.03 | 0.00 |
| Aug-58 | 185,004 | 749.00 | 0.00 | | Aug-63 | 122,646 | 724.81 | 0.00 |
| Sep-58 | 180,361 | 747.43 | 0.00 | | Sep-63 | 119,452 | 723.37 | 0.00 |
| Oct-58 | 176,434 | 746.08 | 0.00 | | Oct-63 | 117,006 | 722.24 | 0.00 |
| Nov-58 | 174,149 | 745.28 | 0.00 | | Nov-63 | 115,755 | 721.66 | 0.00 |
| Dec-58 | 172,011 | 744.53 | 0.00 | | Dec-63 | 114,373 | 721.02 | 0.00 |
| Jan-59 | 172,277 | 744.62 | 0.00 | | Jan-64 | 113,562 | 720.64 | 0.00 |
| Feb-59 | 184,488 | 748.83 | 0.00 | | Feb-64 | 112,088 | 719.94 | 0.00 |
| Mar-59 | 182,931 | 748.30 | 0.00 | | Mar-64 | 110,384 | 719.13 | 0.00 |
| Apr-59 | 180,793 | 747.58 | 0.00 | | Apr-64 | 108,174 | 718.06 | 0.00 |
| May-59 | 176,894 | 746.24 | 0.00 | | May-64 | 102,876 | 715.43 | 0.00 |
| Jun-59 | 172,767 | 744.80 | 0.00 | | Jun-64 | 98,562 | 713.23 | 0.00 |
| Jul-59 | 163,347 | 741.38 | 0.00 | | Jul-64 | 93,789 | 710.72 | 0.00 |
| Aug-59 | 155,544 | 738.45 | 0.00 | | Aug-64 | 89,125 | 708.18 | 0.00 |
| Sep-59 | 149,836 | 736.24 | 0.00 | | Sep-64 | 85,555 | 706.19 | 0.00 |
| Oct-59 | 145,333 | 734.44 | 0.00 | | Oct-64 | 83,053 | 704.76 | 0.00 |
| Nov-59 | 142,483 | 733.29 | 0.00 | | Nov-64 | 81,660 | 703.96 | 0.00 |
| Dec-59 | 141,568 | 732.91 | 0.00 | | Dec-64 | 80,680 | 703.38 | 0.00 |
| Jan-60 | 141,202 | 732.76 | 0.00 | | Jan-65 | 79,909 | 702.93 | 0.00 |
| Feb-60 | 140,372 | 732.42 | 0.00 | | Feb-65 | 78,854 | 702.31 | 0.00 |
| Mar-60 | 136,860 | 730.97 | 0.00 | | Mar-65 | 77,413 | 701.45 | 0.00 |
| Apr-60 | 134,409 | 729.94 | 0.00 | | Apr-65 | 86,593 | 706.77 | 0.00 |
| May-60 | 130,685 | 728.35 | 0.00 | | May-65 | 84,387 | 705.52 | 0.00 |
| Jun-60 | 126,281 | 726.43 | 0.00 | | Jun-65 | 77,674 | 701.61 | 0.00 |
| Jul-60 | 120,926 | 724.04 | 0.00 | | Jul-65 | 71,000 | 697.48 | 0.00 |
| Aug-60 | 113,196 | 720.46 | 0.00 | | Aug-65 | 66,213 | 694.37 | 0.00 |
| Sep-60 | 109,680 | 718.79 | 0.00 | | Sep-65 | 62,940 | 692.18 | 0.00 |
| Oct-60 | 106,989 | 717.48 | 0.00 | | Oct-65 | 60,905 | 690.77 | 0.00 |
| Nov-60 | 106,138 | 717.06 | 0.00 | | Nov-65 | 82,361 | 704.36 | 0.00 |
| Dec-60 | 104,980 | 716.49 | 0.00 | | Dec-65 | 111,644 | 719.73 | 0.00 |
| Jan-61 | 104,206 | 716.10 | 0.00 | | Jan-66 | 129,048 | 727.64 | 0.00 |
| Feb-61 | 102,865 | 715.43 | 0.00 | | Feb-66 | 136,221 | 730.70 | 0.00 |
| Mar-61 | 100,953 | 714.46 | 0.00 | | Mar-66 | 136,988 | 731.02 | 0.00 |
| Apr-61 | 98,257 | 713.07 | 0.00 | | Apr-66 | 132,700 | 729.21 | 0.00 |
| May-61 | 93,054 | 710.32 | 0.00 | | May-66 | 127,373 | 726.91 | 0.00 |
| Jun-61 | 88,754 | 707.98 | 0.00 | | Jun-66 | 122,691 | 724.83 | 0.00 |
| Jul-61 | 84,059 | 705.34 | 0.00 | | Jul-66 | 116,756 | 722.13 | 0.00 |
| Aug-61 | 79,516 | 702.70 | 0.00 | | Aug-66 | 107,097 | 717.53 | 0.00 |
| Sep-61 | 75,977 | 700.58 | 0.00 | | Sep-66 | 100,890 | 714.43 | 0.00 |
| Oct-61 | 73,501 | 699.06 | 0.00 | | Oct-66 | 95,429 | 711.59 | 0.00 |
| Nov-61 | 71,963 | 698.09 | 0.00 | | Nov-66 | 91,504 | 709.49 | 0.00 |
| Dec-61 | 71,026 | 697.50 | 0.00 | | Dec-66 | 138,799 | 731.77 | 0.00 |
| Jan-62 | 69,896 | 696.77 | 0.00 | | Jan-67 | 170,096 | 743.84 | 0.00 |
| Feb-62 | 164,659 | 741.86 | 0.00 | | Feb-67 | 184,409 | 748.80 | 0.00 |
| Mar-62 | 179,112 | 747.01 | 0.00 | | Mar-67 | 197,343 | 753.00 | 3.00 |
| Apr-62 | 179,227 | 747.05 | 0.00 | | Apr-67 | 197,343 | 753.00 | 3.00 |
| May-62 | 175,271 | 745.68 | 0.00 | | May-67 | 197,343 | 753.00 | 3.00 |
| Jun-62 | 170,549 | 744.01 | 0.00 | | Jun-67 | 197,343 | 753.00 | 3.00 |
| Jul-62 | 164,086 | 741.65 | 0.00 | | Jul-67 | 193,541 | 751.79 | 1.79 |
| Aug-62 | 157,309 | 739.12 | 0.00 | | Aug-67 | 185,239 | 749.08 | 0.00 |
| Sep-62 | 151,830 | 737.02 | 0.00 | | Sep-67 | 179,121 | 747.01 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-67 | 176,360 | 746.06 | 0.00 | | Oct-72 | 106,215 | 717.10 | 0.00 |
| Nov-67 | 175,396 | 745.72 | 0.00 | | Nov-72 | 105,918 | 716.95 | 0.00 |
| Dec-67 | 174,243 | 745.32 | 0.00 | | Dec-72 | 104,810 | 716.40 | 0.00 |
| Jan-68 | 173,271 | 744.98 | 0.00 | | Jan-73 | 117,552 | 722.49 | 0.00 |
| Feb-68 | 173,279 | 744.98 | 0.00 | | Feb-73 | 185,809 | 749.26 | 0.00 |
| Mar-68 | 175,142 | 745.63 | 0.00 | | Mar-73 | 197,343 | 753.00 | 3.00 |
| Apr-68 | 171,951 | 744.51 | 0.00 | | Apr-73 | 197,343 | 753.00 | 3.00 |
| May-68 | 168,453 | 743.25 | 0.00 | | May-73 | 196,507 | 752.73 | 2.73 |
| Jun-68 | 160,691 | 740.39 | 0.00 | | Jun-73 | 192,173 | 751.34 | 1.34 |
| Jul-68 | 156,012 | 738.63 | 0.00 | | Jul-73 | 185,928 | 749.30 | 0.00 |
| Aug-68 | 150,122 | 736.35 | 0.00 | | Aug-73 | 180,115 | 747.35 | 0.00 |
| Sep-68 | 144,338 | 734.04 | 0.00 | | Sep-73 | 175,352 | 745.71 | 0.00 |
| Oct-68 | 140,602 | 732.52 | 0.00 | | Oct-73 | 171,581 | 744.38 | 0.00 |
| Nov-68 | 138,300 | 731.57 | 0.00 | | Nov-73 | 169,119 | 743.49 | 0.00 |
| Dec-68 | 137,068 | 731.05 | 0.00 | | Dec-73 | 168,422 | 743.24 | 0.00 |
| Jan-69 | 197,343 | 753.00 | 3.00 | | Jan-74 | 188,425 | 750.13 | 0.13 |
| Feb-69 | 197,343 | 753.00 | 3.00 | | Feb-74 | 189,885 | 750.60 | 0.60 |
| Mar-69 | 197,343 | 753.00 | 3.00 | | Mar-74 | 196,517 | 752.74 | 2.74 |
| Apr-69 | 197,343 | 753.00 | 3.00 | | Apr-74 | 195,985 | 752.57 | 2.57 |
| May-69 | 197,343 | 753.00 | 3.00 | | May-74 | 192,794 | 751.54 | 1.54 |
| Jun-69 | 196,809 | 752.83 | 2.83 | | Jun-74 | 187,643 | 749.87 | 0.00 |
| Jul-69 | 192,662 | 751.50 | 1.50 | | Jul-74 | 180,887 | 747.61 | 0.00 |
| Aug-69 | 187,725 | 749.90 | 0.00 | | Aug-74 | 175,029 | 745.59 | 0.00 |
| Sep-69 | 183,284 | 748.42 | 0.00 | | Sep-74 | 165,845 | 742.30 | 0.00 |
| Oct-69 | 179,467 | 747.13 | 0.00 | | Oct-74 | 163,531 | 741.45 | 0.00 |
| Nov-69 | 178,173 | 746.68 | 0.00 | | Nov-74 | 160,876 | 740.46 | 0.00 |
| Dec-69 | 176,737 | 746.19 | 0.00 | | Dec-74 | 162,813 | 741.18 | 0.00 |
| Jan-70 | 177,474 | 746.44 | 0.00 | | Jan-75 | 161,886 | 740.84 | 0.00 |
| Feb-70 | 180,311 | 747.42 | 0.00 | | Feb-75 | 169,390 | 743.59 | 0.00 |
| Mar-70 | 194,962 | 752.24 | 2.24 | | Mar-75 | 197,343 | 753.00 | 3.00 |
| Apr-70 | 191,257 | 751.05 | 1.05 | | Apr-75 | 197,343 | 753.00 | 3.00 |
| May-70 | 187,622 | 749.86 | 0.00 | | May-75 | 196,143 | 752.62 | 2.62 |
| Jun-70 | 183,720 | 748.57 | 0.00 | | Jun-75 | 191,775 | 751.22 | 1.22 |
| Jul-70 | 174,619 | 745.45 | 0.00 | | Jul-75 | 185,492 | 749.16 | 0.00 |
| Aug-70 | 166,688 | 742.61 | 0.00 | | Aug-75 | 179,812 | 747.25 | 0.00 |
| Sep-70 | 161,767 | 740.79 | 0.00 | | Sep-75 | 175,069 | 745.61 | 0.00 |
| Oct-70 | 157,626 | 739.24 | 0.00 | | Oct-75 | 171,449 | 744.33 | 0.00 |
| Nov-70 | 158,912 | 739.73 | 0.00 | | Nov-75 | 169,449 | 743.61 | 0.00 |
| Dec-70 | 170,166 | 743.87 | 0.00 | | Dec-75 | 167,634 | 742.95 | 0.00 |
| Jan-71 | 176,472 | 746.10 | 0.00 | | Jan-76 | 165,683 | 742.24 | 0.00 |
| Feb-71 | 177,762 | 746.54 | 0.00 | | Feb-76 | 168,279 | 743.19 | 0.00 |
| Mar-71 | 177,649 | 746.50 | 0.00 | | Mar-76 | 165,900 | 742.32 | 0.00 |
| Apr-71 | 175,119 | 745.62 | 0.00 | | Apr-76 | 163,789 | 741.54 | 0.00 |
| May-71 | 172,319 | 744.64 | 0.00 | | May-76 | 160,191 | 740.21 | 0.00 |
| Jun-71 | 165,096 | 742.03 | 0.00 | | Jun-76 | 152,414 | 737.25 | 0.00 |
| Jul-71 | 157,143 | 739.06 | 0.00 | | Jul-76 | 144,386 | 734.06 | 0.00 |
| Aug-71 | 149,188 | 735.98 | 0.00 | | Aug-76 | 137,204 | 731.11 | 0.00 |
| Sep-71 | 143,604 | 733.74 | 0.00 | | Sep-76 | 132,042 | 728.93 | 0.00 |
| Oct-71 | 139,703 | 732.15 | 0.00 | | Oct-76 | 128,852 | 727.56 | 0.00 |
| Nov-71 | 137,356 | 731.17 | 0.00 | | Nov-76 | 127,237 | 726.85 | 0.00 |
| Dec-71 | 145,687 | 734.59 | 0.00 | | Dec-76 | 125,933 | 726.28 | 0.00 |
| Jan-72 | 146,488 | 734.91 | 0.00 | | Jan-77 | 125,648 | 726.15 | 0.00 |
| Feb-72 | 145,835 | 734.65 | 0.00 | | Feb-77 | 124,227 | 725.52 | 0.00 |
| Mar-72 | 143,637 | 733.76 | 0.00 | | Mar-77 | 122,596 | 724.79 | 0.00 |
| Apr-72 | 140,716 | 732.56 | 0.00 | | Apr-77 | 119,730 | 723.49 | 0.00 |
| May-72 | 133,489 | 729.55 | 0.00 | | May-77 | 116,978 | 722.23 | 0.00 |
| Jun-72 | 126,902 | 726.70 | 0.00 | | Jun-77 | 113,021 | 720.38 | 0.00 |
| Jul-72 | 122,147 | 724.59 | 0.00 | | Jul-77 | 105,049 | 716.52 | 0.00 |
| Aug-72 | 115,785 | 721.68 | 0.00 | | Aug-77 | 100,525 | 714.24 | 0.00 |
| Sep-72 | 110,057 | 718.97 | 0.00 | | Sep-77 | 96,832 | 712.33 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-77 | 94,131 | 710.90 | 0.00 | | Oct-82 | 141,308 | 732.81 | 0.00 |
| Nov-77 | 91,989 | 709.75 | 0.00 | | Nov-82 | 141,134 | 732.74 | 0.00 |
| Dec-77 | 91,596 | 709.54 | 0.00 | | Dec-82 | 155,522 | 738.44 | 0.00 |
| Jan-78 | 110,214 | 719.04 | 0.00 | | Jan-83 | 197,343 | 753.00 | 3.00 |
| Feb-78 | 197,343 | 753.00 | 3.00 | | Feb-83 | 197,343 | 753.00 | 3.00 |
| Mar-78 | 197,343 | 753.00 | 3.00 | | Mar-83 | 197,343 | 753.00 | 3.00 |
| Apr-78 | 197,343 | 753.00 | 3.00 | | Apr-83 | 197,343 | 753.00 | 3.00 |
| May-78 | 197,343 | 753.00 | 3.00 | | May-83 | 197,343 | 753.00 | 3.00 |
| Jun-78 | 196,164 | 752.62 | 2.62 | | Jun-83 | 197,343 | 753.00 | 3.00 |
| Jul-78 | 191,410 | 751.10 | 1.10 | | Jul-83 | 195,792 | 752.51 | 2.51 |
| Aug-78 | 186,633 | 749.54 | 0.00 | | Aug-83 | 192,794 | 751.55 | 1.55 |
| Sep-78 | 182,747 | 748.24 | 0.00 | | Sep-83 | 189,485 | 750.47 | 0.47 |
| Oct-78 | 178,924 | 746.94 | 0.00 | | Oct-83 | 190,062 | 750.66 | 0.66 |
| Nov-78 | 177,449 | 746.43 | 0.00 | | Nov-83 | 193,292 | 751.71 | 1.71 |
| Dec-78 | 176,286 | 746.03 | 0.00 | | Dec-83 | 197,343 | 753.00 | 3.00 |
| Jan-79 | 182,900 | 748.29 | 0.00 | | Jan-84 | 197,343 | 753.00 | 3.00 |
| Feb-79 | 197,343 | 753.00 | 3.00 | | Feb-84 | 197,343 | 753.00 | 3.00 |
| Mar-79 | 197,343 | 753.00 | 3.00 | | Mar-84 | 196,463 | 752.72 | 2.72 |
| Apr-79 | 197,343 | 753.00 | 3.00 | | Apr-84 | 193,915 | 751.91 | 1.91 |
| May-79 | 196,666 | 752.78 | 2.78 | | May-84 | 188,563 | 750.17 | 0.17 |
| Jun-79 | 192,300 | 751.39 | 1.39 | | Jun-84 | 183,291 | 748.42 | 0.00 |
| Jul-79 | 186,310 | 749.43 | 0.00 | | Jul-84 | 176,710 | 746.18 | 0.00 |
| Aug-79 | 180,500 | 747.48 | 0.00 | | Aug-84 | 171,016 | 744.17 | 0.00 |
| Sep-79 | 175,481 | 745.75 | 0.00 | | Sep-84 | 165,390 | 742.13 | 0.00 |
| Oct-79 | 171,071 | 744.19 | 0.00 | | Oct-84 | 161,366 | 740.64 | 0.00 |
| Nov-79 | 168,920 | 743.42 | 0.00 | | Nov-84 | 159,660 | 740.01 | 0.00 |
| Dec-79 | 167,876 | 743.04 | 0.00 | | Dec-84 | 160,026 | 740.14 | 0.00 |
| Jan-80 | 170,346 | 743.93 | 0.00 | | Jan-85 | 159,380 | 739.90 | 0.00 |
| Feb-80 | 197,343 | 753.00 | 3.00 | | Feb-85 | 159,089 | 739.79 | 0.00 |
| Mar-80 | 197,343 | 753.00 | 3.00 | | Mar-85 | 157,917 | 739.35 | 0.00 |
| Apr-80 | 197,343 | 753.00 | 3.00 | | Apr-85 | 155,329 | 738.37 | 0.00 |
| May-80 | 197,343 | 753.00 | 3.00 | | May-85 | 151,388 | 736.85 | 0.00 |
| Jun-80 | 194,206 | 752.00 | 2.00 | | Jun-85 | 143,542 | 733.72 | 0.00 |
| Jul-80 | 189,014 | 750.32 | 0.32 | | Jul-85 | 135,617 | 730.44 | 0.00 |
| Aug-80 | 183,304 | 748.43 | 0.00 | | Aug-85 | 130,175 | 728.13 | 0.00 |
| Sep-80 | 178,486 | 746.79 | 0.00 | | Sep-85 | 124,481 | 725.63 | 0.00 |
| Oct-80 | 174,488 | 745.40 | 0.00 | | Oct-85 | 121,056 | 724.10 | 0.00 |
| Nov-80 | 172,221 | 744.60 | 0.00 | | Nov-85 | 120,448 | 723.82 | 0.00 |
| Dec-80 | 170,507 | 743.99 | 0.00 | | Dec-85 | 119,022 | 723.17 | 0.00 |
| Jan-81 | 170,574 | 744.02 | 0.00 | | Jan-86 | 118,620 | 722.99 | 0.00 |
| Feb-81 | 171,073 | 744.19 | 0.00 | | Feb-86 | 162,196 | 740.95 | 0.00 |
| Mar-81 | 189,024 | 750.32 | 0.32 | | Mar-86 | 195,615 | 752.45 | 2.45 |
| Apr-81 | 188,243 | 750.07 | 0.07 | | Apr-86 | 197,343 | 753.00 | 3.00 |
| May-81 | 185,064 | 749.02 | 0.00 | | May-86 | 193,967 | 751.92 | 1.92 |
| Jun-81 | 180,552 | 747.50 | 0.00 | | Jun-86 | 189,261 | 750.40 | 0.40 |
| Jul-81 | 175,068 | 745.61 | 0.00 | | Jul-86 | 182,736 | 748.24 | 0.00 |
| Aug-81 | 168,622 | 743.31 | 0.00 | | Aug-86 | 176,659 | 746.16 | 0.00 |
| Sep-81 | 162,703 | 741.14 | 0.00 | | Sep-86 | 171,271 | 744.26 | 0.00 |
| Oct-81 | 158,709 | 739.65 | 0.00 | | Oct-86 | 167,288 | 742.83 | 0.00 |
| Nov-81 | 156,614 | 738.86 | 0.00 | | Nov-86 | 165,547 | 742.19 | 0.00 |
| Dec-81 | 155,281 | 738.35 | 0.00 | | Dec-86 | 163,892 | 741.58 | 0.00 |
| Jan-82 | 154,596 | 738.09 | 0.00 | | Jan-87 | 162,497 | 741.07 | 0.00 |
| Feb-82 | 153,472 | 737.65 | 0.00 | | Feb-87 | 161,276 | 740.61 | 0.00 |
| Mar-82 | 155,667 | 738.50 | 0.00 | | Mar-87 | 160,533 | 740.33 | 0.00 |
| Apr-82 | 171,360 | 744.30 | 0.00 | | Apr-87 | 156,243 | 738.72 | 0.00 |
| May-82 | 169,727 | 743.71 | 0.00 | | May-87 | 152,209 | 737.17 | 0.00 |
| Jun-82 | 166,462 | 742.53 | 0.00 | | Jun-87 | 147,588 | 735.35 | 0.00 |
| Jul-82 | 157,700 | 739.27 | 0.00 | | Jul-87 | 142,274 | 733.20 | 0.00 |
| Aug-82 | 149,955 | 736.28 | 0.00 | | Aug-87 | 135,113 | 730.23 | 0.00 |
| Sep-82 | 143,590 | 733.74 | 0.00 | | Sep-87 | 129,721 | 727.93 | 0.00 |

**Table B-2**
**Simulated End-of-Month Storage, Elevation, and Surcharge**
**in Cachuma Reservoir Under Alterantive 5C**
**Based on SYRHM, WY 1918-1993**

| Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) | | Month | Storage (acre-feet) | Elevation (feet) | Surcharge (feet) |
|---|---|---|---|---|---|---|---|---|
| Oct-87 | 127,644 | 727.03 | 0.00 | | Oct-92 | 141,168 | 732.75 | 0.00 |
| Nov-87 | 126,006 | 726.31 | 0.00 | | Nov-92 | 136,406 | 730.78 | 0.00 |
| Dec-87 | 125,165 | 725.94 | 0.00 | | Dec-92 | 135,994 | 730.60 | 0.00 |
| Jan-88 | 124,807 | 725.78 | 0.00 | | Jan-93 | 197,343 | 753.00 | 3.00 |
| Feb-88 | 124,226 | 725.52 | 0.00 | | Feb-93 | 197,343 | 753.00 | 3.00 |
| Mar-88 | 126,860 | 726.69 | 0.00 | | Mar-93 | 197,343 | 753.00 | 3.00 |
| Apr-88 | 124,423 | 725.61 | 0.00 | | Apr-93 | 197,343 | 753.00 | 3.00 |
| May-88 | 121,042 | 724.09 | 0.00 | | May-93 | 197,343 | 753.00 | 3.00 |
| Jun-88 | 113,518 | 720.61 | 0.00 | | Jun-93 | 196,624 | 752.77 | 2.77 |
| Jul-88 | 108,664 | 718.29 | 0.00 | | Jul-93 | 192,343 | 751.40 | 1.40 |
| Aug-88 | 102,285 | 715.14 | 0.00 | | Aug-93 | 187,453 | 749.81 | 0.00 |
| Sep-88 | 96,727 | 712.28 | 0.00 | | Sep-93 | 182,918 | 748.30 | 0.00 |
| Oct-88 | 94,082 | 710.88 | 0.00 | | | | | |
| Nov-88 | 92,684 | 710.12 | 0.00 | | | | | |
| Dec-88 | 91,869 | 709.68 | 0.00 | | | | | |
| Jan-89 | 90,747 | 709.07 | 0.00 | | | | | |
| Feb-89 | 90,731 | 709.07 | 0.00 | | | | | |
| Mar-89 | 89,261 | 708.26 | 0.00 | | | | | |
| Apr-89 | 86,710 | 706.84 | 0.00 | | | | | |
| May-89 | 83,595 | 705.07 | 0.00 | | | | | |
| Jun-89 | 79,125 | 702.47 | 0.00 | | | | | |
| Jul-89 | 72,912 | 698.69 | 0.00 | | | | | |
| Aug-89 | 68,476 | 695.86 | 0.00 | | | | | |
| Sep-89 | 65,540 | 693.93 | 0.00 | | | | | |
| Oct-89 | 63,481 | 692.54 | 0.00 | | | | | |
| Nov-89 | 61,862 | 691.44 | 0.00 | | | | | |
| Dec-89 | 60,471 | 690.47 | 0.00 | | | | | |
| Jan-90 | 59,641 | 689.88 | 0.00 | | | | | |
| Feb-90 | 58,783 | 689.27 | 0.00 | | | | | |
| Mar-90 | 57,151 | 688.09 | 0.00 | | | | | |
| Apr-90 | 54,882 | 686.42 | 0.00 | | | | | |
| May-90 | 51,019 | 683.48 | 0.00 | | | | | |
| Jun-90 | 48,602 | 681.58 | 0.00 | | | | | |
| Jul-90 | 44,949 | 678.59 | 0.00 | | | | | |
| Aug-90 | 41,892 | 675.98 | 0.00 | | | | | |
| Sep-90 | 39,789 | 674.12 | 0.00 | | | | | |
| Oct-90 | 38,033 | 672.51 | 0.00 | | | | | |
| Nov-90 | 36,874 | 671.42 | 0.00 | | | | | |
| Dec-90 | 36,189 | 670.76 | 0.00 | | | | | |
| Jan-91 | 35,466 | 670.06 | 0.00 | | | | | |
| Feb-91 | 34,938 | 669.54 | 0.00 | | | | | |
| Mar-91 | 69,111 | 696.27 | 0.00 | | | | | |
| Apr-91 | 77,662 | 701.60 | 0.00 | | | | | |
| May-91 | 74,784 | 699.85 | 0.00 | | | | | |
| Jun-91 | 69,981 | 696.83 | 0.00 | | | | | |
| Jul-91 | 64,365 | 693.14 | 0.00 | | | | | |
| Aug-91 | 58,710 | 689.22 | 0.00 | | | | | |
| Sep-91 | 55,990 | 687.24 | 0.00 | | | | | |
| Oct-91 | 53,192 | 685.15 | 0.00 | | | | | |
| Nov-91 | 51,863 | 684.14 | 0.00 | | | | | |
| Dec-91 | 51,696 | 684.01 | 0.00 | | | | | |
| Jan-92 | 52,335 | 684.50 | 0.00 | | | | | |
| Feb-92 | 138,025 | 731.45 | 0.00 | | | | | |
| Mar-92 | 165,017 | 742.00 | 0.00 | | | | | |
| Apr-92 | 172,518 | 744.71 | 0.00 | | | | | |
| May-92 | 170,818 | 744.10 | 0.00 | | | | | |
| Jun-92 | 166,776 | 742.64 | 0.00 | | | | | |
| Jul-92 | 160,772 | 740.42 | 0.00 | | | | | |
| Aug-92 | 151,052 | 736.71 | 0.00 | | | | | |
| Sep-92 | 144,545 | 734.13 | 0.00 | | | | | |

# Draft Technical Memorandum No. 7
# Hydrologic Impacts of Alternatives 5B and 5C on Salinity

C

# D R A F T
# TECHNICAL MEMORANDUM No. 7

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**TO:** David Fee, URS **DATE:** June 16, 2006
rev. August 22, 2006

**FROM:** Curtis Lawler **JOB NO:** 1893

**RE:** Hydrologic Impacts of Alternatives 5B and 5C on Salinity

## 1. INTRODUCTION

This technical memorandum was prepared to determine the hydrologic impacts of Alternatives 5B and 5C on surface water salinity and ground water salinity in the Lompoc Plain. The two additional alternatives (Alternatives 5B and 5C) were identified for the revised Draft Environmental Impact Report on Consideration of Modifications to the U.S. Bureau of Reclamation's Water Right Permits 11308 and 11310 (Applications 11331 and 11332) to Protect Public Trust Values and Downstream Water Rights on the Santa Ynez River below Bradbury Dam (Cachuma Reservoir) dated August 2003. Draft Technical Memorandum No. 5 (Re: Hydrologic Impact Analysis of Possible Cachuma Operations Alternatives) provides a detailed discussion on how these alternatives (Alternatives 5B and 5C) were analyzed using the Santa Ynez River Hydrology Model (SYRHM). Draft Technical Memorandum No. 5 includes the results on: (1) Cachuma Reservoir operations; (2) Santa Ynez River flows; (3) above Narrows groundwater storage; (4) water rights releases; (5) Cachuma Project water supply; (6) State Water Project (SWP) deliveries; and (7) sensitivity analysis.

Presented in this memorandum are the results of hydrologic impact analyses of Alternatives 5B and 5C for:

- Effects on salinity in Cachuma Reservoir;
- Effects on salinity of surface flows at Lompoc Narrows; and
- Effects on salinity of ground water in Lompoc Plain.

The focus of this salinity analysis is on concentrations of total dissolved solids (TDS) in the Santa Ynez River (surface flow) at the Lompoc Narrows. The Santa Ynez River passes through the Lompoc Narrows, then flows across the Lompoc Plain, where the Lompoc Plain ground water basin is located. The TDS concentrations of the groundwater in the central and

western Lompoc plains have increased from less than 1,000 milligrams per liter (mg/L) in the 1940s to greater than 2,000 mg/L in the 1960s (USGS, 1997). The surface water flow of Santa Ynez River reaching the Lompoc Narrows is a significant source of recharge for the Lompoc Plain aquifer. This study has been undertaken, primarily, for the purpose of determining the impacts, if any, of the Cachuma Project operations (including SWP water deliveries) on the TDS concentrations of surface flows at the Lompoc Narrows.

Hydrologic impact analyses were performed using three different models. The SYRHM was used to determine impacts to the surface water at the Lompoc Narrows. The Lompoc groundwater models by the U.S. Geological Survey (USGS) and Hydrologic Consultants, Inc (HCI) were used to determine impacts on salinity in the Lompoc Plain main aquifer.

## 2. SURFACE WATER SALINITY ANALYSIS OF ALTERNATIVES 5B AND 5C

This section covers the methodology utilized for modeling the salinity in the Santa Ynez River and the impact analysis for Alternatives 5B and 5C.

### 2A. METHODOLOGY FOR MODELING SALINITY IN SANTA YNEZ RIVER FROM CACHUMA RESERVOIR TO LOMPOC NARROWS

The SYRHM was utilized for the surface water salinity analysis of the EIR alternatives. Technical Memorandum No. 1 provides an overview of the SYRHM and modeling results prepared for the SWRCB Draft EIR (August 2003) which included hydrologic analyses for seven alternatives (Alternatives 1, 2, 3A, 3B, 3C, 4A and 4B). Technical Memorandum No. 3 explains the methodology of modeling surface water salinity in the SYRHM, including model calibration. An overview of the main sources of salts in the surface water as modeled in the SYRHM is summarized below.

- Salinity varies in the local runoff within the Santa Ynez River watershed according to the magnitude of surface flows, where high flows have low salinity and low flows have high salinity. Five different flow-salinity relationships were used in the SYRHM based on five geographic regions with measured salinity data.

- Imports of SWP water with lower salinity affects the TDS concentrations when blended with Santa Ynez River water. In the SYRHM, the SWP imports are either mixed directly in Cachuma Reservoir or released as commingled water into the Santa Ynez River through the Cachuma outlet works.

C

- Another source of salt loading incorporated in the SYRHM is channel loading where the salinity of the Santa Ynez River increases from Solvang to the Lompoc Narrows due to salt contributions from the river channel and associated subflow in the alluvial deposits.

Alternatives 5B and 5C are very similar to Alternatives 3B and 3C in terms of how the surface water salinity is modeled in the SYRHM. Table 1 shows the SWP deliveries under various alternatives including Alternative 5B and 5C. Alternatives 5B and 5C would involve slightly different operations of the SWP imports as discussed below.

**TABLE 1**
**SWP WATER DELIVERIES USED IN SYRHM**

| | Average for Period 1942-1993 , afa | | | | |
|---|---|---|---|---|---|
| **Alternative** | **Exchange with ID#1 (a)** | **BNA Exchange for Alt 4B only (b)** | **SWP Delivered to Cachuma Lake (c)** | **SWP Released in the Outlet Works (d)** | **Total SWP Imports (a)+(b)+(c)+(d)** |
| 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 2,497 | 0 | 5,489 | 1,789 | 10,135 |
| 3A | 2,472 | 0 | 5,878 | 1,802 | 10,152 |
| 3B | 2,482 | 0 | 5,844 | 1,841 | 10,167 |
| 3C | 2,497 | 0 | 5,836 | 1,866 | 10,199 |
| 4B | 2,501 | 1,770 | 4,853 | 1,245 | 10,369 |
| 5B | 2,470 | 0 | 5,251 | 2,317 | 10,038 |
| 5C | 2,484 | 0 | 5,246 | 2,337 | 10,068 |

The total amount of SWP water delivery to the South Coast would be reduced slightly (<1%) under Alternatives 5B and 5C in comparison to the baseline condition (Alternative 2). However, more SWP is released directly into the river in Alternatives 5B and 5C. This is due to the increased use of the outlet works for making additional releases for fish under Alternatives 5B and 5C. The higher target flows under Alternatives 5B and 5C would require at times releases greater than 10 cfs (Hilton Creek watering system capacity) and releases for fish might contain up to 50% SWP water and have a lower salinity. However, during the months of December through June, no SWP water could be delivered if releases are being made for fish through the outlet works.

Tables 2 and 3 show the annual SWP imports under Alternatives 5B and 5C. Please note that tables in Appendix D of Draft Technical Memorandum No. 5 of August 11, 2005 were revised

**Table 2**

**SUMMARY OF STATE WATER PROJECT DELIVERIES**

**FOR ALTERNATIVE 5B**

**(ACRE-FEET/YEAR)**

| | DEMAND | | SUPPLY | | | DELIVERY | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | M&I Projected | ID No. 1 | Reduced | | | | Total Imports |
| WATER | TOTAL | ID No. 1 | Delivery as Percentage | Exchange | Delivery due | ID No. 1 | SWP in | SWP in | under South |
| YEAR | SWP Demand [1] | Exchange | of Full Entitlement [2] | Shortage [3] | to Spill [4] | Exchange | Cachuma [5] | Outlet Works [6] | Coast Contracts |
| 1942 | 13,750 | 2,571 | 100% | 100% | 1,868 | 2,571 | 8,392 | 521 | 11,483 |
| 1943 | 13,750 | 2,571 | 89% | 100% | 3,173 | 2,571 | 2,831 | 1,421 | 6,822 |
| 1944 | 13,750 | 2,571 | 92% | 100% | 2,467 | 2,571 | 5,367 | 1,500 | 9,438 |
| 1945 | 13,750 | 2,571 | 90% | 100% | 1,645 | 2,571 | 6,589 | 1,659 | 10,819 |
| 1946 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 6,589 | 4,988 | 14,148 |
| 1947 | 13,750 | 2,571 | 75% | 100% | 0 | 2,571 | 3,203 | 4,888 | 10,662 |
| 1948 | 13,750 | 2,571 | 67% | 100% | 0 | 2,571 | 4,007 | 2,588 | 9,166 |
| 1949 | 13,750 | 2,571 | 65% | 88% | 0 | 2,272 | 5,649 | 1,055 | 8,976 |
| 1950 | 13,750 | 2,571 | 67% | 69% | 0 | 1,768 | 6,162 | 1,236 | 9,167 |
| 1951 | 13,750 | 2,571 | 88% | 51% | 0 | 1,321 | 10,196 | 515 | 12,031 |
| 1952 | 13,750 | 2,571 | 96% | 88% | 1,820 | 2,258 | 5,022 | 1,647 | 8,927 |
| 1953 | 13,750 | 2,571 | 90% | 100% | 0 | 2,571 | 9,207 | 3,065 | 14,843 |
| 1954 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 5,892 | 2,995 | 11,458 |
| 1955 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 4,123 | 2,855 | 9,549 |
| 1956 | 13,750 | 2,571 | 90% | 97% | 0 | 2,493 | 8,174 | 1,494 | 12,161 |
| 1957 | 13,750 | 2,571 | 88% | 84% | 0 | 2,171 | 5,863 | 3,101 | 11,135 |
| 1958 | 13,750 | 2,571 | 90% | 93% | 1,677 | 2,379 | 7,350 | 1,171 | 10,900 |
| 1959 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,283 | 3,162 | 13,016 |
| 1960 | 13,750 | 2,571 | 63% | 100% | 0 | 2,571 | 3,749 | 2,274 | 8,594 |
| 1961 | 13,750 | 2,571 | 61% | 98% | 0 | 2,515 | 4,848 | 1,040 | 8,403 |
| 1962 | 13,750 | 2,571 | 78% | 99% | 0 | 2,546 | 3,216 | 2,047 | 7,810 |
| 1963 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 12,415 | 885 | 15,871 |
| 1964 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 9,285 | 175 | 12,031 |
| 1965 | 13,750 | 2,571 | 82% | 93% | 0 | 2,398 | 5,642 | 3,227 | 11,267 |
| 1966 | 13,750 | 2,571 | 96% | 98% | 0 | 2,520 | 3,591 | 3,177 | 9,288 |
| 1967 | 13,750 | 2,571 | 96% | 100% | 3,545 | 2,571 | 2,705 | 5,665 | 10,942 |
| 1968 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 7,153 | 2,684 | 12,409 |
| 1969 | 13,750 | 2,571 | 93% | 100% | 4,230 | 2,571 | 2,705 | 2,044 | 7,321 |
| 1970 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 8,760 | 2,168 | 13,499 |
| 1971 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 5,157 | 5,523 | 13,251 |
| 1972 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 4,945 | 3,857 | 11,373 |
| 1973 | 13,750 | 2,571 | 82% | 100% | 1,453 | 2,571 | 3,453 | 2,333 | 8,356 |
| 1974 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 7,793 | 2,171 | 12,535 |
| 1975 | 13,750 | 2,571 | 96% | 100% | 1,773 | 2,571 | 4,015 | 2,142 | 8,728 |
| 1976 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,732 | 5,506 | 15,809 |
| 1977 | 13,750 | 2,571 | 33% | 100% | 0 | 2,571 | 888 | 1,364 | 4,823 |
| 1978 | 13,750 | 2,571 | 68% | 100% | 2,231 | 2,571 | 3,421 | 922 | 6,914 |
| 1979 | 13,750 | 2,571 | 85% | 100% | 2,214 | 2,571 | 3,271 | 1,515 | 7,357 |
| 1980 | 13,750 | 2,571 | 82% | 100% | 2,875 | 2,571 | 2,705 | 2,179 | 7,455 |
| 1981 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 9,572 | 1,485 | 13,628 |
| 1982 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 6,004 | 4,412 | 12,986 |
| 1983 | 13,750 | 2,571 | 100% | 100% | 5,544 | 2,571 | 4,716 | 384 | 7,671 |
| 1984 | 13,750 | 2,571 | 100% | 100% | 2,779 | 2,571 | 3,345 | 1,632 | 7,548 |
| 1985 | 13,750 | 2,571 | 96% | 100% | 0 | 2,571 | 6,292 | 5,291 | 14,154 |
| 1986 | 13,750 | 2,571 | 81% | 100% | 699 | 2,571 | 4,958 | 2,178 | 9,706 |
| 1987 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 7,928 | 1,666 | 12,166 |
| 1988 | 13,750 | 2,571 | 43% | 100% | 0 | 2,571 | 1,433 | 1,958 | 5,962 |
| 1989 | 13,750 | 2,571 | 58% | 93% | 0 | 2,385 | 3,749 | 1,887 | 8,021 |
| 1990 | 13,750 | 2,571 | 46% | 75% | 0 | 1,916 | 3,189 | 1,197 | 6,302 |
| 1991 | 13,750 | 2,571 | 29% | 75% | 0 | 1,927 | 0 | 2,084 | 4,011 |
| 1992 | 13,750 | 2,571 | 31% | 95% | 0 | 2,445 | 44 | 1,713 | 4,202 |
| 1993 | 13,750 | 2,571 | 76% | 100% | 3,282 | 2,571 | 2,460 | 1,835 | 6,866 |
| AVG | 13,750 | 2,571 | 80% | 96% | 832 | 2,470 | 5,251 | 2,317 | 10,038 |

NOTES

1) Based on total South Coast contractual agreements with CCWA not including drought buffers and additional water (4,500 afy) contracted by Goleta.

2) Based on DWR's SWP model DWRSIM v. 9.06T
Uses results from DWR's No Action scenario 786 which uses Delta historic hydrology
with regulations (including 1995 WQCP Bay-Delta Accord, 1997 AFRP CVPIA(b) and the New Melones Interim Operation plan)
and no new storage facilities. The percentages in this table do not include the option of purchasing the 10% drought buffer.

3) Based on shortages in Cachuma Project estimated by the SYRHM 0498

4) Assumes no CCWA deliveries when Cachuma is spilling and also that South Coast would not want to make-up that delivery water
because of the wetness of the basin and already assuming full deliveries of 13750 pending spills

5) SWP reductions in delivery (due to restrictions of 50% SWP during water right releases and 0% SWP during passage releases)
are redistributed to the following months up to one year.

6) Limited to being 50% of outlet releases

**Table 3**

**SUMMARY OF STATE WATER PROJECT DELIVERIES**

**FOR ALTERNATIVE 5C**

**(ACRE-FEET/YEAR)**

| | DEMAND | | SUPPLY | | | DELIVERY | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | M&I Projected | ID No. 1 | Reduced | | | | Total Imports |
| WATER | TOTAL | ID No. 1 | Delivery as Percentage | Exchange | Delivery due | ID No. 1 | SWP in | SWP in | under South |
| YEAR | SWP Demand [1] | Exchange | of Full Entitlement [2] | Shortage [3] | to Spill [4] | Exchange | Cachuma [5] | Outlet Works [6] | Coast Contracts |
| 1942 | 13,750 | 2,571 | 100% | 100% | 919 | 2,571 | 9,341 | 522 | 12,434 |
| 1943 | 13,750 | 2,571 | 89% | 100% | 3,173 | 2,571 | 2,830 | 1,421 | 6,821 |
| 1944 | 13,750 | 2,571 | 92% | 100% | 2,467 | 2,571 | 5,367 | 1,500 | 9,438 |
| 1945 | 13,750 | 2,571 | 90% | 100% | 1,645 | 2,571 | 6,589 | 1,660 | 10,820 |
| 1946 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 6,589 | 4,989 | 14,149 |
| 1947 | 13,750 | 2,571 | 75% | 100% | 0 | 2,571 | 3,203 | 4,887 | 10,661 |
| 1948 | 13,750 | 2,571 | 67% | 100% | 0 | 2,571 | 4,004 | 2,591 | 9,166 |
| 1949 | 13,750 | 2,571 | 65% | 90% | 0 | 2,324 | 5,595 | 1,057 | 8,976 |
| 1950 | 13,750 | 2,571 | 67% | 73% | 0 | 1,866 | 6,080 | 1,220 | 9,166 |
| 1951 | 13,750 | 2,571 | 88% | 56% | 0 | 1,431 | 10,086 | 515 | 12,031 |
| 1952 | 13,750 | 2,571 | 96% | 89% | 1,816 | 2,283 | 5,014 | 1,735 | 9,032 |
| 1953 | 13,750 | 2,571 | 90% | 100% | 0 | 2,571 | 9,207 | 2,965 | 14,743 |
| 1954 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 5,892 | 2,995 | 11,458 |
| 1955 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 4,124 | 2,854 | 9,549 |
| 1956 | 13,750 | 2,571 | 90% | 98% | 0 | 2,529 | 8,144 | 1,491 | 12,165 |
| 1957 | 13,750 | 2,571 | 88% | 87% | 0 | 2,243 | 5,819 | 3,094 | 11,156 |
| 1958 | 13,750 | 2,571 | 90% | 94% | 1,673 | 2,405 | 7,317 | 1,167 | 10,889 |
| 1959 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,274 | 3,162 | 13,007 |
| 1960 | 13,750 | 2,571 | 63% | 100% | 0 | 2,571 | 3,749 | 2,274 | 8,594 |
| 1961 | 13,750 | 2,571 | 61% | 99% | 0 | 2,551 | 4,817 | 1,035 | 8,403 |
| 1962 | 13,750 | 2,571 | 78% | 100% | 0 | 2,562 | 3,209 | 2,055 | 7,827 |
| 1963 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 12,398 | 885 | 15,854 |
| 1964 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 9,285 | 175 | 12,031 |
| 1965 | 13,750 | 2,571 | 82% | 95% | 0 | 2,433 | 5,612 | 3,223 | 11,268 |
| 1966 | 13,750 | 2,571 | 96% | 98% | 0 | 2,530 | 3,588 | 3,177 | 9,295 |
| 1967 | 13,750 | 2,571 | 96% | 100% | 3,545 | 2,571 | 2,705 | 5,666 | 10,942 |
| 1968 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 7,153 | 2,685 | 12,409 |
| 1969 | 13,750 | 2,571 | 93% | 100% | 4,230 | 2,571 | 2,705 | 2,044 | 7,321 |
| 1970 | 13,750 | 2,571 | 89% | 100% | 0 | 2,571 | 8,760 | 2,168 | 13,498 |
| 1971 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 5,157 | 5,523 | 13,251 |
| 1972 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 4,945 | 3,778 | 11,295 |
| 1973 | 13,750 | 2,571 | 82% | 100% | 1,453 | 2,571 | 3,531 | 2,333 | 8,435 |
| 1974 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 7,793 | 2,754 | 13,118 |
| 1975 | 13,750 | 2,571 | 96% | 100% | 1,773 | 2,571 | 4,058 | 1,816 | 8,445 |
| 1976 | 13,750 | 2,571 | 88% | 100% | 0 | 2,571 | 7,732 | 5,449 | 15,752 |
| 1977 | 13,750 | 2,571 | 33% | 100% | 0 | 2,571 | 1,251 | 1,357 | 5,178 |
| 1978 | 13,750 | 2,571 | 68% | 100% | 2,231 | 2,571 | 3,324 | 1,019 | 6,914 |
| 1979 | 13,750 | 2,571 | 85% | 100% | 2,214 | 2,571 | 3,271 | 1,515 | 7,357 |
| 1980 | 13,750 | 2,571 | 82% | 100% | 2,875 | 2,571 | 2,705 | 2,179 | 7,455 |
| 1981 | 13,750 | 2,571 | 83% | 100% | 0 | 2,571 | 9,571 | 1,485 | 13,628 |
| 1982 | 13,750 | 2,571 | 94% | 100% | 0 | 2,571 | 6,004 | 4,412 | 12,986 |
| 1983 | 13,750 | 2,571 | 100% | 100% | 5,544 | 2,571 | 4,716 | 384 | 7,671 |
| 1984 | 13,750 | 2,571 | 100% | 100% | 2,779 | 2,571 | 3,345 | 1,632 | 7,548 |
| 1985 | 13,750 | 2,571 | 96% | 100% | 0 | 2,571 | 6,292 | 5,291 | 14,154 |
| 1986 | 13,750 | 2,571 | 81% | 100% | 699 | 2,571 | 4,953 | 2,202 | 9,725 |
| 1987 | 13,750 | 2,571 | 69% | 100% | 0 | 2,571 | 7,917 | 1,701 | 12,189 |
| 1988 | 13,750 | 2,571 | 43% | 100% | 0 | 2,571 | 1,391 | 1,958 | 5,920 |
| 1989 | 13,750 | 2,571 | 58% | 95% | 0 | 2,433 | 3,653 | 1,935 | 8,021 |
| 1990 | 13,750 | 2,571 | 46% | 78% | 0 | 2,011 | 3,096 | 1,195 | 6,302 |
| 1991 | 13,750 | 2,571 | 29% | 78% | 0 | 2,004 | 296 | 1,711 | 4,010 |
| 1992 | 13,750 | 2,571 | 31% | 96% | 0 | 2,460 | 0 | 1,741 | 4,201 |
| 1993 | 13,750 | 2,571 | 76% | 100% | 3,282 | 2,571 | 1,337 | 2,958 | 6,866 |
| AVG | 13,750 | 2,571 | 80% | 97% | 814 | 2,484 | 5,246 | 2,337 | 10,068 |

NOTES

1) Based on total South Coast contractual agreements with CCWA not including drought buffers and additional water (4,500 afy) contracted by Goleta.

2) Based on DWR's SWP model DWRSIM v. 9.06T
Uses results from DWR's No Action scenario 786 which uses Delta historic hydrology
with regulations (including 1995 WQCP Bay-Delta Accord, 1997 AFRP CVPIA(b) and the New Melones Interim Operation plan)
and no new storage facilities. The percentages in this table do not include the option of purchasing the 10% drought buffer.

3) Based on shortages in Cachuma Project estimated by the SYRHM 0498

4) Assumes no CCWA deliveries when Cachuma is spilling and also that South Coast would not want to make-up that delivery water
because of the wetness of the basin and already assuming full deliveries of 13750 pending spills

5) SWP reductions in delivery (due to restrictions of 50% SWP during water right releases and 0% SWP during passage releases)
are redistributed to the following months up to one year.

6) Limited to being 50% of outlet releases

to reflect rescheduling of the SWP imports when water rights releases are made. This is consistent with the modeling of other EIR alternatives, except Alternative 1 which does not have SWP imports. This rescheduling of SWP imports is done in accordance with the Settlement Agreement of 2002 which states that the parties will "make best efforts to maximize the delivery by the Central Coast Water Authority ('CCWA') of State Water Project (SWP) water with lower concentrations of total dissolved solids ('TDS') into the outlet works at Bradbury Dam during WR 89-18 water rights releases consistent with the NMFS BO."

In performing the surface water salinity modeling for Alternatives 5B and 5C, a computer programming "bug" was found in the SYRHM model code for surface water salinity modeling originally performed in 2001. The bug relates to Cachuma Reservoir salinity. Releases for fish are made from Cachuma Reservoir on an iterative basis in the SYRHM model code for each month until downstream flow targets are met. Due to these iterations within the model's monthly timestep, the salts from the incremental releases for fish were not properly taken out of Cachuma Reservoir. The results of this model programming bug is that the salinity in Cachuma Reservoir was about 8 mg/L higher than it should have been for Alternative 2 and about 18 mg/L higher than it should have been for Alternatives 3A, 3B, and 3C. Because Alternative 1 did not have releases for fish, the Cachuma Reservoir salinity in Alternative 1 is unchanged. Likewise, the model calibration of the SYRHM for surface water salinity modeling did not change because the model calibration did not have releases for fish. Table 4 summarizes the median Cachuma Reservoir salinity for the period 1942-1993 for the previous and revised surface water salinity model runs performed in 2001 and 2006, respectively. This programming bug created errors in Cachuma Reservoir salinity of about 1.5 to 3 percent based on the median salinity.

**Table 4**
**Corrections in Simulated Cachuma Reservoir Salinity (1942-1993)**

| Alternative | Median Salinity (mg/L) | | | |
|---|---|---|---|---|
| | Technical Memorandum 2001 | Technical Memorandum 2006 | Difference | Percentage |
| 1 | 605 | 605 | 0 | 0 |
| 2 | 575 | 566 | -8 | -1.5% |
| 3A | 585 | 567 | -18 | -3.1% |
| 3B | 585 | 567 | -18 | -3.2% |
| 3C | 585 | 567 | -18 | -3.2% |
| 4B | 591 | 572 | -19 | -3.3% |
| 5B | NA | 569 | 0 | 0 |
| 5C | NA | 570 | 0 | 0 |

The error from the programming bug was even smaller in the salinity of surface flows at the Lompoc Narrows due to attenuation from the above Narrows riparian reach. The results of this model programming bug is that the surface water salinity at the Lompoc Narrows was about 2 mg/L higher than it should have been for Alternative 2 and about 5 mg/L higher than it should have been for Alternatives 3A, 3B, and 3C. Table 5 summarizes the surface water salinity for the flows for the Lompoc Narrows for the previous and revised surface water salinity model runs performed in 2001 and 2006, respectively. This programming bug created errors in the Santa Ynez River salinity at the Lompoc Narrows of less than one percent based on the average salinity.

**Table 5**
**Corrections in Simulated Salinity of Santa Ynez River at Lompoc Narrows (1942-1993)**

| Alternative | Average Annual Flow Weighed TDS (mg/L) | | | |
|---|---|---|---|---|
| | Technical Memorandum 2001 | Technical Memorandum 2006 | Difference | Percentage |
| 1 | 766 | 766 | 0 | 0 |
| 2 | 743 | 741 | -2 | -0.3% |
| 3A | 752 | 747 | -5 | -0.7% |
| 3B | 758 | 753 | -5 | -0.7% |
| 3C | 751 | 746 | -5 | -0.7% |
| 4B | 562 | 560 | -2 | -0.4% |
| 5B | NA | 747 | 0 | 0 |
| 5C | NA | 747 | 0 | 0 |

The quantity of surface water flows for any of the alternatives is not affected by the above corrections. Since the revised surface water salinity changes are small, none of the conclusions from the previous Stetson technical memoranda have changed. However, all surface water salinity figures have been updated here. Aside from the above changes, all other modeling assumptions and limitations in the SYRHM are the same for all of the alternatives, including Alternatives 5B and 5C.

## 2B. RESULTS OF SURFACE WATER ANALYSIS – ALTERNATIVES 5B AND 5C

Overall, the SYRHM results indicate that the surface water salinity under Alternatives 5B and 5C is very similar to Alternatives 3B and 3C due to similar operations for WR 89-18 and releases for fish and similar import quantities of SWP water.

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Figure 1 shows the TDS concentrations in Cachuma Reservoir for each alternative. Alternative 1 has the highest TDS due to no imports of SWP. All of the TDS concentrations are very similar, except during droughts when the amount of storage in Cachuma Reservoir decreases so that SWP imports become a larger percentage of the storage.

Figure 2 shows the frequency of TDS concentrations in water rights releases directly below the dam. SWP mixing in the outlet works is limited to 50% of the WR 89-18 releases, and SWP imports are typically about 300 mg/L lower in TDS concentration than the TDS in Cachuma Reservoir. For these reasons, the TDS of WR 89-18 releases under Alternative 2, 3A, 3B, 3C, 4B, 5B, and 5C are typically about 150 mg/L lower than Alternative 1 as shown in Figure 2.

The simulated flow and TDS of the Santa Ynez River at the Lompoc Narrows from the SYRHM are the inputs to the Lompoc Plain groundwater models. The differences in flow and TDS concentrations of the surface water at the Lompoc Narrows are discussed briefly here in order to facilitate the understanding of the simulated response in TDS concentrations of the Lompoc Plain ground water for the EIR alternatives.

The primary difference between the EIR alternatives regarding the salinity at the Narrows is related to the importation of SWP water. In Alternative 1, there are no SWP imports. In Alternative 4B, SWP imports are recharged directly into Lompoc Plain aquifer in exchange for the Below Narrows Account (WR 89-18) water. All of the other alternatives (including Alternatives 5B and 5C) are very similar in terms of SWP imports. Figure 3 shows the frequency of TDS concentrations of water rights releases (WR 89-18) at the Narrows. The frequency analysis does not include months of no flows or flows less than 0.5 cfs at the Narrows. Figure 3 indicates that imports of SWP water improve the salinity at the Narrows during WR 89-18 releases. The median difference in TDS concentrations between Alternative 1 and other alternatives (including Alternatives 5B and 5C) is about 130 mg/L.

The total surface flow at the Lompoc Narrows is very similar for the EIR alternatives because of the tributary contributions in the reach between Bradbury Dam and the Lompoc Narrows and the similarity in total amount of water discharged from Cachuma Reservoir as either spills, water rights releases, or releases for fish (Stetson, 2001, 2005). Figure 4 shows the annual average flows of the Santa Ynez River at the Lompoc Narrows. The monthly average simulated flows based on the SYRHM for the period 1942-1988 are shown in Figure 5. The differences between the alternatives are most apparent during summer months. The greatest differences exist between Alternatives 2, 3, and 5, which are very similar, and Alternative 4. In Alternative 4B,

SWP water is recharged directly at or below the Narrows and increases the flow significantly in dry months. However, directly upstream of the recharge point near the Lompoc Narrows, surface flows are actually smaller than the rest of the alternatives due to the proposed Below Narrows Exchange as shown in Figure 5.

The average annual flow weighted TDS of the Santa Ynez River (simulated by SYRHM) at the Narrows for the EIR alternatives is shown in Figure 6. The monthly average TDS of flows simulated at the Narrows for each EIR alternative is shown in Figure 7. These graphs clearly show the inverse relationship between flow and TDS. The wintertime TDS is 300 to 600 mg/L lower than summertime TDS because of the higher flows. The TDS concentrations for Alternatives 2, 3B, 3C, 5B, and 5C are very similar. There is less similarity in the TDS for Alternative 4. Alternative 4B stands out because, at low flows, the effects of discharging State Project water below the Narrows for recharge significantly reduce the average TDS, even though the amount of water discharged is relatively small. However, the TDS at the Narrows, except during the winter months, would be higher under Alternative 4B immediately upstream of the recharge area than it is under the baseline operation (Alternative 2) because Below Narrows Account releases would no longer be made from Cachuma Reservoir.

## 3. GROUND WATER SALINITY ANALYSIS OF ALTERNATIVES 5B AND 5C

This section covers the methodology utilized for modeling salinity in the Lompoc ground water basin and the results of analysis using the USGS and HCI models.

### 3A. METHODOLOGY FOR MODELING SALINITY IN LOMPOC PLAIN GROUND WATER BASIN

Two sets of Lompoc Plain groundwater models were utilized for the ground water salinity analysis of the alternatives. These models are generally referred to as the USGS and HCI flow and solute transport models. Technical Memorandum No. 4 explains the methodology of modeling groundwater salinity in the Lompoc Plain. The reader is also referred to the USGS (1997) and HCI (1997, 1999) reports that provide a detailed description of the models.

The objective of this analysis is to simulate the relative change in the quality of ground-water in the Main Zone aquifer of the Lompoc Plain that will result from various Cachuma Reservoir operational alternatives to be considered in the EIR. The USGS and HCI flow and transport model simulations for the Cachuma EIR alternatives both use the same Santa Ynez River flow and TDS input data at the Lompoc Narrows produced as outputs by the SYRHM.

The common time period for all models is controlled by the USGS model period which was January 1941 to December 1988. Although the models were run for their respective calibration periods, the hydrologic period selected for evaluation of the EIR alternatives using the ground water models is 1952 to 1988. This period was selected for averaging the effects of model results for each alternative because it was a more balanced hydrologic period that overlaps the calibration periods of both sets of models, and because it limits the effect of using different initial conditions. In other words, the same initial conditions were used for all of the EIR alternatives in each model.

The most significant modifications made to the ground-water flow and transport models from the calibrated versions that were provided by the USGS and HCI was to utilize the 1988 ground-water pumping data as a constant throughout the simulations. The purpose in using constant pumping is to better represent current conditions, and allow for a suitable comparison between the EIR alternatives. Also, initial water levels and TDS were reset to those simulated at the end of 1988 for the original calibration of each model.

From the limited evaluation of the models that could be conducted within the scope of this study, it is believed that the TDS results of models are only accurate for future predictions to within a range of roughly 100 to 300 mg/L, depending upon location, magnitude of changes in input data, hydrologic conditions, length of simulation period and other factors. For use in comparative analysis, such as between EIR alternatives where changes in input are limited, the differences in TDS between simulations in a single model of less than 100 mg/L may be useful in cases where clear trends are exhibited.

The differences between EIR alternatives are best viewed within one model rather than between models since the differences in model construction and approach to calibration and the complexity of the system and limitation of data make it difficult to compare the models directly. The predictive capability of these models to simulate ground water quality conditions in the future is limited by: (1) the conversion of monthly SYRHM output into the biannual and annual stress periods in the USGS and HCI transport models, respectively; (2) the use of constant 1988 pumping, as originally developed for the model calibration, which may not represent present or future pumping amounts or pumping distribution by aquifer and subregion.

### 3B. Ground Water Model Results for Cachuma EIR Alternatives

For this study two well locations were selected from each of the primary subareas, Eastern, Central and Western Plain in order to evaluate the effects of each alternative in the

regions of the majority of ground water pumping (Figure 8). The wells were selected on the basis of location, availability of measured water quality data at that location, and the fact that they were used as calibration wells by the USGS (Bright, and others, 1997). The following is a summary of the simulated water levels and TDS for selected sites within the Main Zone of the Lompoc Plain for the Cachuma EIR alternatives. The results are presented for each Alternative as tables representing the average TDS at each location over the period 1952 through 1982, and time series graphs of TDS and water levels representing the results for the entire simulated period used in the USGS and HCI models.

**1. Average Simulated TDS for the 1952 – 1982 Base Period**

The average TDS for the Main Zone aquifer in the Lompoc Plain for each subarea at selected locations and the flow-weighted average for the City of Lompoc active wells (five wells) are shown in Table 6. The average difference in TDS between Alternative 2 and other alternatives are shown in Table 7 as both a difference in TDS in mg/L and as a percentage. Alternative 2 was selected as the baseline, by which other alternatives can be compared for the purpose of the Cachuma EIR. The results shown in Table 6 illustrate the magnitude of the average simulated TDS in each subarea and within a given subarea. The values in Table 6 can provide an indication of the relative precision of the model results that, although presented to the nearest 1 mg/L, may be best evaluated by rounding to the nearest 100 mg/L. However, for comparisons between alternatives, differences of less than 100 mg/L may be useful where clear trends are observed.

Table 6 shows that, within the HCI model, the overall magnitude of the average TDS ranges from about 2000 to 2300 mg/L in the Western Plain, a relatively uniform 1800 mg/L in the Central Plain, over 800 to 1700 mg/L in the Eastern Plain, and about 900 to 1000 mg/L for the City of Lompoc wells. The range of TDS in the HCI model is approximately 1500 mg/L basin wide. The differences in results within each subarea range from about 900 mg/L in the Eastern Plain, 300 mg/L in the Western Plain, and no significant difference within the Central Plain. The new EIR alternatives (Alternatives 5B and 5C) also fall within these ranges of TDS in the HCI model.

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**Table 6**
**Lompoc Plain Groundwater Quality**
**Simulated Average TDS for Selected Locations**
**Main Zone Aquifer (1952-1982)**
**[mg/L]**

**HCI Model**

| | Alt 1 | Alt 2 | Alt 3B | Alt 3C | Alt 4B | Alt5B | Alt 5C |
|---|---|---|---|---|---|---|---|
| **Western Plain** | | | | | | | |
| **Well 26F1,3,4,5** | 2331 | 2330 | 2329 | 2330 | 2332 | 2333 | 2333 |
| **Well 25D1,3** | 2020 | 2018 | 2016 | 2016 | 2018 | 2017 | 2017 |
| **Central Plain** | | | | | | | |
| **Well 31A3** | 1786 | 1784 | 1784 | 1782 | 1803 | 1798 | 1798 |
| **Well 29N6** | 1785 | 1784 | 1784 | 1786 | 1794 | 1800 | 1799 |
| **Eastern Plain** | | | | | | | |
| **Well 28M2** | 1733 | 1728 | 1726 | 1723 | 1731 | 1715 | 1712 |
| **Well 34B1** | 1019 | 1009 | 1006 | 1002 | 842 | 986 | 987 |
| **City Wells - Avg** | 1022 | 1012 | 1011 | 1008 | 854 | 989 | 991 |

**USGS Model**

| | Alt 1 | Alt 2 | Alt 3B | Alt 3C | Alt 4B | Alt 5B | Alt 5C |
|---|---|---|---|---|---|---|---|
| **Western Plain** | | | | | | | |
| **Well 26F1,3,4,5** | 2901 | 2885 | 2844 | 2850 | 2906 | 2831 | 2830 |
| **Well 25D1,3** | 2291 | 2273 | 2231 | 2235 | 2284 | 2210 | 2209 |
| **Central Plain** | | | | | | | |
| **Well 31A3** | 2180 | 2180 | 2176 | 2176 | 2176 | 2172 | 2171 |
| **Well 29N6** | 1933 | 1937 | 1935 | 1935 | 1928 | 1934 | 1934 |
| **Eastern Plain** | | | | | | | |
| **Well 28M2** | 1769 | 1770 | 1758 | 1758 | 1752 | 1753 | 1754 |
| **Well 34B1** | 984 | 973 | 975 | 974 | 931 | 971 | 970 |
| **City Wells - Avg** | 1115 | 1108 | 1109 | 1107 | 1085 | 1105 | 1104 |

Within the USGS model, Table 6 shows that the overall magnitude of the average TDS ranges from about 2200 to 2900 mg/L in the Western Plain, 1900 to 2200 mg/L in the Central Plain, about 900 to 1800 mg/L in the Eastern Plain, and about 1100 mg/L for the City of Lompoc wells. The range of TDS in the USGS model is approximately 2000 mg/L basin wide. The differences in results within each sub-area range from about 700 mg/L in the Western Plain, about 300 mg/L within the Central Plain, and 800 mg/L in the Eastern Plain. Alternatives 5B and 5C also fall within these ranges of TDS in the USGS model.

Table 7 was created to show the extremely small simulated TDS differences between the EIR alternatives. Results shown in Table 7 have been normalized relative to Alternative 2. The difference in TDS between alternatives at a given location may be considered below the absolute accuracy of either model. However, it is hoped that they may exhibit trends that would allow evaluation of the alternatives.

The results shown in Table 7 are primarily for comparisons between the EIR alternatives as simulated by a single model. These indicate only minor differences in the water quality in the Main Zone aquifer of the Lompoc Plain that result from the changes in Cachuma operations for the EIR alternatives. Cachuma operations that result in higher dry season flows due to increased releases for fish (Alternatives 3 and 5) provide benefits to the Eastern Plain (HCI and USGS) and possibly to the Western Plain (USGS). Alternatives that involve changes in operations directly within the Lompoc Plain basin such as Alternative 4B, which includes direct recharge of high quality SWP water in the basin, result in the most significant changes throughout the Main Zone in the Lompoc Plain. In general, the HCI model appears to be more sensitive to Cachuma operations in the Eastern Plain, and the USGS model appears to be more sensitive in the Western Plain.

None of the Alternatives considered for future operations exhibit conspicuous basin wide trends that would suggest it was superior to the others. Alternative 1 is more representative of past operations, but does exhibit a clear trend of inferior water quality basin wide, although the magnitude is relatively minor or even insignificant. Locally, the greatest improvement in ground water quality occurs near the Lompoc Narrows under Alternative 4B where recharging of low TDS SWP water results in a significant improvement near the City wells, including Well 34B1, possibly due to high vertical permeability which allows localized deep percolation of high quality SWP discharge. Slight improvements in TDS are shown in the HCI model results for Alternatives 3B and 3C. Alternatives 5B and 5C show slight improvements compared to

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**Table 7**
**Lompoc Plain Groundwater Quality**
**Simulated Average TDS for Selected Locations**
**Main Zone Aquifer (1952-1982)**
**[Alternatives - Alternative 2]**

| | HCI Model | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Alt 1 | | Alt 3B | | Alt 3C | | Alt 4B | | Alt 5B | | Alt 5C | |
| | mg/l | % | mg/l | % | mg/l | % | mg/l | % | mg/l | % | mg/l | % |
| **Western Plain** | | | | | | | | | | | | |
| **Well 26F1,3,4,5** | 1.4 | 0.1% | -0.4 | 0.0% | 0.0 | 0.0% | 2.0 | 0.1% | 3.4 | 0.1% | 3.4 | 0.1% |
| **Well 25D1,3** | 2.6 | 0.1% | -1.9 | -0.1% | -2.0 | -0.1% | -0.1 | 0.0% | -0.7 | 0.0% | -0.7 | 0.0% |
| **Central Plain** | | | | | | | | | | | | |
| **Well 31A3** | 2.3 | 0.1% | -0.1 | 0.0% | -1.5 | -0.1% | 19.6 | 1.1% | 14.2 | 0.8% | 14.2 | 0.8% |
| **Well 29N6** | 1.0 | 0.1% | -0.3 | 0.0% | 1.2 | 0.1% | 9.9 | 0.6% | 15.6 | 0.9% | 14.6 | 0.8% |
| **Eastern Plain** | | | | | | | | | | | | |
| **Well 28M2** | 5.0 | 0.3% | -1.6 | -0.1% | -4.8 | -0.3% | 3.1 | 0.2% | -13.1 | -0.8% | -16.1 | -0.9% |
| **Well 34B1** | 9.3 | 0.9% | -3.2 | -0.3% | -6.8 | -0.7% | -167.1 | -16.6% | -23.2 | -2.3% | -22.2 | -2.2% |
| **City Wells - Avg** | 10.3 | 1.0% | -1.4 | -0.1% | -4.5 | -0.4% | -158.2 | -15.6% | -23.0 | -2.3% | -21.0 | -2.1% |

| | USGS Model | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Alt 1 | | Alt 3B | | Alt 3C | | Alt 4B | | Alt 5B | | Alt 5C | |
| | mg/l | % | mg/l | % | mg/l | % | mg/l | % | mg/l | % | mg/l | % |
| **Western Plain** | | | | | | | | | | | | |
| **Well 26F1,3,4,5** | 15.5 | 0.5% | -41.0 | -1.4% | -35.0 | -1.2% | 21.1 | 0.7% | -54.2 | -1.9% | -55.2 | -1.9% |
| **Well 25D1,3** | 17.3 | 0.8% | -42.6 | -1.9% | -38.3 | -1.7% | 10.4 | 0.5% | -63.5 | -2.8% | -64.5 | -2.8% |
| **Central Plain** | | | | | | | | | | | | |
| **Well 31A3** | -0.1 | 0.0% | -4.0 | -0.2% | -4.0 | -0.2% | -4.5 | -0.2% | -8.1 | -0.4% | -9.1 | -0.4% |
| **Well 29N6** | -3.6 | -0.2% | -1.1 | -0.1% | -1.2 | -0.1% | -8.4 | -0.4% | -2.6 | -0.1% | -2.6 | -0.1% |
| **Eastern Plain** | | | | | | | | | | | | |
| **Well 28M2** | -0.7 | 0.0% | -11.9 | -0.7% | -11.9 | -0.7% | -17.5 | -1.0% | -16.9 | -1.0% | -15.9 | -0.9% |
| **Well 34B1** | 10.8 | 1.1% | 1.7 | 0.2% | 1.6 | 0.2% | -42.0 | -4.3% | -1.8 | -0.2% | -2.8 | -0.3% |
| **City Wells - Avg** | 7.0 | 0.6% | 1.0 | 0.1% | -1.1 | -0.1% | -23.5 | -2.1% | -3.4 | -0.3% | -4.4 | -0.4% |

Alternatives 2, 3B and 3C due to both increased low flows at the Narrows resulting from more releases for fish from Cachuma Reservoir and more releases of SWP water directly into the river during the releases for fish through the outlet works during wet and above-normal years.

In general, the results for both models are generally consistent, although some differences in magnitude occur that may be explained by differences in boundary conditions, calibration approach and conceptual models. The ground water model results tend to favor Alternative 4B in the Eastern Plain. However, Alternative 4B would increase the TDS in the alluvial groundwater basin immediately upstream of the Lompoc Narrows, which is the Santa Rita sub-unit, due to the Below Narrows Exchange.

## 2. Time Series Graphs of USGS Model Results

Time series graph of water levels and TDS are presented as Figures 9 to 32 and are discussed briefly below for each of the six locations (Figure 8) selected for comparisons between the EIR alternatives. In general, the graphs show a degree of similarity between the alternatives which make it difficult to identify clear difference between them. In comparison, the changes in TDS shown in Stetson Technical Memorandum No. 4 showed large historical increases in TDS compared to the relatively minor differences simulated for most of the EIR alternatives. The times series graphs are shown for the entire calibration period of each model, unlike the TDS Tables 6 and 7 which are based on averages from the period 1952-82.

Eastern Lompoc Plain

The Eastern Plain is greatly influenced by flows and TDS of surface water at the Narrows. The simulated TDS in the Main Zone in the eastern Lompoc Plain using the USGS model are shown for two selected well locations in Figures 9 and 10. Figure 9 shows the simulated TDS at Eastern Plain well 34B1. Alternative 4B clearly results in a lower TDS than the others at this location. At increasing distances from the Narrows, a greater influence on ground water quality in the Main Zone appears to be the TDS of water in overlying or underlying aquifers or along margins as shown in Figures 10 which shows the simulated TDS in the Main Zone for Well 28M2 on the western side of the eastern Lompoc Plain. There is little difference between the results for each alternative at this location, which begins to show a more subdued response more characteristic of wells in the Central Plain.

Figure 11 shows the water level response in the Main Zone near the Lompoc Narrows. Figure 12 shows a similar but more subdued water level response. The simulated water level

response in the Eastern Plain to all alternatives is very similar and none stands out as having a clear advantage over the others with respect to ground water levels in the Main Zone in this area.

Central Lompoc Plain

The simulated TDS response in the Central Plain shows the dampened response to flow and TDS changes at the Narrows with increasing distance (Figures 13 and 14). The lower permeability of overlying sediments and distance from the Narrows has the effect of allowing the simulated TDS for all alternatives to become very similar. The simulated water levels for these same locations in the Lompoc Plain are shown in Figures 15 and 16. Both locations show a similar response to each Alternative such that none is clearly superior over the others. Alternatives 5B and 5C are slightly higher than Alternatives 2, 3B, and 3C due to the increased releases for fish from Cachuma Reservoir.

Western Lompoc Plain

The simulated TDS graphs for each alternative in the Western Plain are shown in Figures 17 and 18. The differences between alternatives are small relative to the magnitude of the TDS in the Main Zone in the Western Plain sub-area but shows more variation than TDS in the Central Plain (Figures 13 and 14) caused by greater inflow of poor quality water from adjacent boundaries of underlying formations. Figures 19 and 20 show the water level response in the Main Zone beneath the Western Lompoc Plain. The water levels in this region show similar responses as those in the Eastern and Central Plain. There appears to be little difference between the alternatives.

### 3. Time Series Graphs of HCI Model Results

The graphs of results for the HCI model contrast with those of the USGS model. The HCI model results appear smoother due to the annual stress periods.

Eastern Lompoc Plain

The simulated TDS in the Main Zone in the eastern Lompoc Plain using the HCI model are shown in Figures 21 and 22. Figure 21 shows the simulated TDS at Eastern Plain Well 34B1. The simulated TDS in the Main Zone is similar for all the EIR alternatives, except Alternative 4B. In Alternative 4B, the direct recharge of much lower TDS water (approximately 300 mg/L) in the Santa Ynez River bed near this well location, lowers the simulated TDS in the aquifer in that area by about 150 mg/L relative to the other alternatives. The minor differences in

simulated TDS at this location between the other alternatives are a result of the similarity in the simulated flow and TDS at the Narrows for those alternatives.

Figure 22 shows the simulated TDS in the Main Zone for Well 28M2 on the western side of the Eastern Plain. There is little significant difference between the results for each alternative at this location. The effects of direct recharge of high quality water in Alternative 4B appear to provide little benefit at this distance from the recharge area. The long-term trend is relatively flat, showing little response to hydrology.

Figures 23 and 24 show the water level response in the Main Zone near the Lompoc Narrows. The simulated water level response in the Eastern Plain to all alternatives is very similar and none stands out as showing clear advantages over another in the Main Zone. Water levels under Alternatives 5B and 5C are slightly higher than Alternatives 2, 3B, and 3C due to the increased releases for fish from Cachuma Reservoir. Figure 24 shows a similar water level response to that shown in Figure 23, but is more subdued due to distance from the area of highest recharge and highest degree of hydraulic communication with surface water near the Narrows.

Central Lompoc Plain

The simulated TDS response in the Central Plain is more subdued than near the Narrows due to the lower permeability of overlying sediments and increased distance from the primary area of stream recharge (below Lompoc Narrows) (Figures 25 and 26). There is no significant difference between the alternatives in this area. However, the TDS for Alternatives 5C and 4B is slightly higher compared to other alternatives although they would be expected to be slightly lower. There is no explanation for these apparently anomalous results.

The simulated water levels for these Central Lompoc Plain locations are shown in Figures 27 and 28. Both locations show a similar response to each alternative. Alternatives 5B and 5C are slightly higher than Alternatives 2, 3B, and 3C possibly due to the increased releases for fish from Cachuma Reservoir.

Western Lompoc Plain

The simulated TDS for each alternative in the Western Plain is shown in Figures 29 and 30. The results for each of the alternatives are very similar and show little variation over time, due to hydrology. Figures 31 and 32 show the water level response in the Main Zone beneath the Western Lompoc Plain. There is little difference in water levels between the alternatives and

they show only a minor response to hydrologic trends particularly in the model study period from 1952 through 1982.

## 4. REFERENCES


Bright, D.J., Stamos, C.L., Martin, P., and D.B. Nash. 1992. Groundwater Hydrology and Quality in the Lompoc Area, Santa Barbara County, California, 1987-88. USGS Water-Resources Investigations Report 91-4172.

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Stetson Engineers. 2005. Technical Memorandum #5. Hydrologic Impact Analysis of Possible Cachuma Operations Alternatives. Prepared for State Water Resources Board. August 11, 2005.

Stetson Engineers. 2006. Technical Memorandum #6. Hydrologic Analyses of Daily Flows for Impact Assessment on Steelhead. April 24, 2006.

# Figures

**Figure 1**

# Lake Cachuma Total Dissolved Solids (TDS) for EIR Alternatives using SYRHM 0498 1942 through 1993

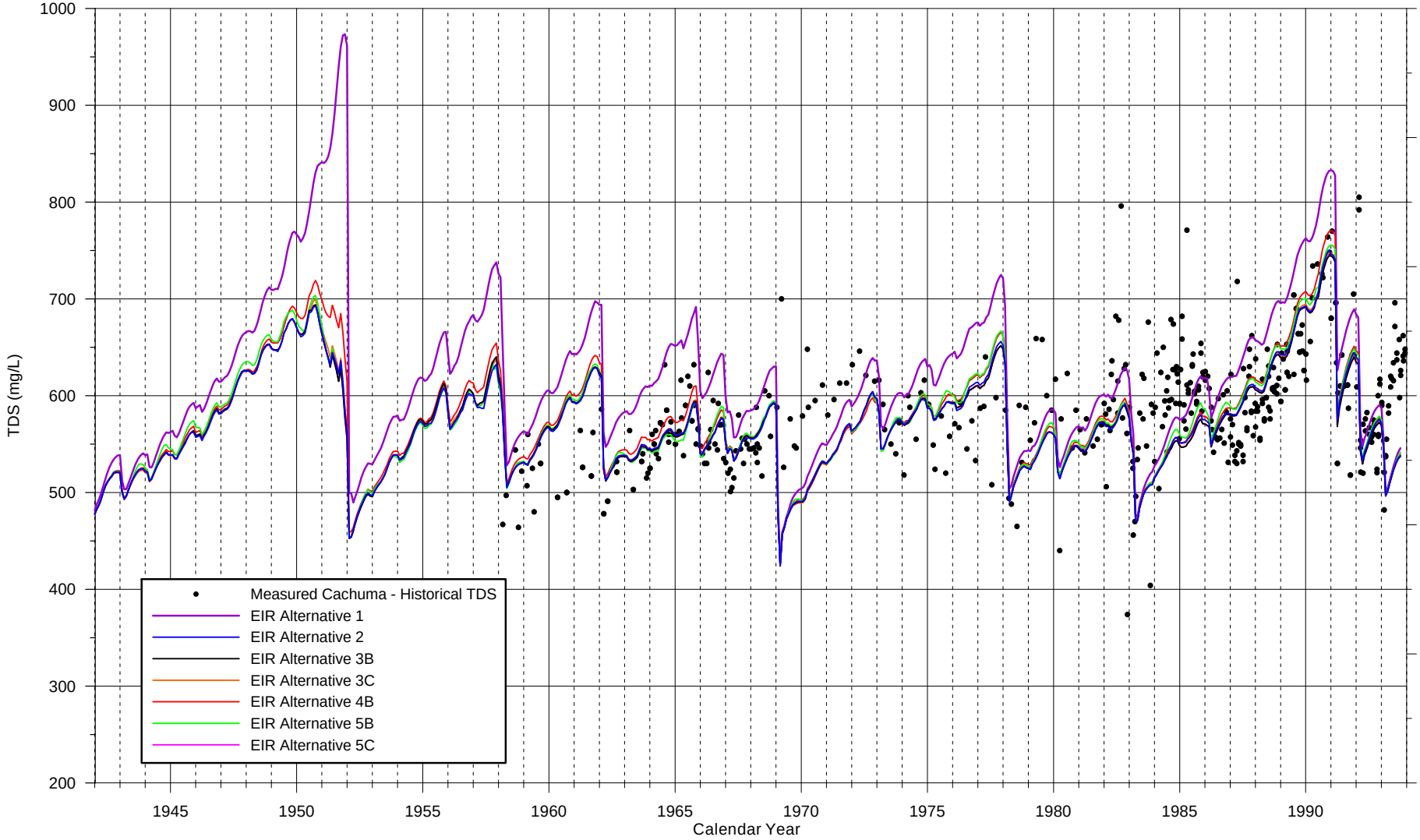
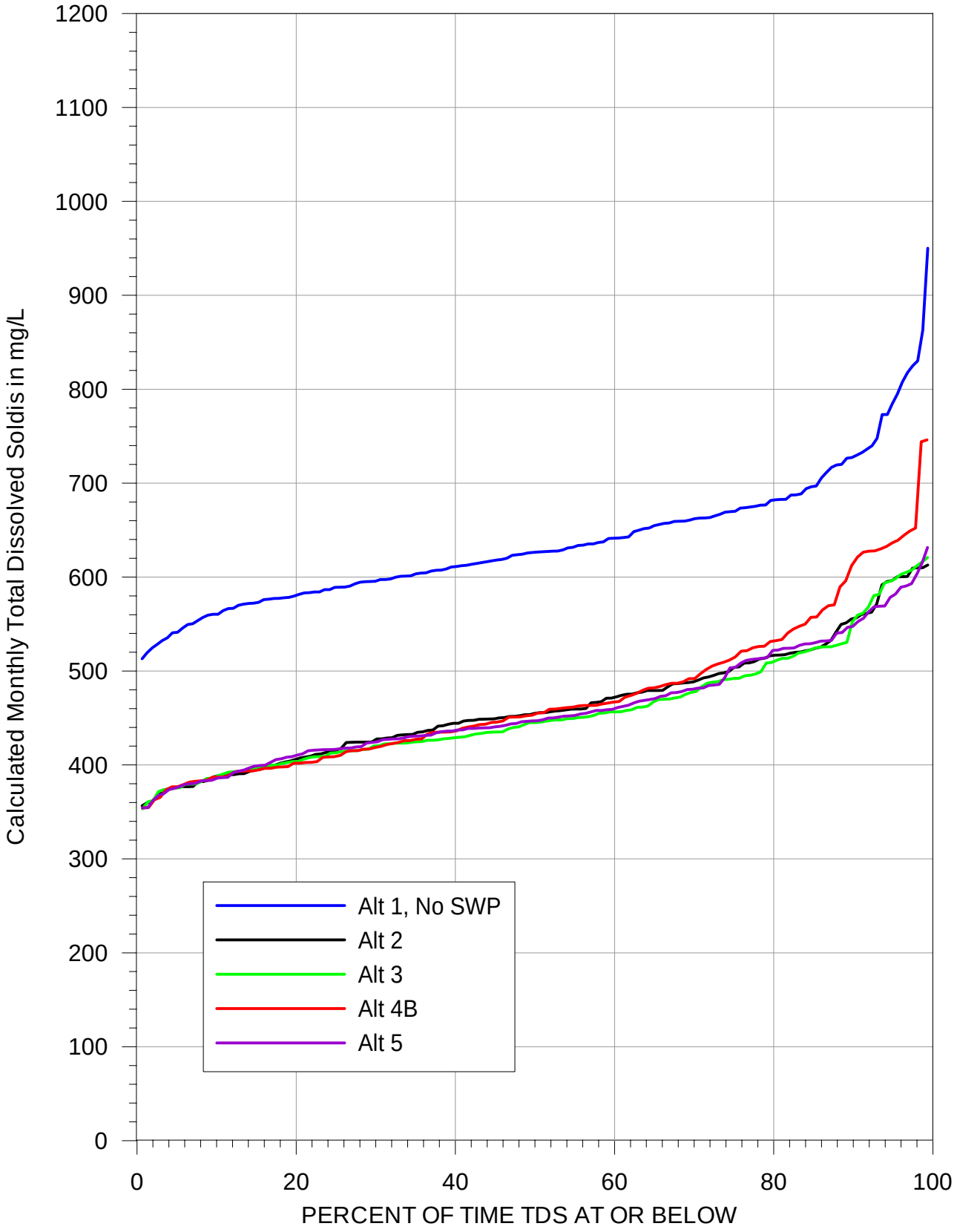


**Figure 2**

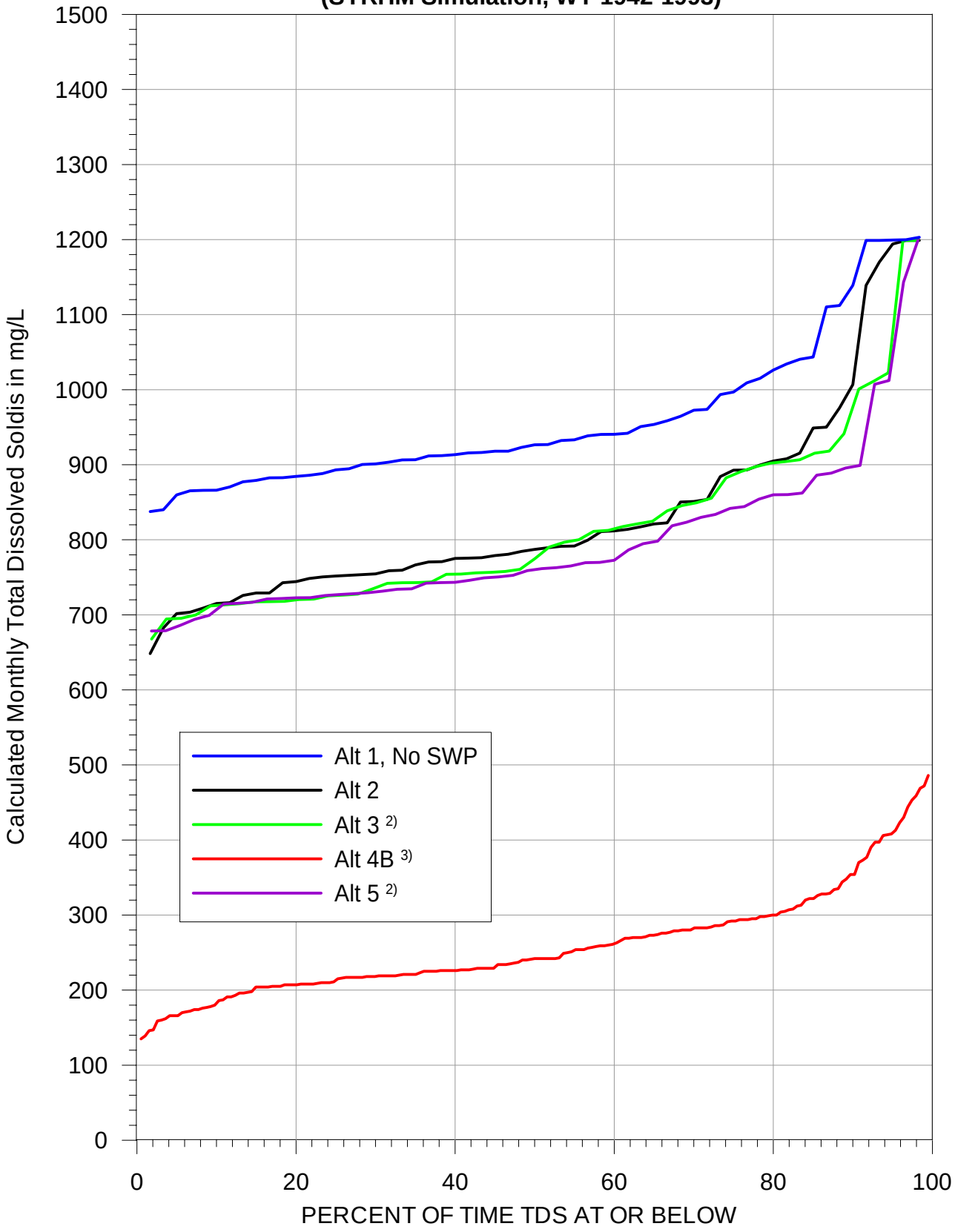
**Frequency of TDS Concentrations in Water Rights Releases Below the Dam**
**(SYRHM Simulation, WY 1942-1993)**




1) Results from EIR Alternatives 3C and 5C are plotted here; Alts 3B and 5B are very similar to 3C and 5C, respectively.
2) Water rights release TDS for ANA releases are shown here for 4B.

**Figure 3**

## Frequency of TDS Concentrations in Water Rights Releases at Lompoc Narrows [1] (SYRHM Simulation, WY 1942-1993)




1) Frequency does not include months of no flow or flows less than 0.5 cfs at the Narrows.
2) Results from EIR Alternatives 3C and 5C are plotted here; Alts 3B and 5B are very similar to 3C and 5C, respectively.
3) State Water Project TDS during Below Narrows Account water right releases.

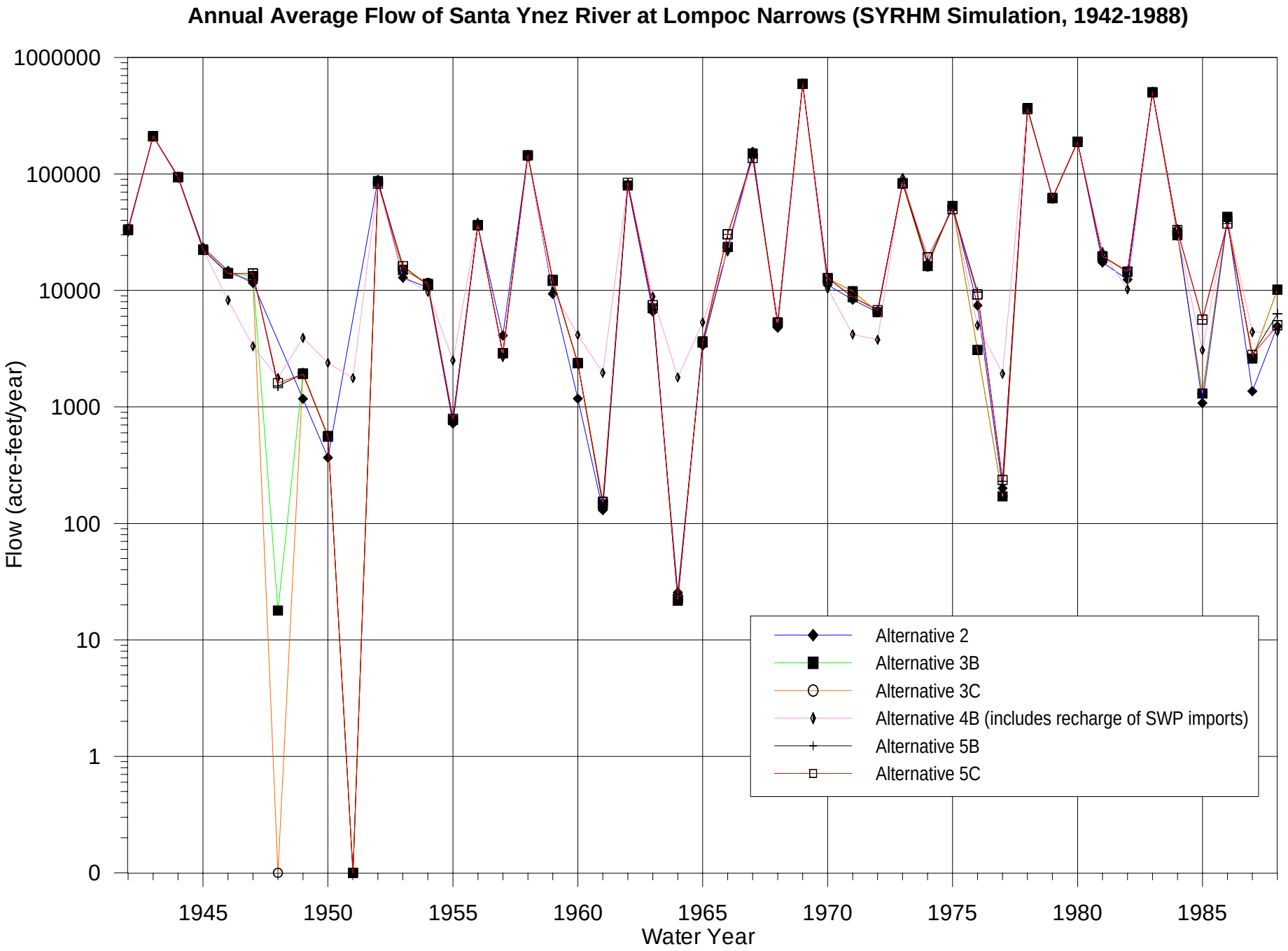
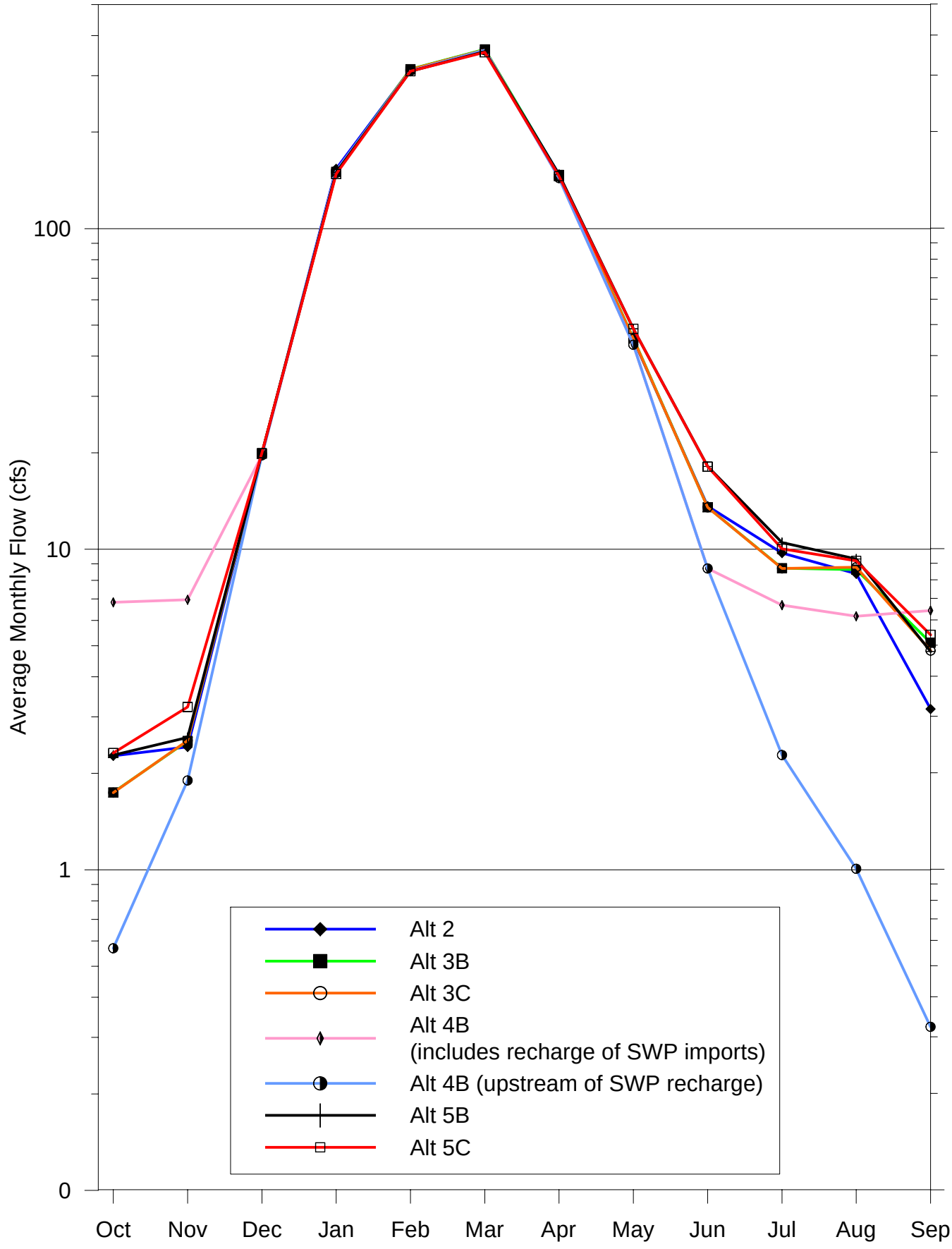

Annual Average Flow of Santa Ynez River at Lompoc Narrows (SYRHM Simulation, 1942-1988)
Flow (acre-feet/year)
1000000
100000
10000
1000
100
10
1
0
1945
1950
1955
1960
1965
1970
1975
1980
1985
Water Year
Alternative 2
Alternative 3B
Alternative 3C
Alternative 4B (includes recharge of SWP imports)
Alternative 5B
Alternative 5C

Figure 4

Figure 5

**Simulated Mean Streamflow at the LompocNarrows (1942-1988)**



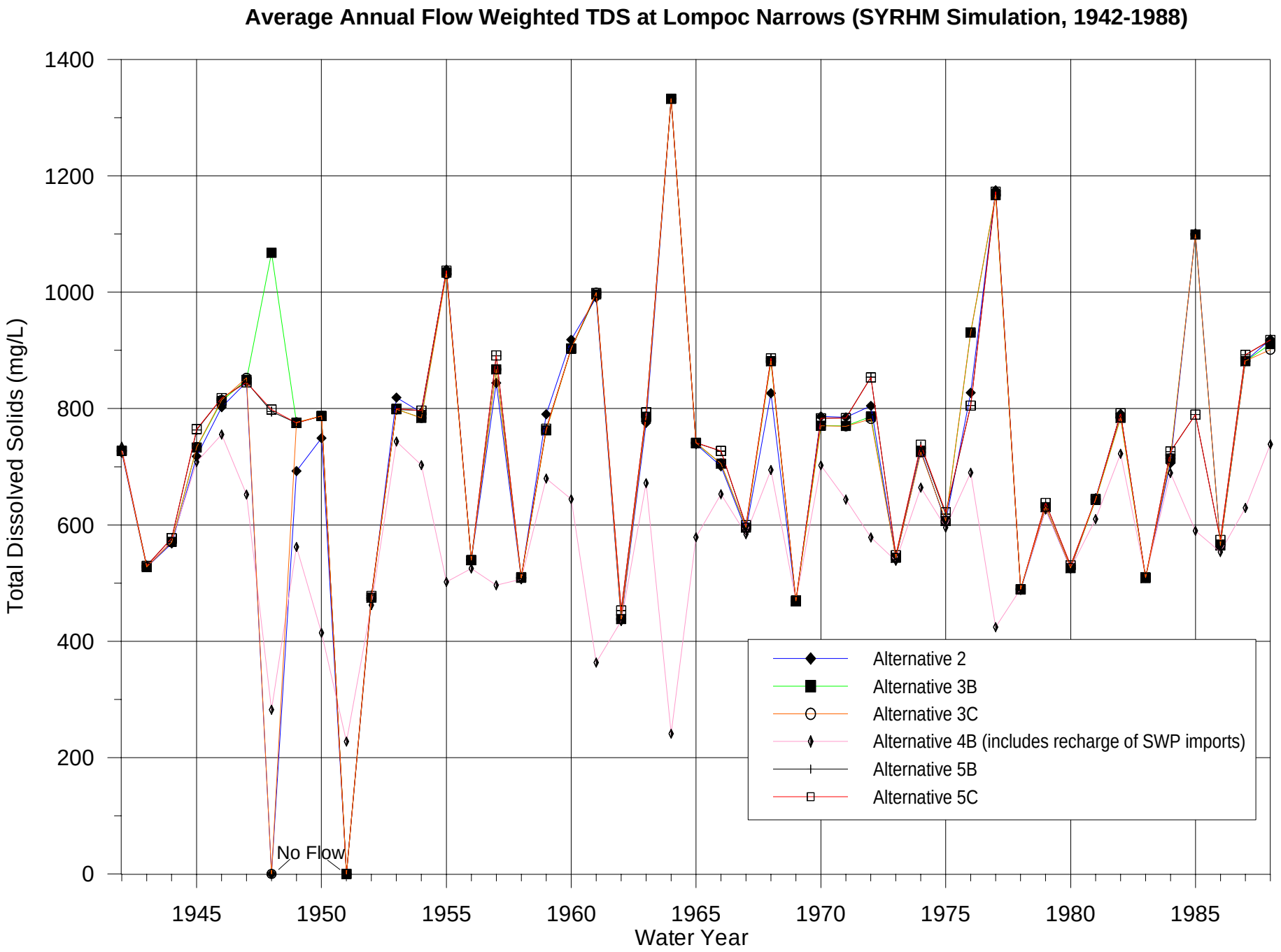
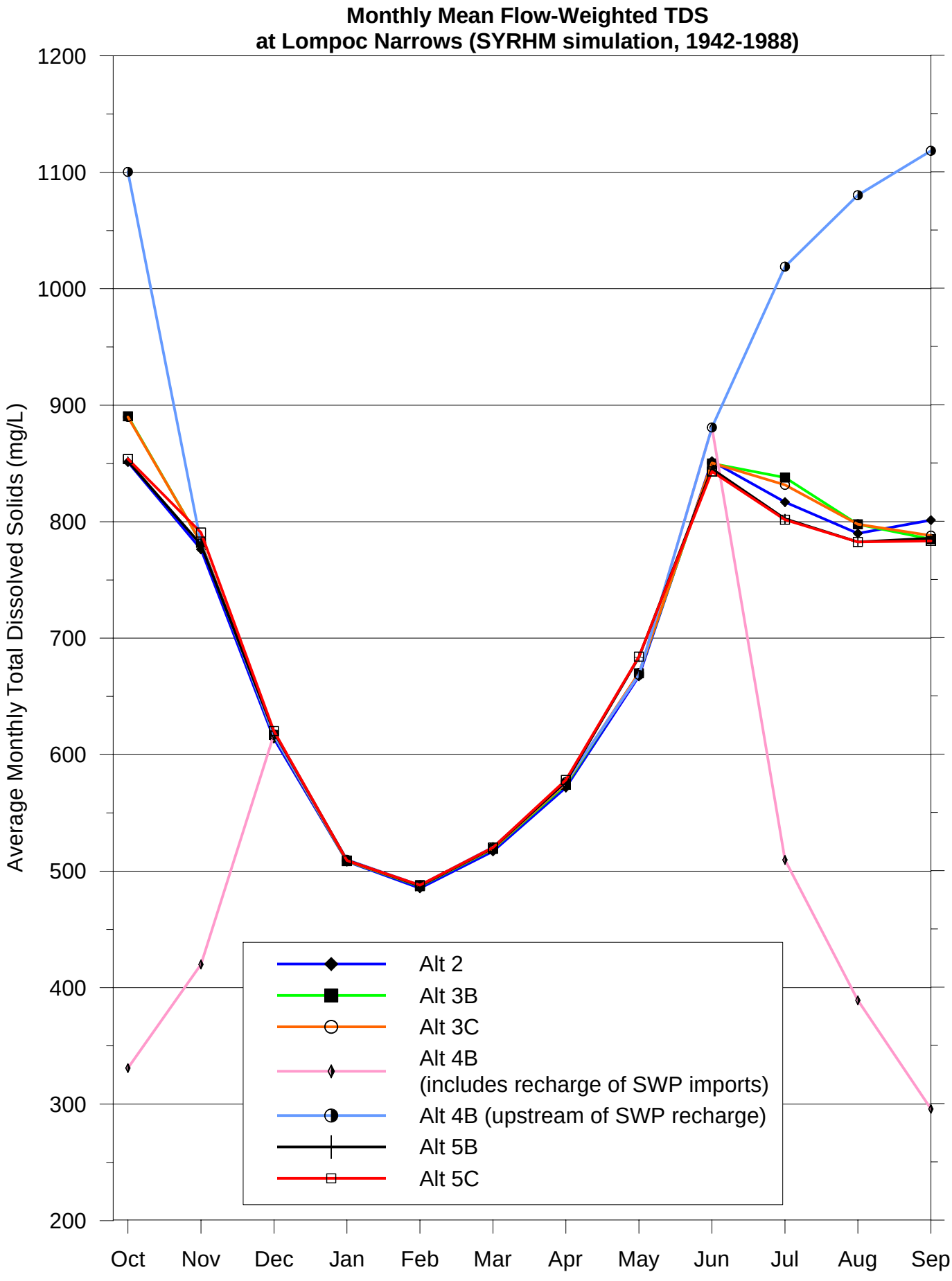
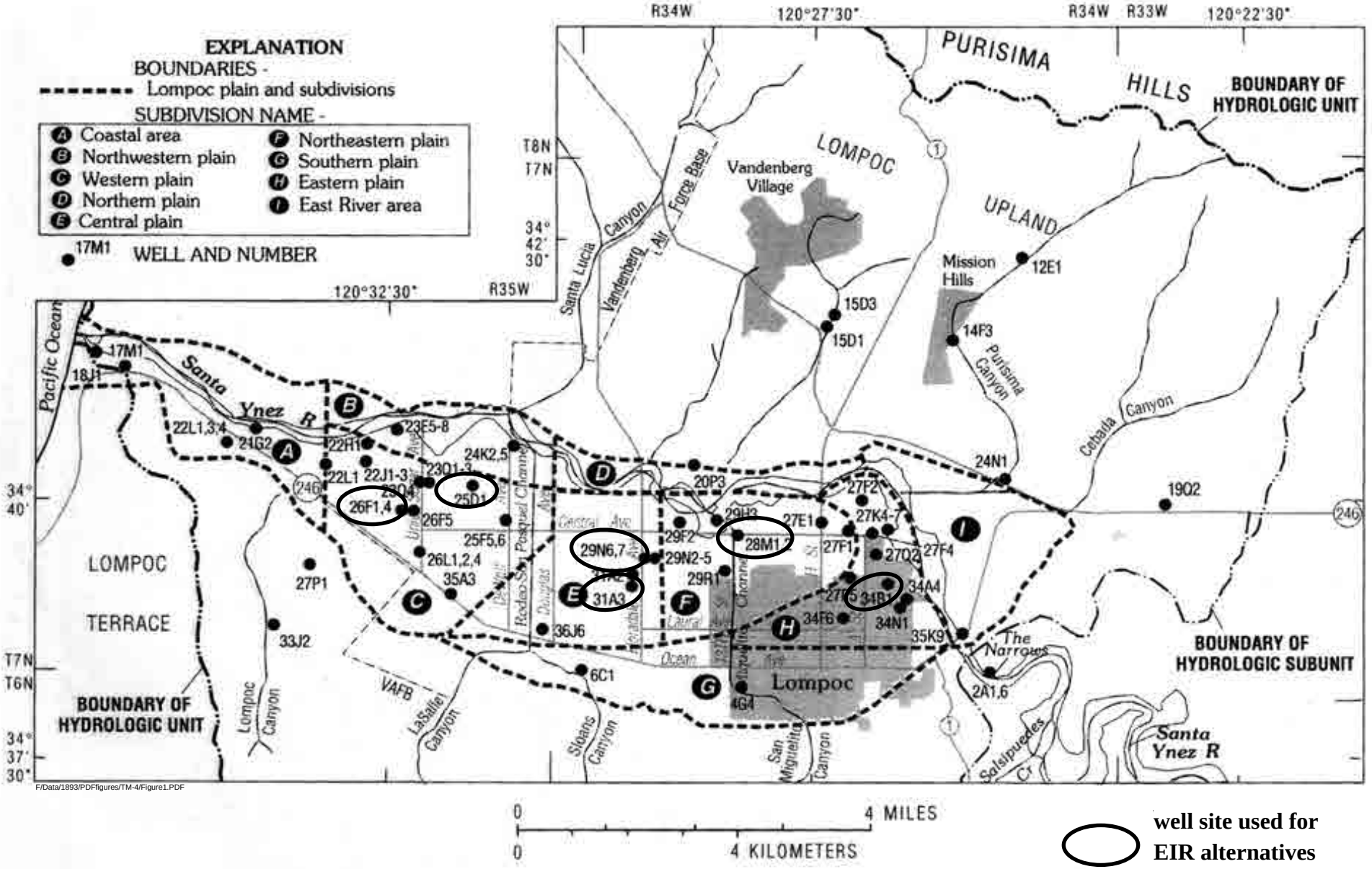

Average Annual Flow Weighted TDS at Lompoc Narrows (SYRHM Simulation, 1942-1988)
Total Dissolved Solids (mg/L)
1400
1200
1000
800
600
400
200
0
1945
1950
1955
1960
1965
1970
1975
1980
1985
Water Year
No Flow
Alternative 2
Alternative 3B
Alternative 3C
Alternative 4B (includes recharge of SWP imports)
Alternative 5B
Alternative 5C

Figure 6

Figure 7


Monthly Mean Flow-Weighted TDS
at Lompoc Narrows (SYRHM simulation, 1942-1988)
Average Monthly Total Dissolved Solids (mg/L)
1200
1100
1000
900
800
700
600
500
400
300
200
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Alt 2
Alt 3B
Alt 3C
Alt 4B
(includes recharge of SWP imports)
Alt 4B (upstream of SWP recharge)
Alt 5B
Alt 5C




**Subdivisions of Lompoc Plain and Location of Wells**
**(Source: Bright, et. al. 1997)**

**FIGURE 8**

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Eastern Lompoc Plain Well#:7N/34W-34B1

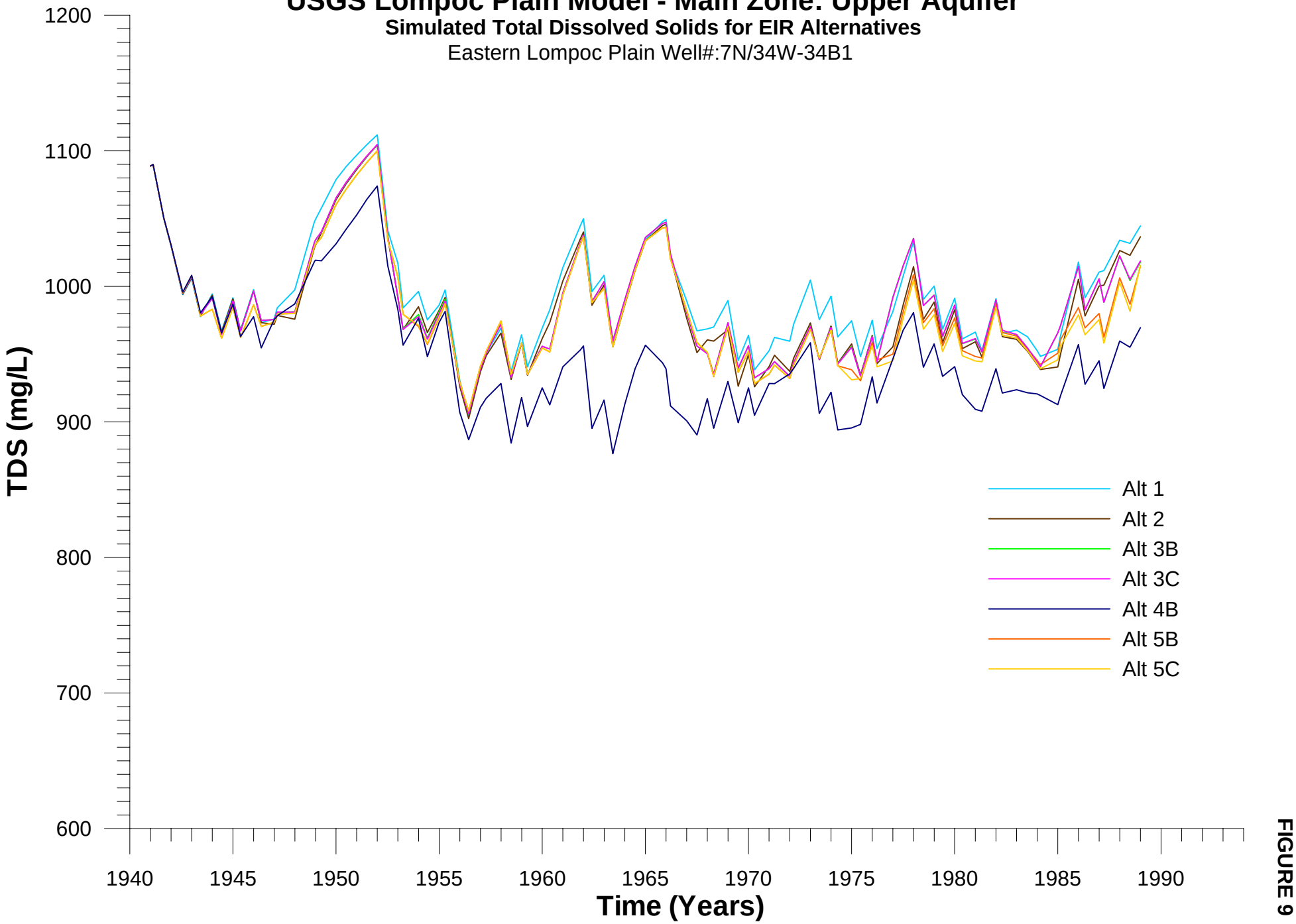



FIGURE 9

F:\DATA\1815\GWMODELS\POST\Alt\USGS\TDS34B1_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Eastern Lompoc Plain Well#:7N/34W-28M2

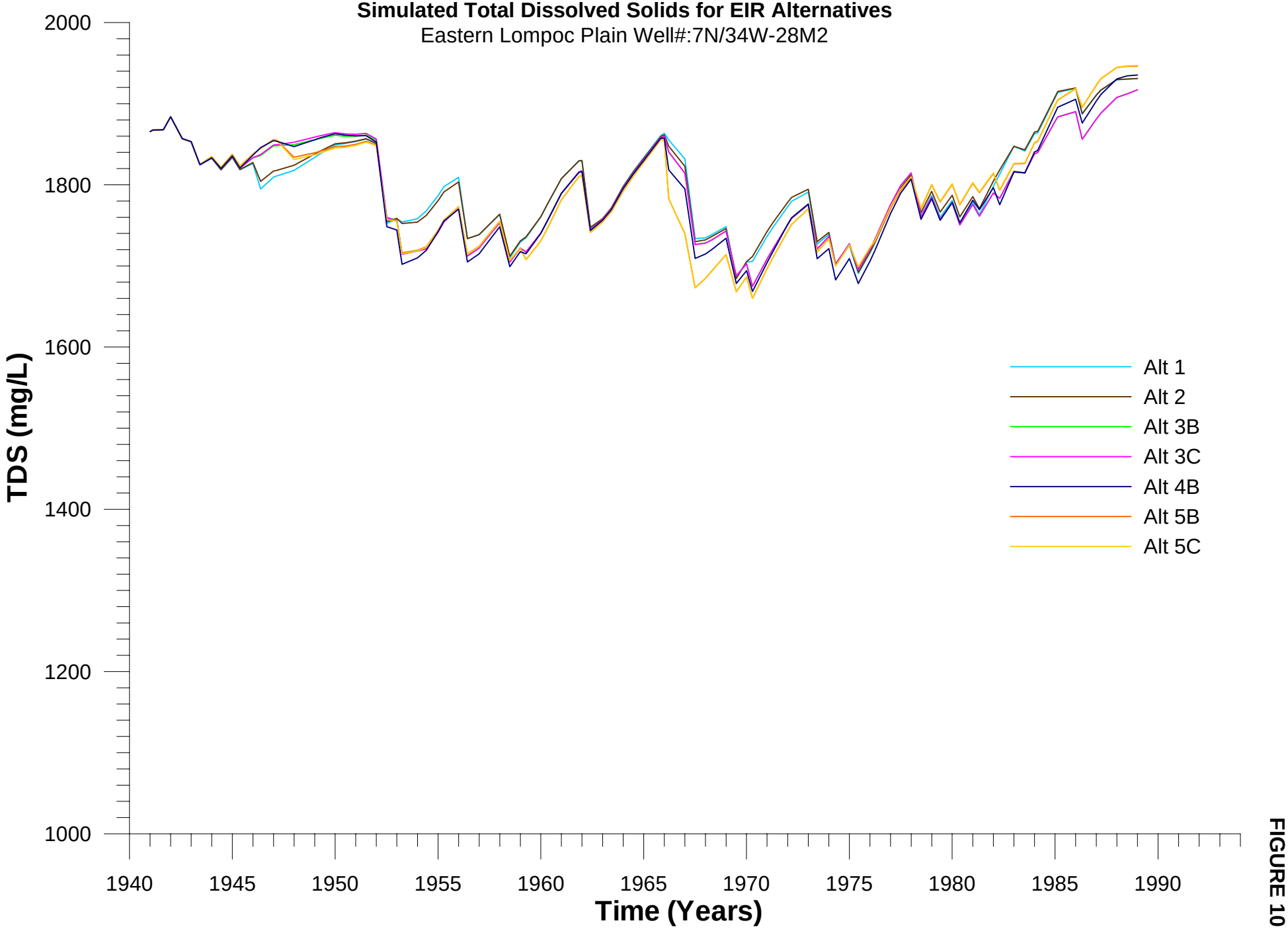



FIGURE 10

F:\DATA\1815\GWMODELS\POST\Alt\USGS\TDS28M2_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Eastern Lompoc Plain Well#:7N/34W-34B1

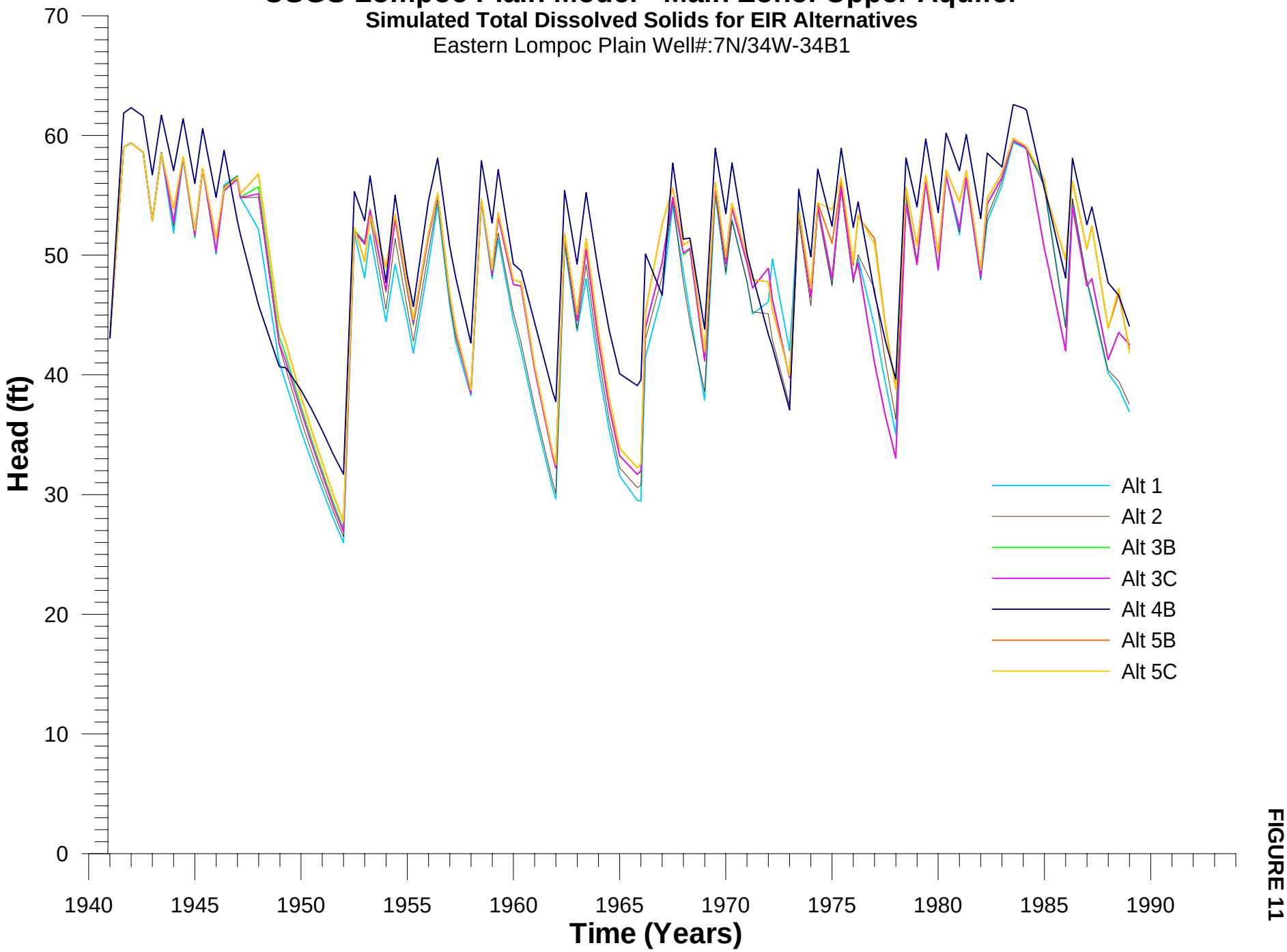



FIGURE 11

F:\DATA\1815\GWMODELS\POST\Alt\USGS\WL\WL34B1_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Eastern Lompoc Plain Well#:7N/34W-28M2

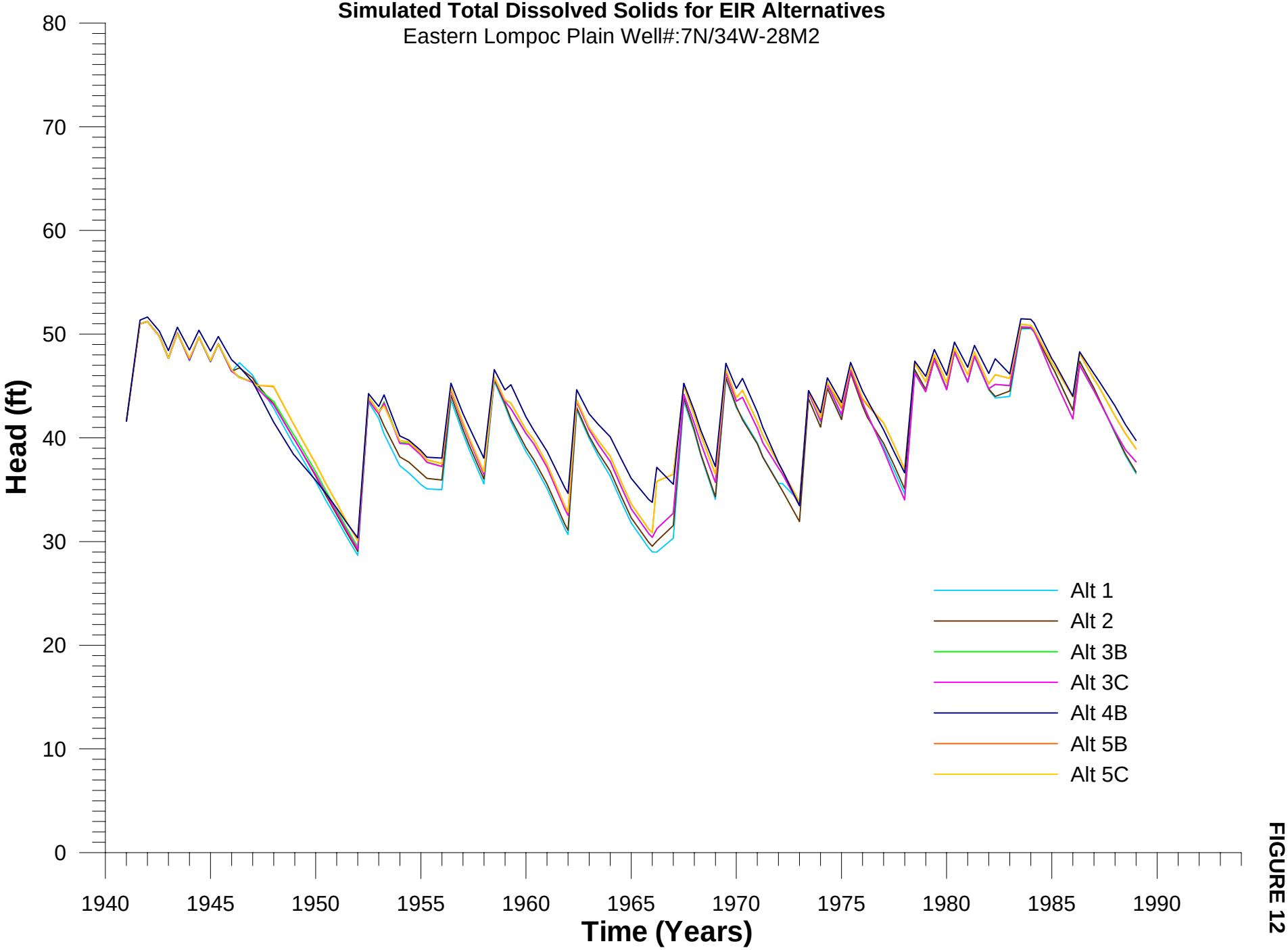



FIGURE 12

F:\DATA\1815\GWMODELS\POST\Alt\USGS\WL\WL28M2_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Central Lompoc Plain Well#:7N/34W-29N6

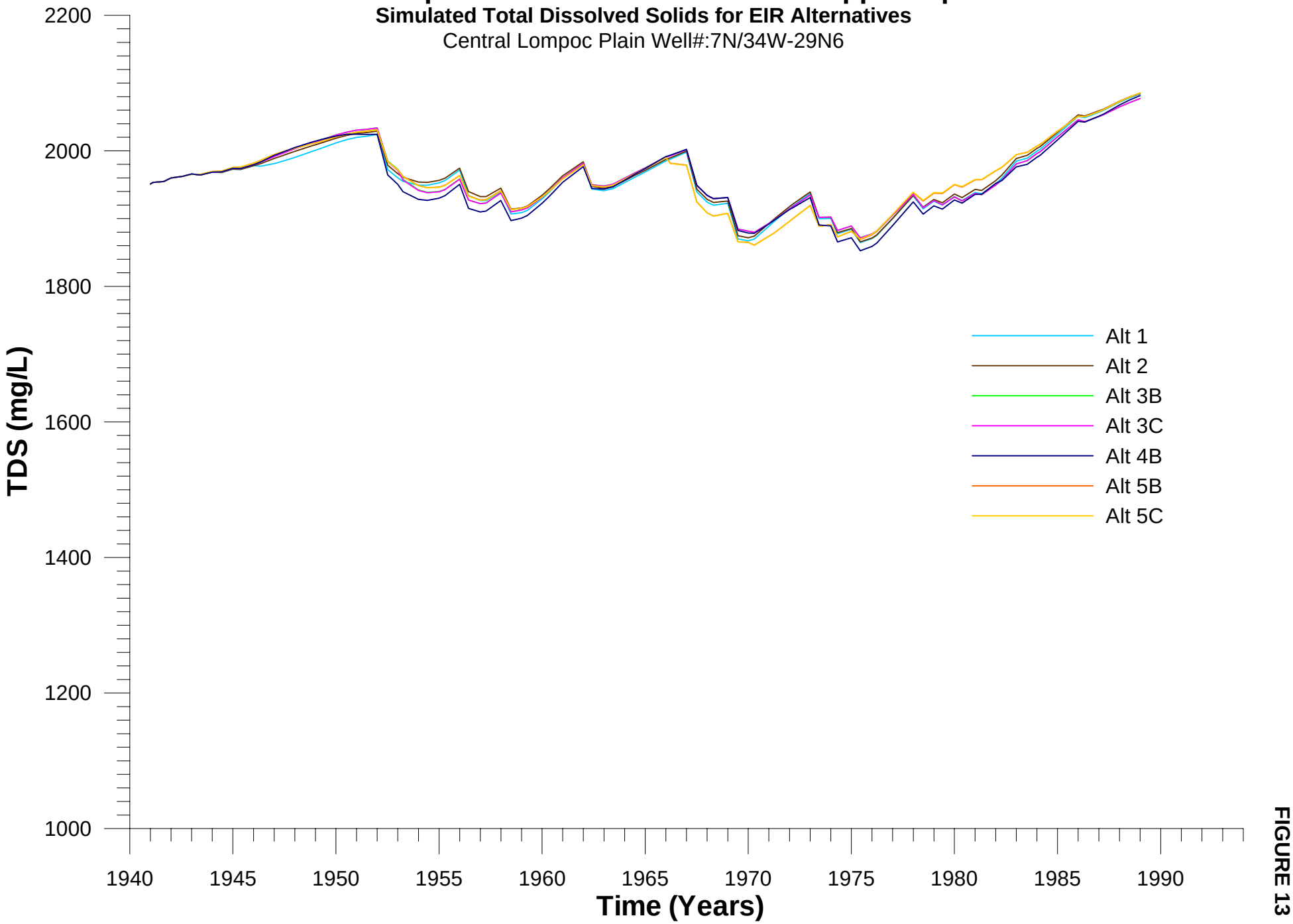



FIGURE 13

F:\DATA\1815\GWMODELS\POST\Alt\USGS\TDS26F1_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Central Lompoc Plain Well#:7N/34W-31A3

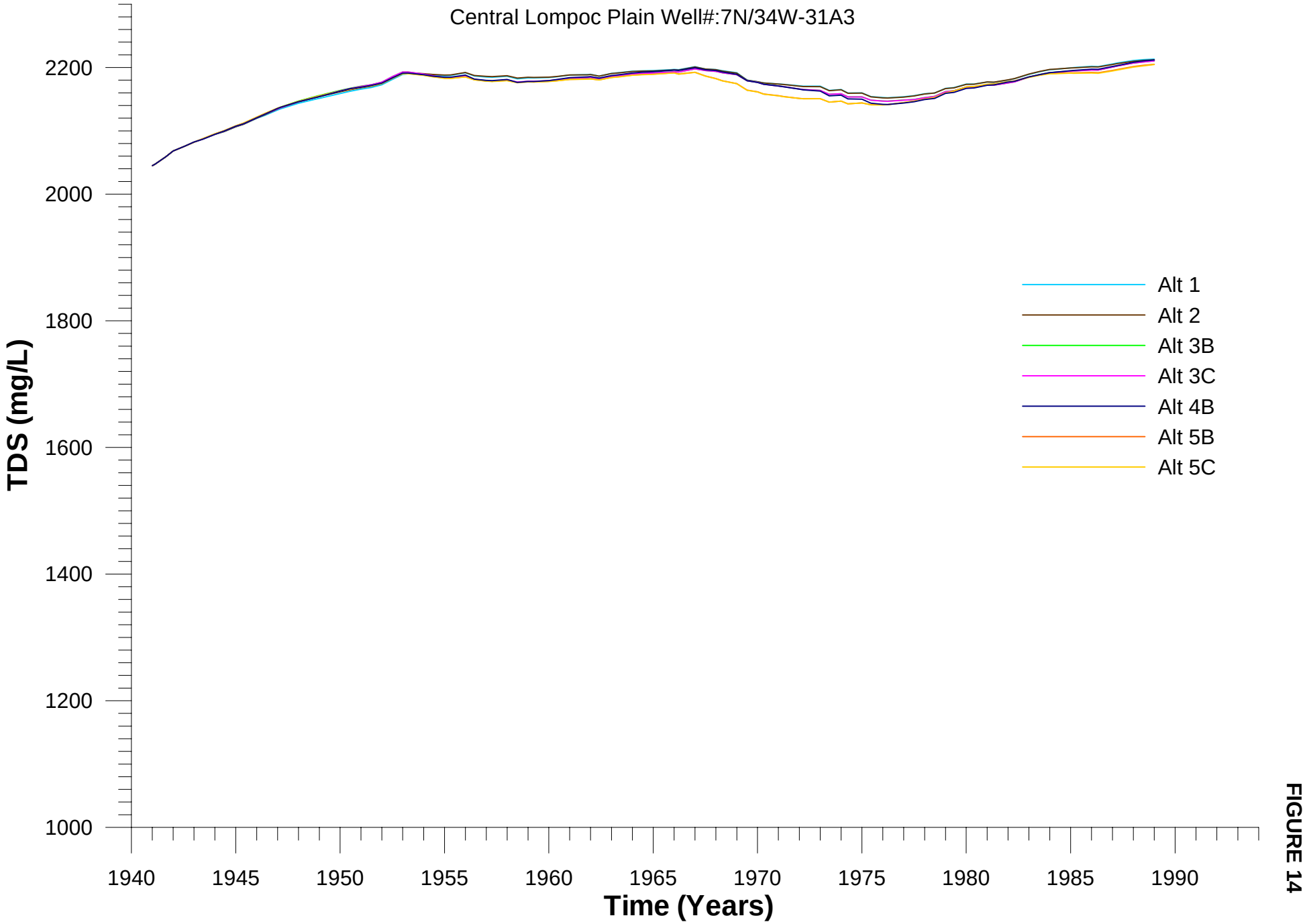



FIGURE 14

F:\DATA\1815\GWMODELS\POST\Alt\USGS\TDS31A3_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Central Lompoc Plain Well#:7N/34W-29N6

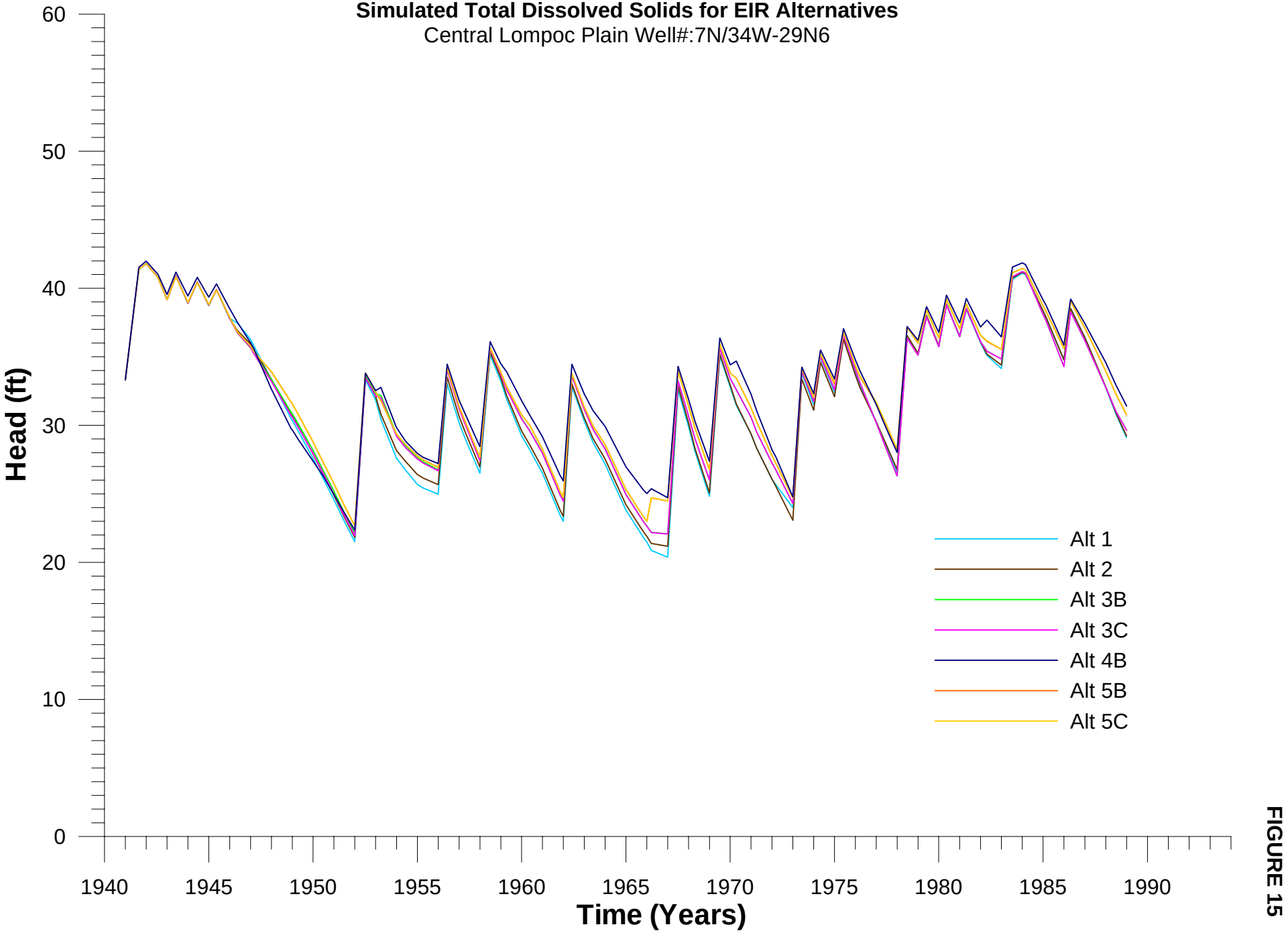



FIGURE 15

F:\DATA\1815\GWMODELS\POST\Alt\USGS\WL\WL26F1_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Central Lompoc Plain Well#:7N/34W-31A3

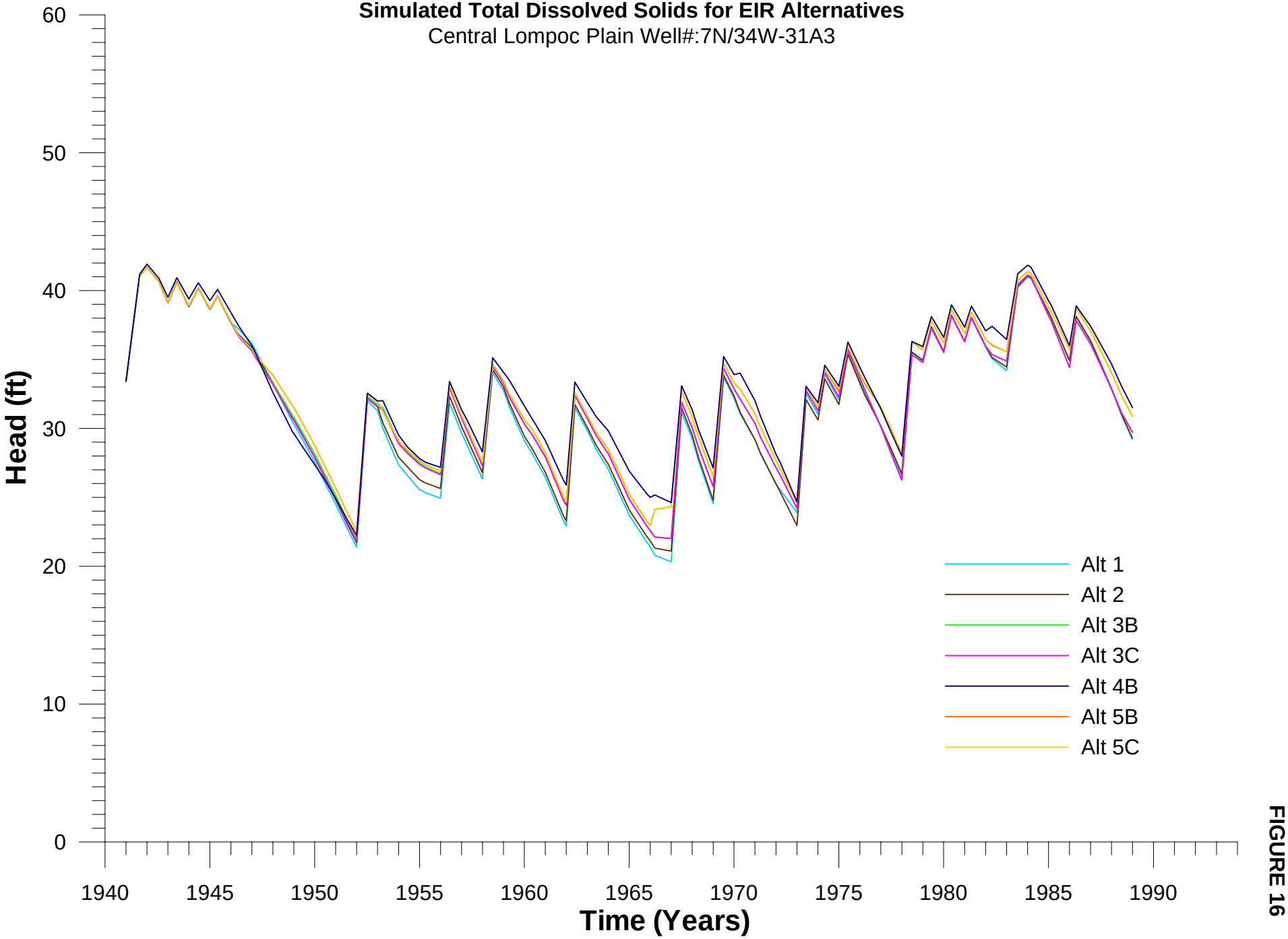



FIGURE 16

F:\DATA\1815\GWMODELS\POST\Alt\USGS\WL\WL31A3_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Western Lompoc Plain Well#:7N/35W-25D1,3

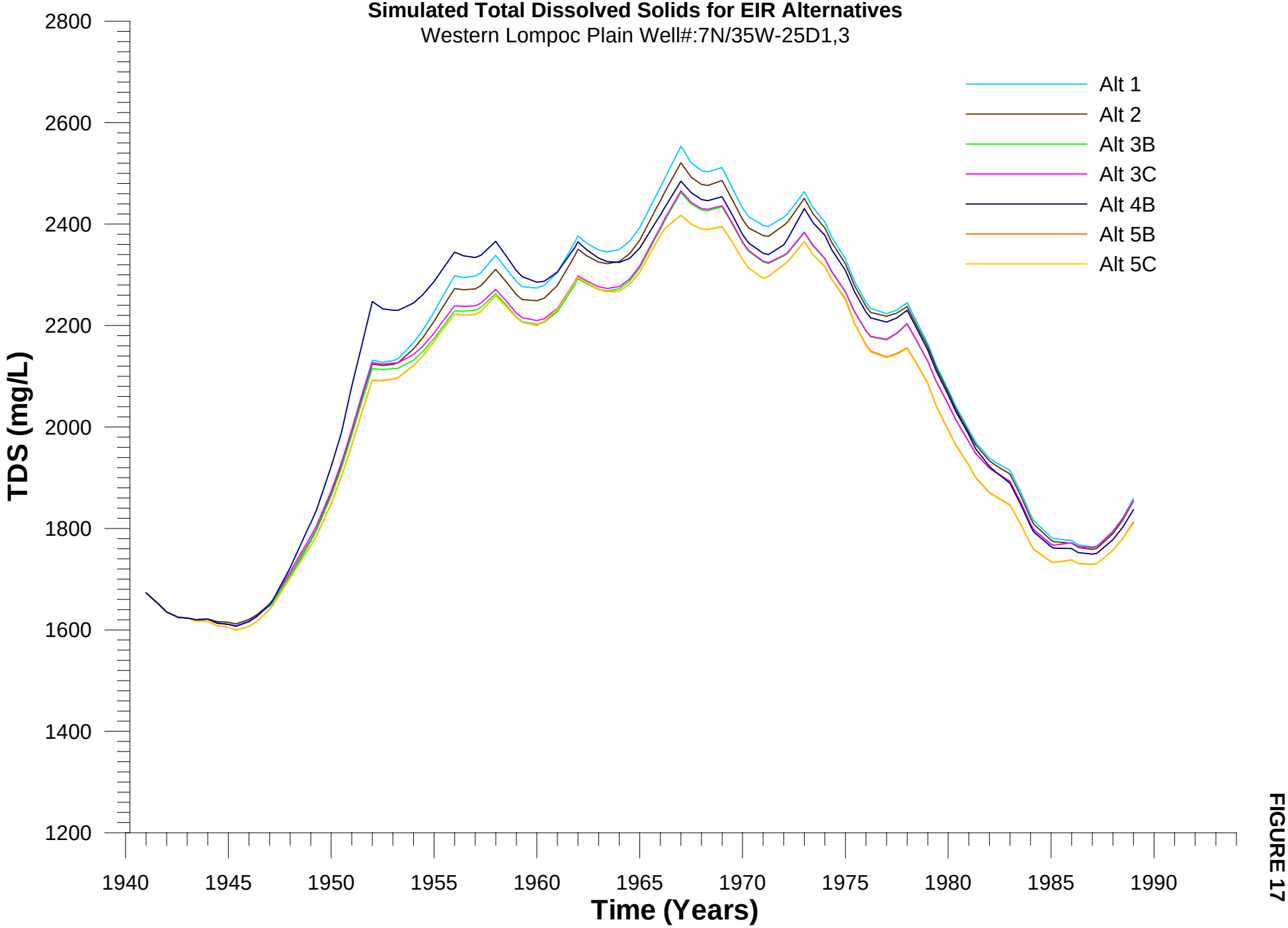



FIGURE 17

F:\DATA\1815\GWMODELS\POST\Alt\USGS\TDS25D1 AltsEIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Western Lompoc Plain Well#:7N/35W-26F1

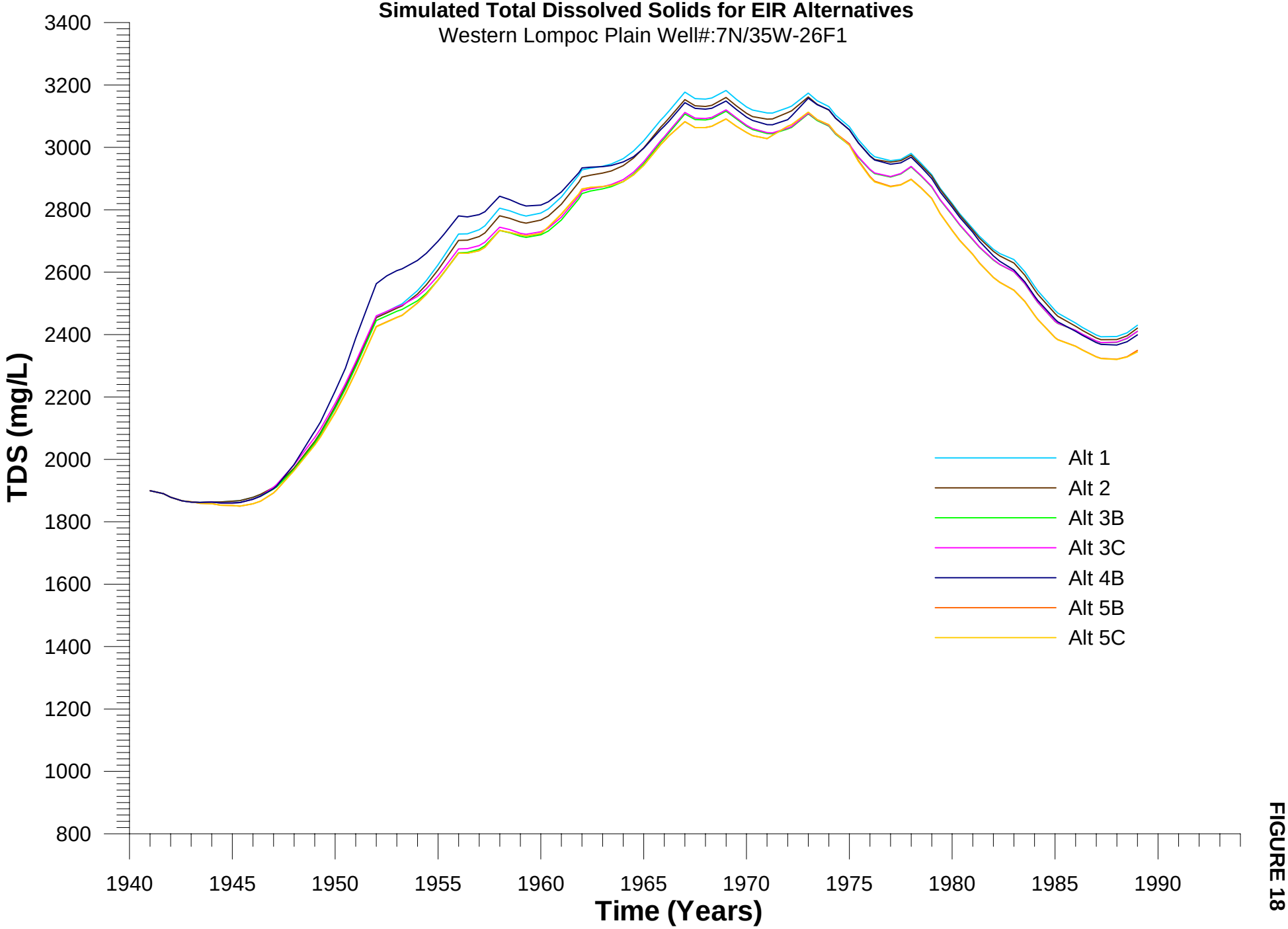



FIGURE 18

F:\DATA\1815\GWMODELS\POST\Alt\USGS\TDS26F1_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Water Levels for EIR Alternatives**

Western Lompoc Plain Well#:7N/35W-25D1,3

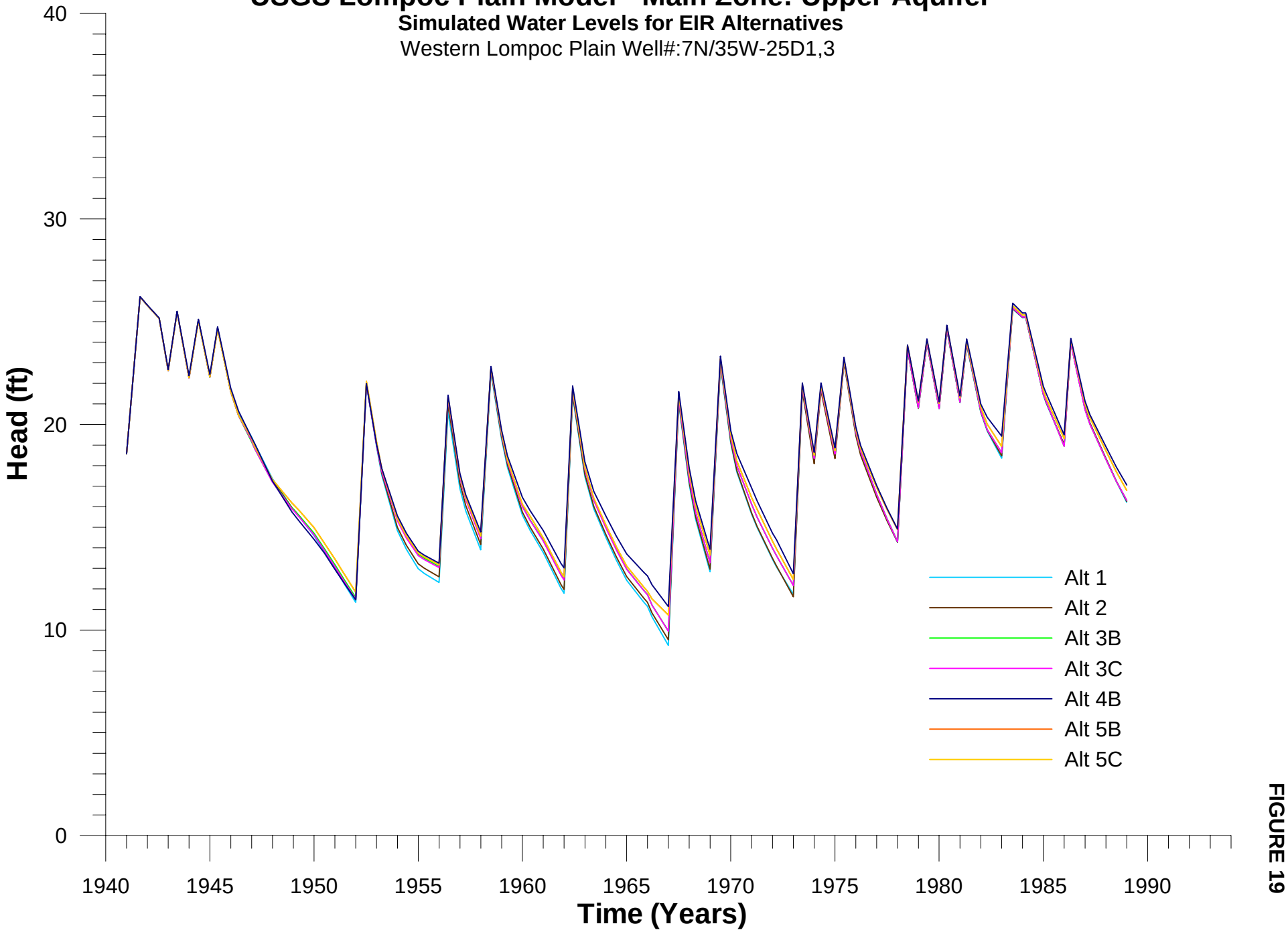



FIGURE 19

F:\DATA\1815\GWMODELS\POST\Alts\USGS\WL\WL25D1_USGS_EIR.GRF

# USGS Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Western Lompoc Plain Well#:7N/35W-26F1

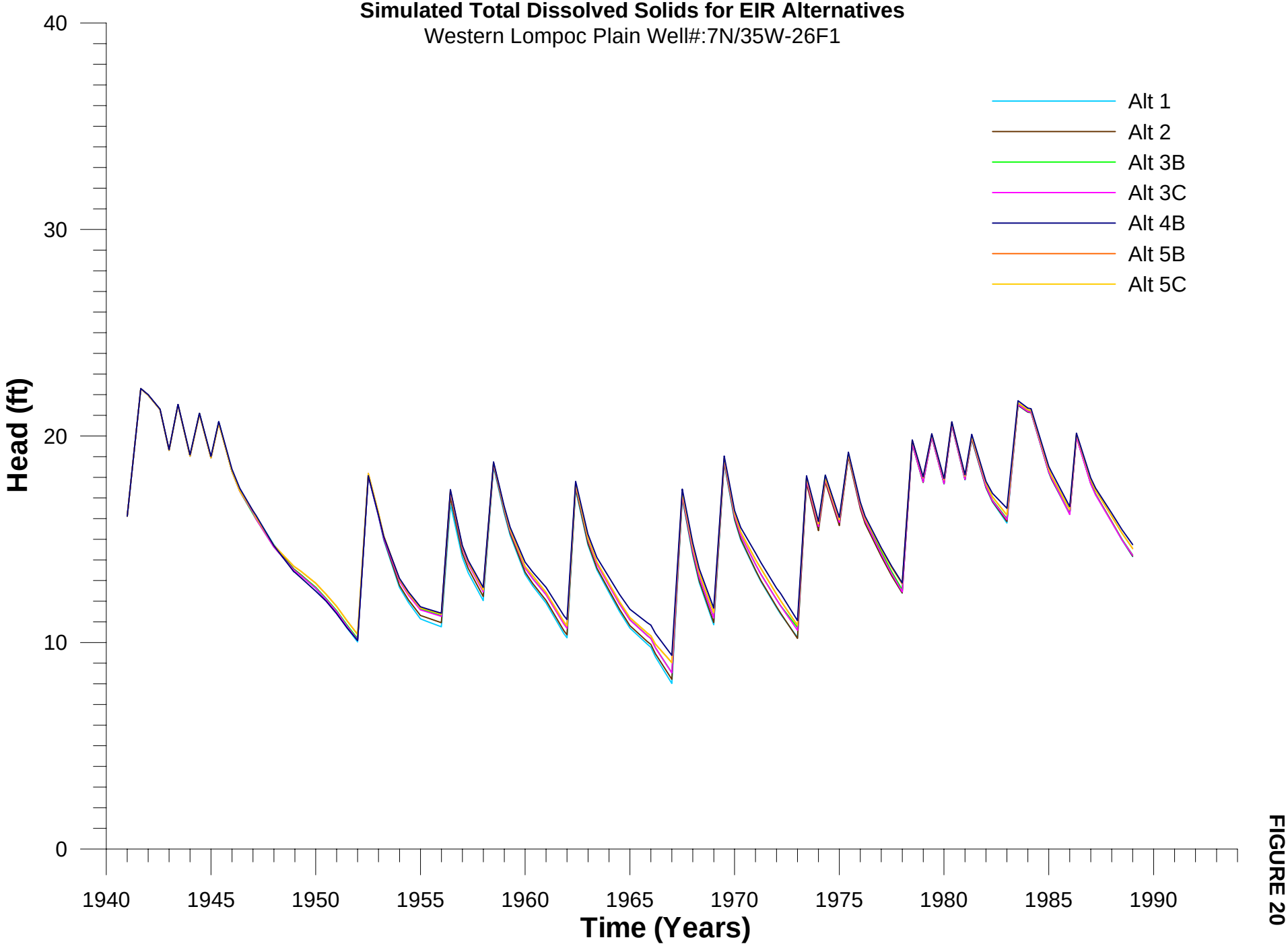



FIGURE 20

F:\DATA\1815\GWMODELS\POST\Alt\USGS\WL\WL26F1_USGS_EIR.GRF

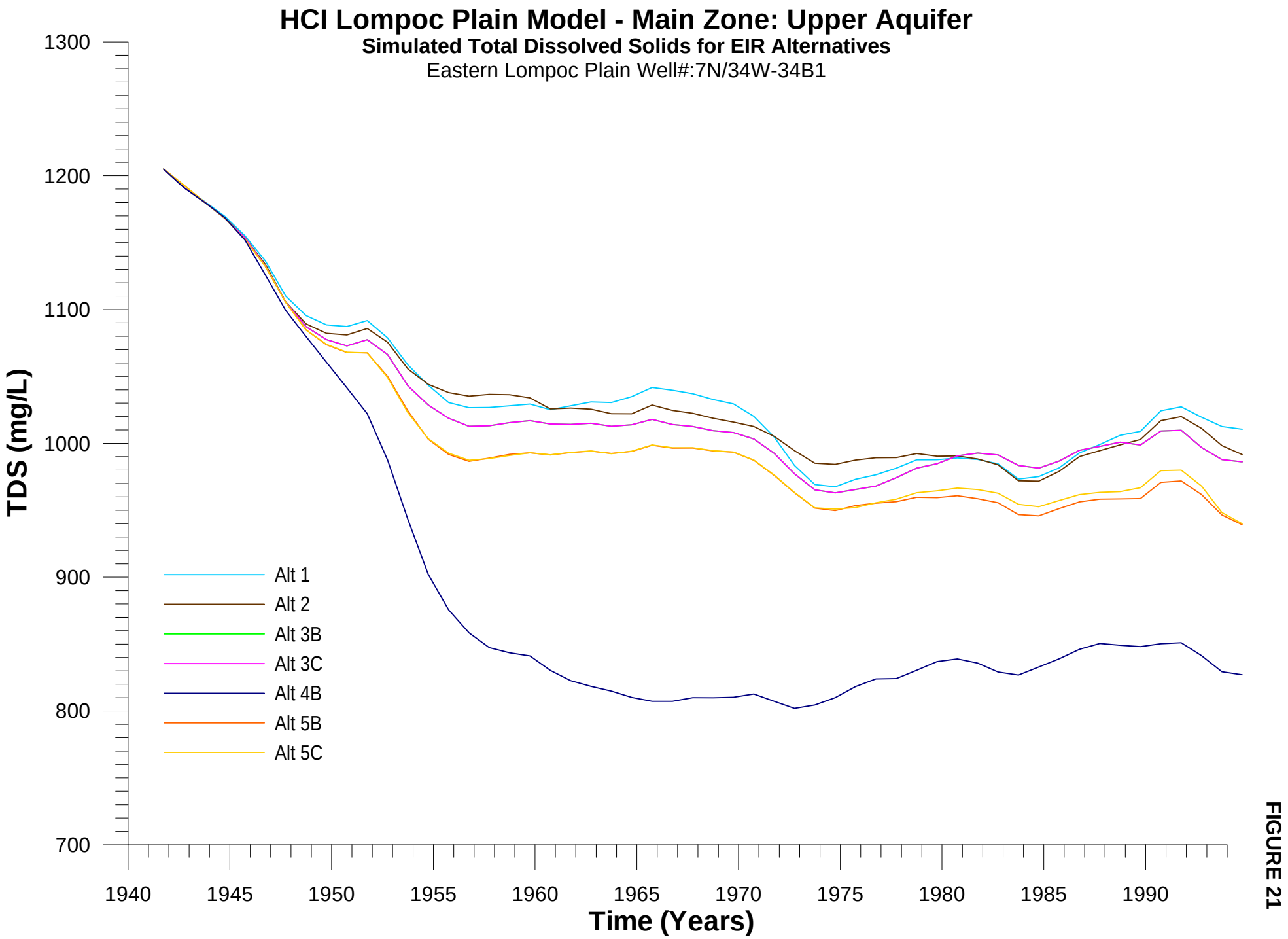



FIGURE 21

F:\DATA\1815\GWMODELS\POST\Alt\HCI\TDS34B1 HCI EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Eastern Lompoc Plain Well#:7N/34W-28M2

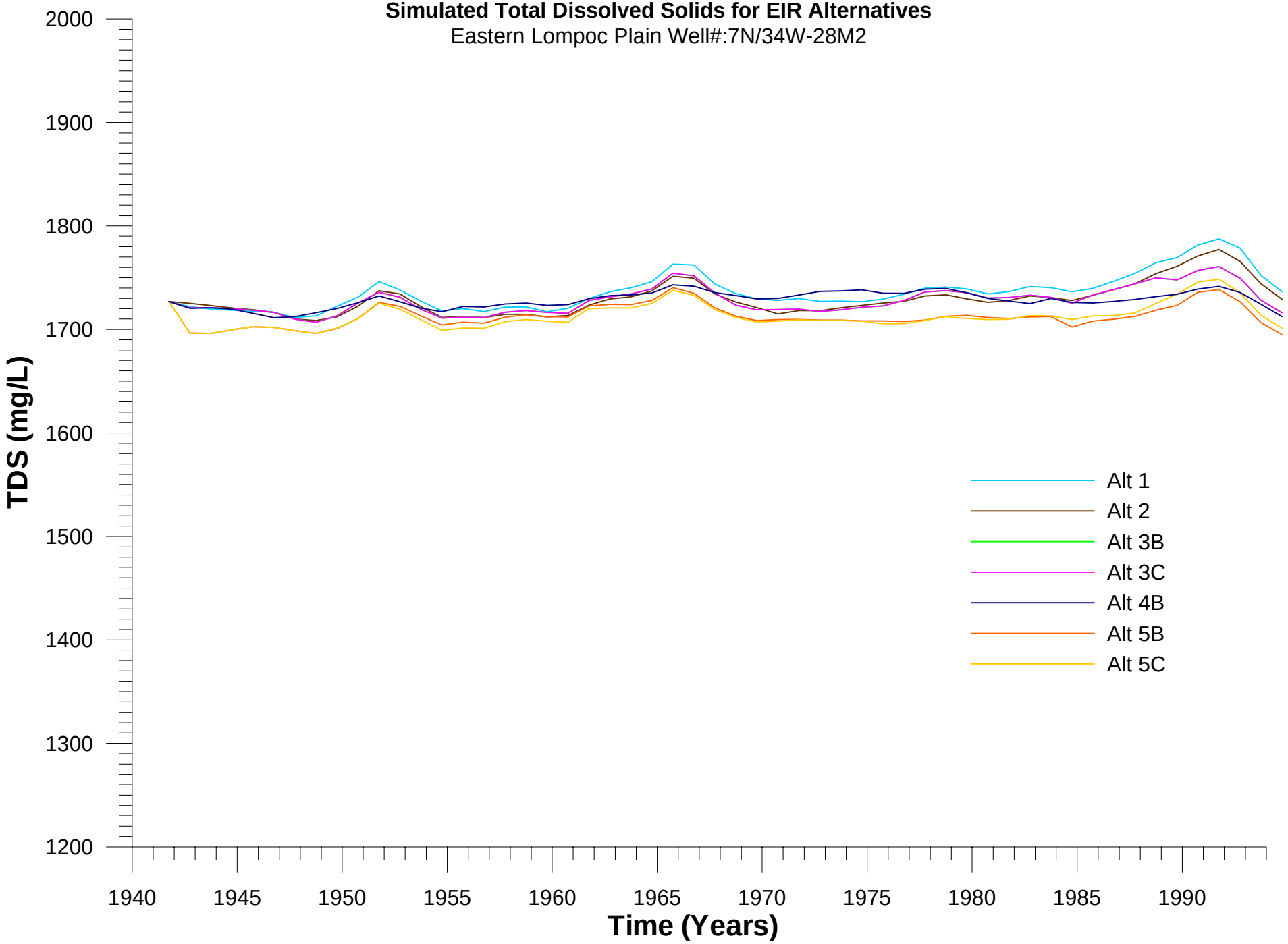



FIGURE 22

F:\DATA\1815\GWMODELS\POST\Alt\HCI\TDS28M2 HCI EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Water Levels for EIR Alternatives**

Eastern Lompoc Plain Well#:7N/34W-34B1

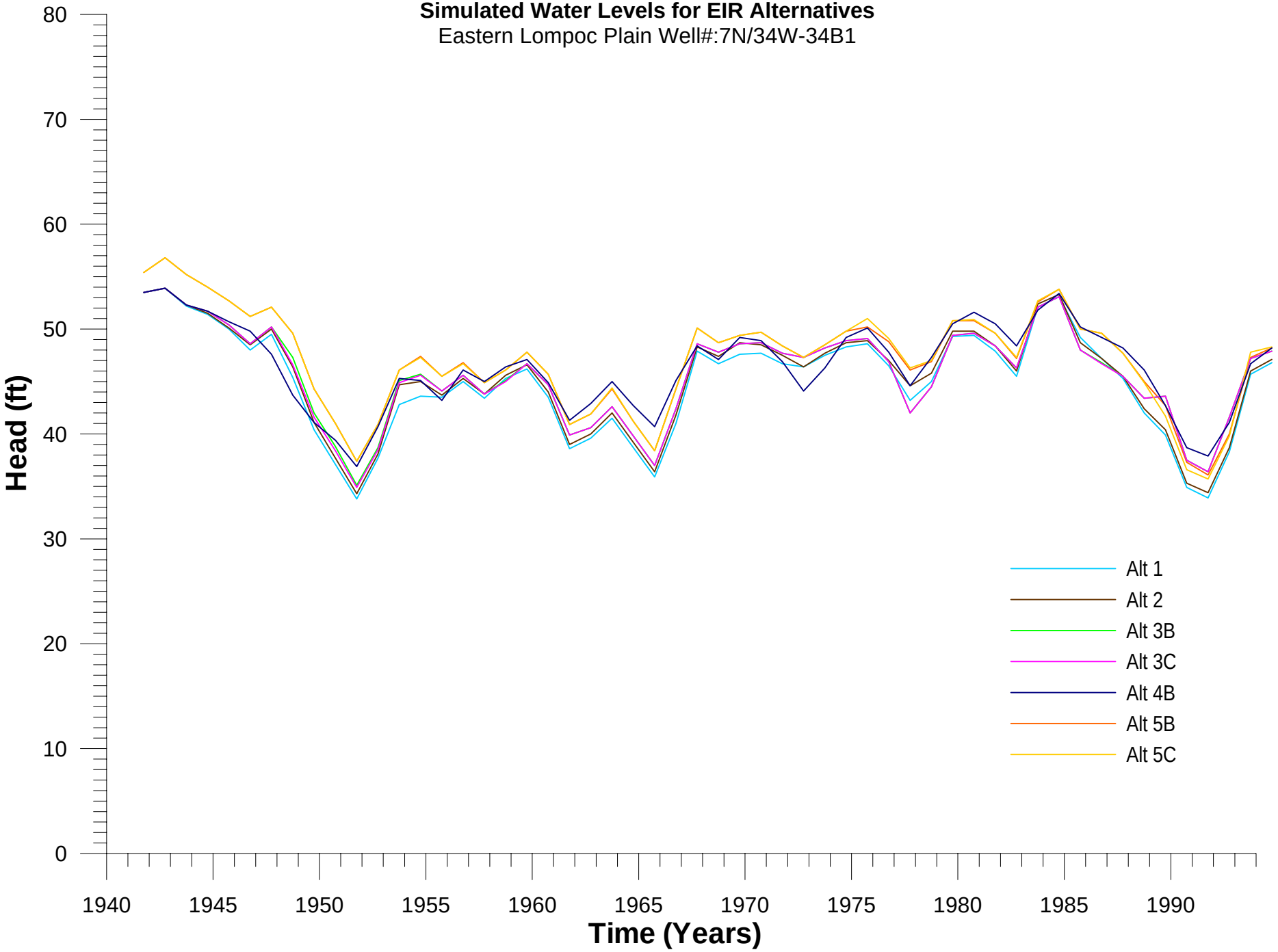



FIGURE 23

F:\DATA\1815\GWMODELS\POST\Alt\HCI\WL\WL34B1_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Water Levels for EIR Alternatives**

Eastern Lompoc Plain Well#:7N/34W-28M2

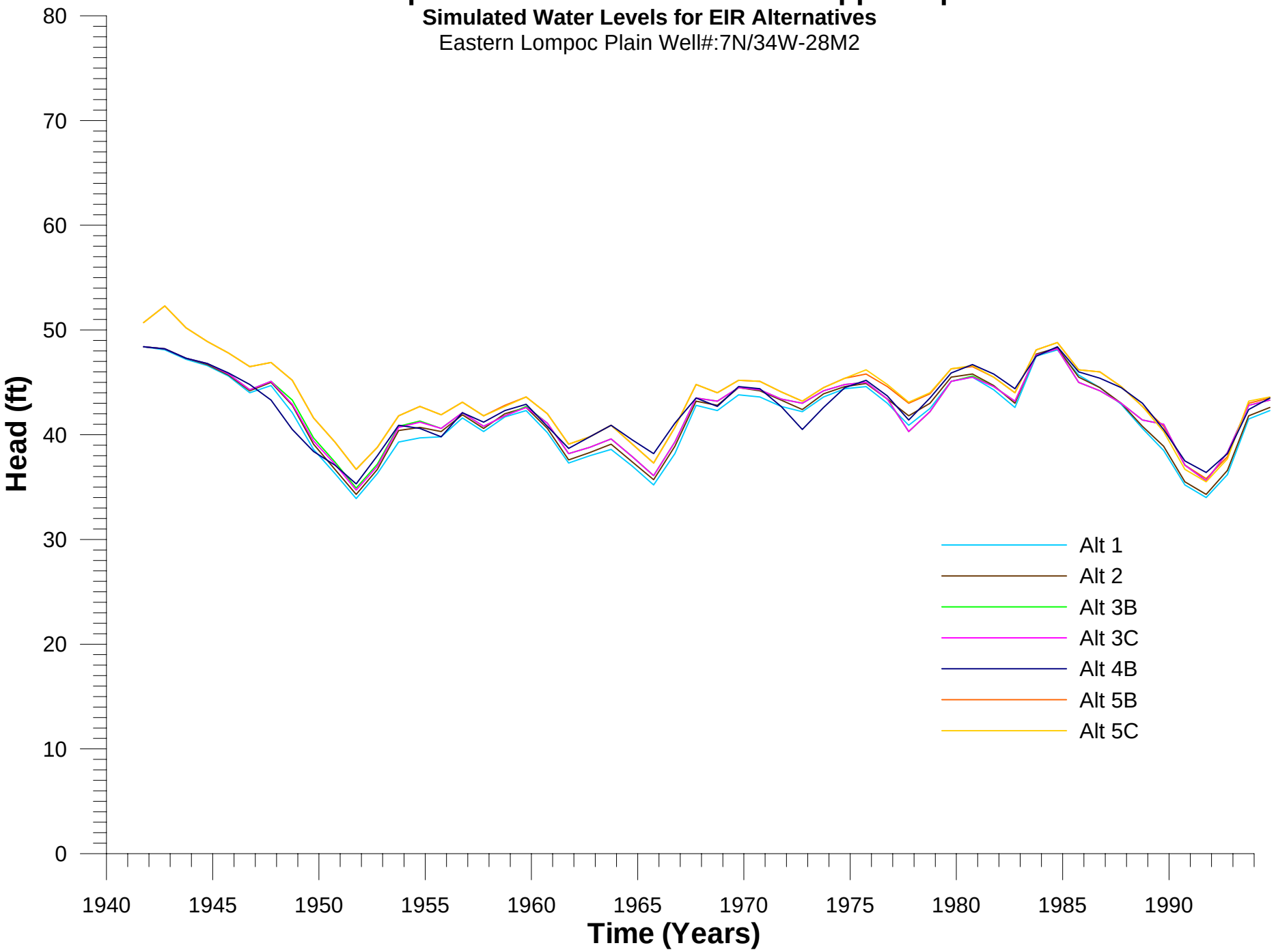



FIGURE 24

F:\DATA\1815\GWMODELS\POST\Alt\HCI\WL\WL28M2_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Central Lompoc Plain Well#:7N/34W-29N6

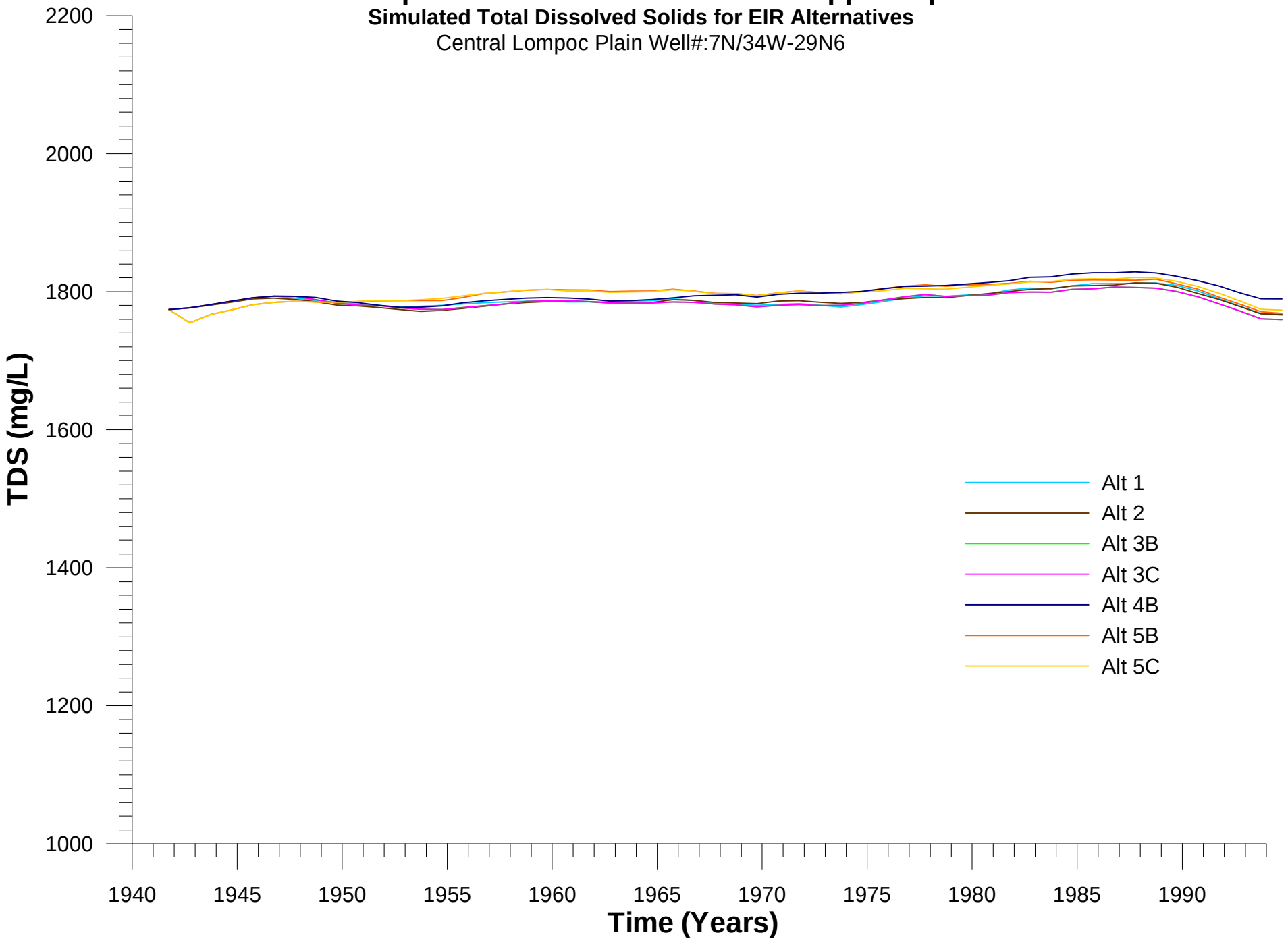



FIGURE 25

F:\DATA\1815\GWMODELS\POST\Alt\HCI\TDS26F1 HCI EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Total Dissolved Solids for EIR Alternatives**

Central Lompoc Plain Well#:7N/34W-31A3

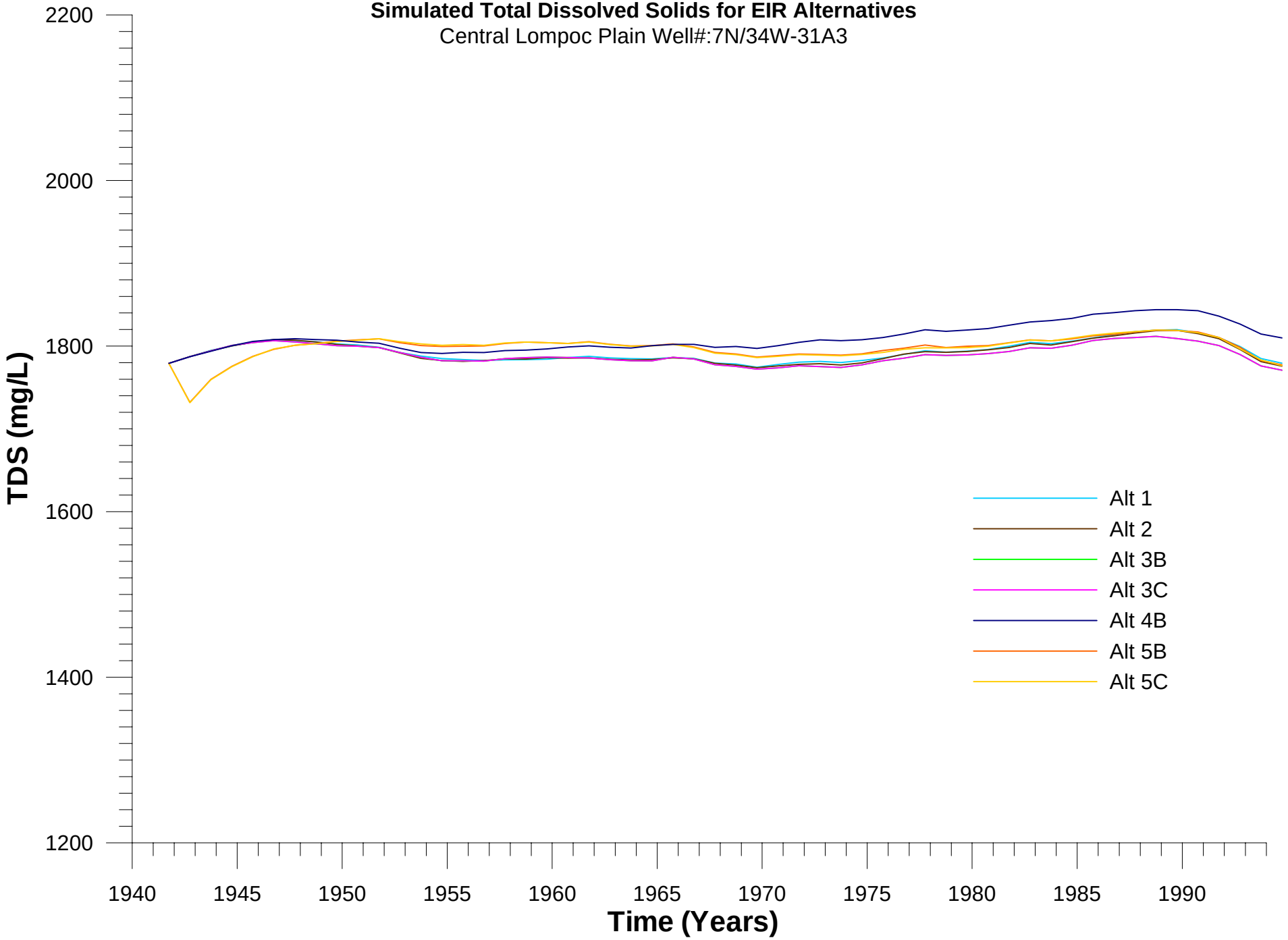



FIGURE 26

F:\DATA\1815\GWMODELS\POST\Alt\HCI\TDS31A3_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Water Levels for EIR Alternatives**

Central Lompoc Plain Well#:7N/34W-29N6

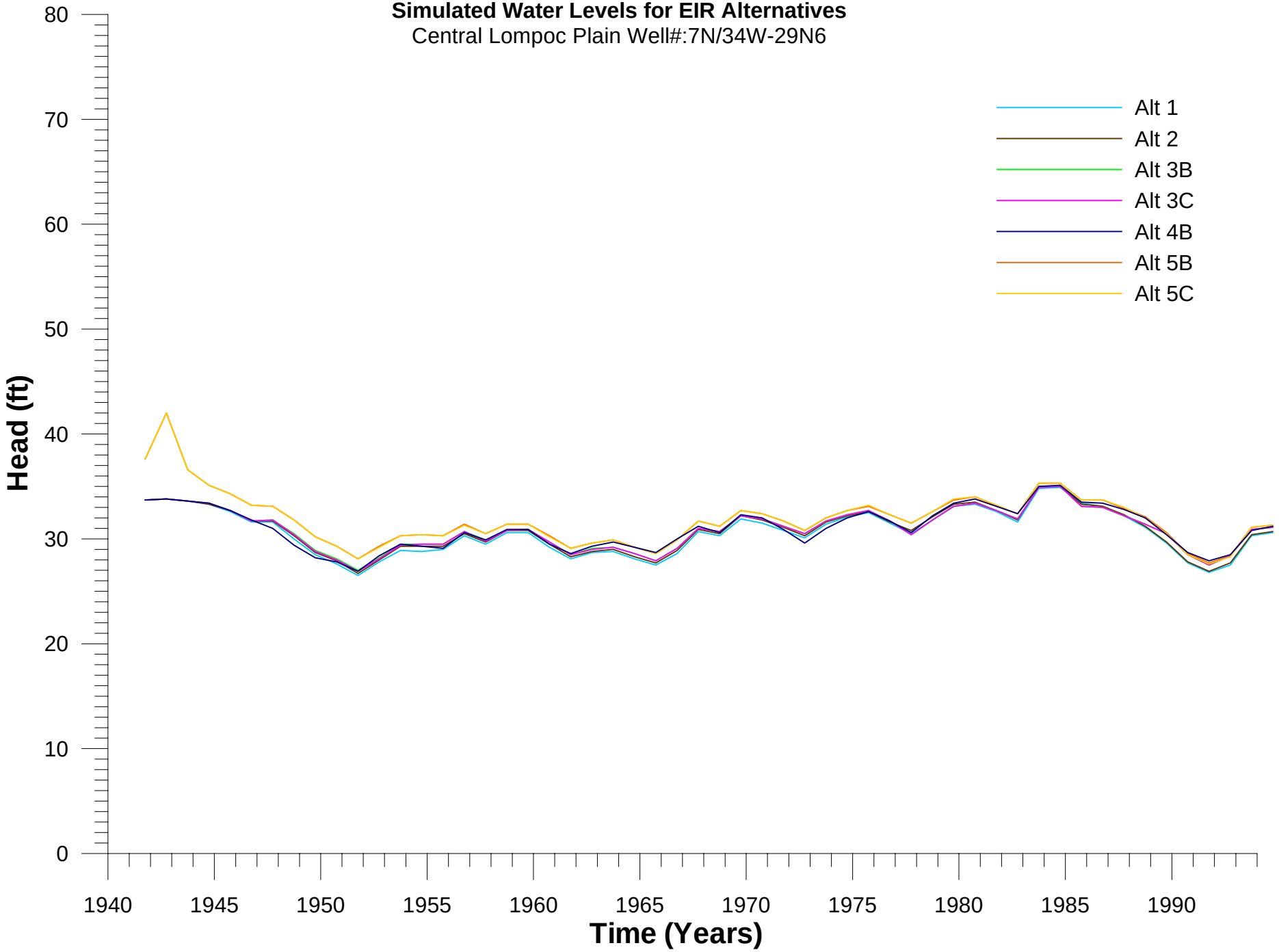



FIGURE 27

F:\DATA\1815\GWMODELS\POST\Alt\HCI\WL\WL26F1_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Water Levels for EIR Alternatives**

Central Lompoc Plain Well#:7N/34W-31A3

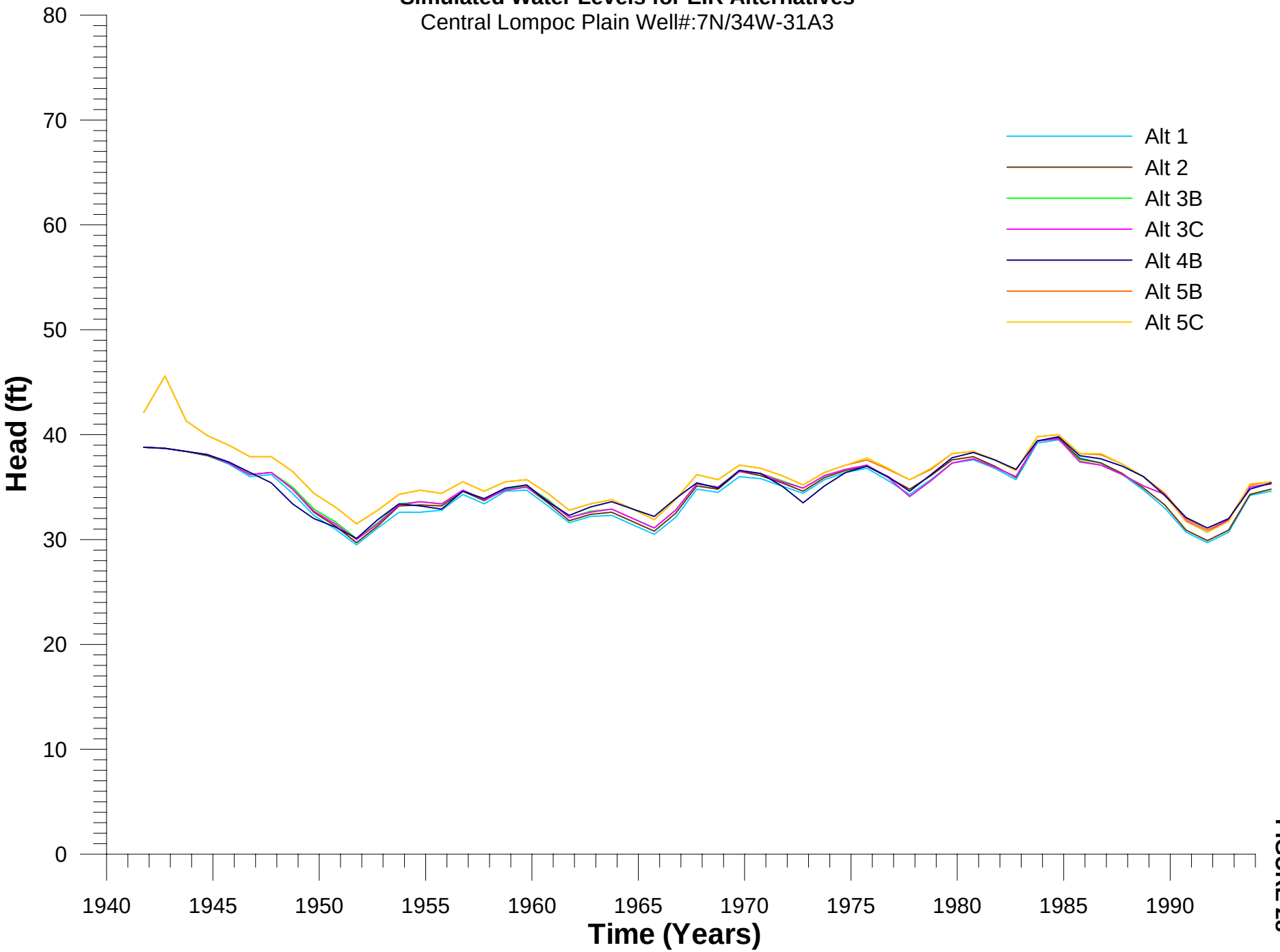



FIGURE 28

F:\DATA\1815\GWMODELS\POST\Alt\HCI\WL\WL31A3_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Western Lompoc Plain Well#:7N/35W-25D1,3

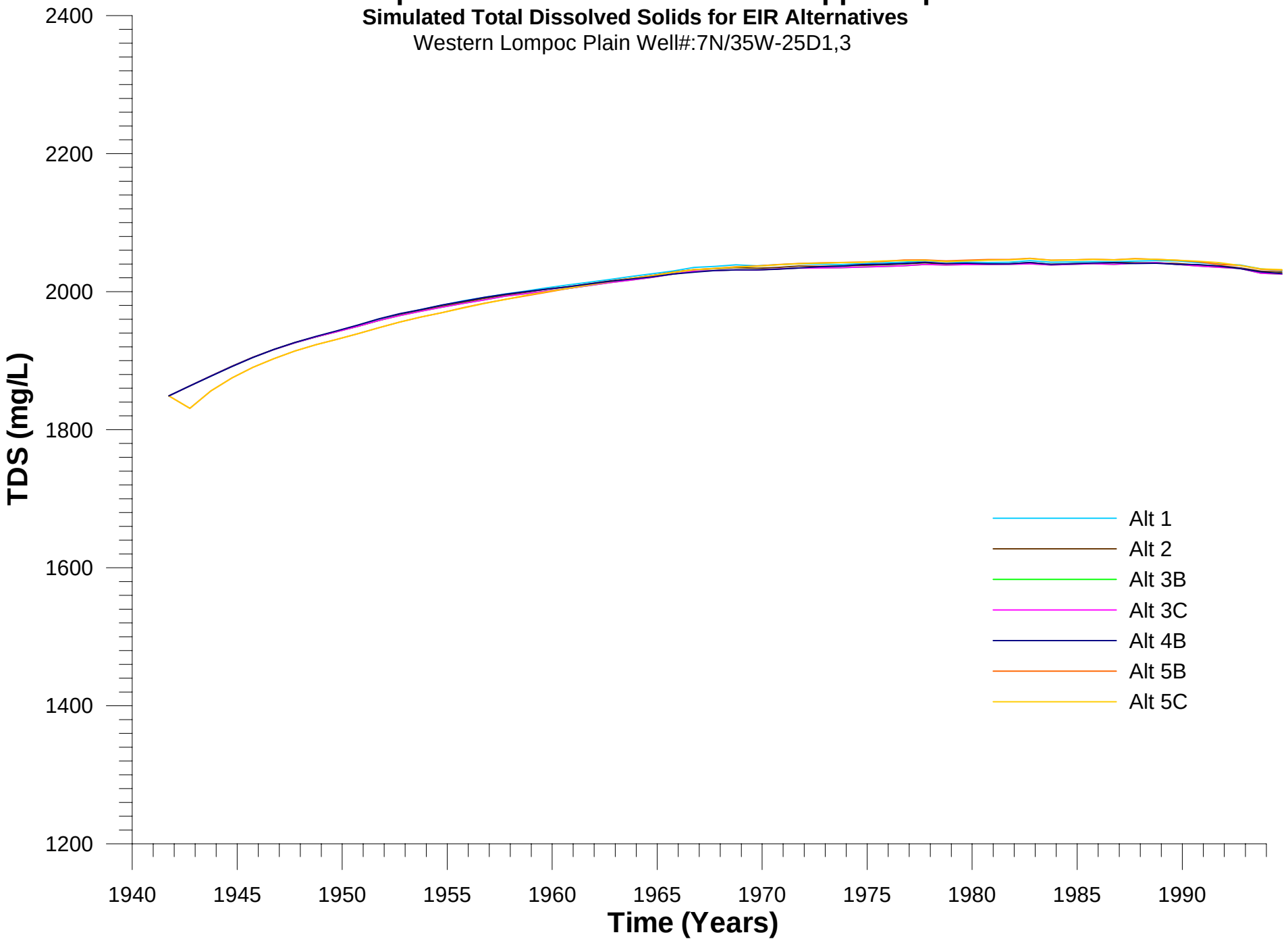



FIGURE 29

F:\DATA\1815\GWMODELS\POST\Alt\HCI\TDS25D1_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Total Dissolved Solids for EIR Alternatives

Western Lompoc Plain Well#:7N/35W-26F1

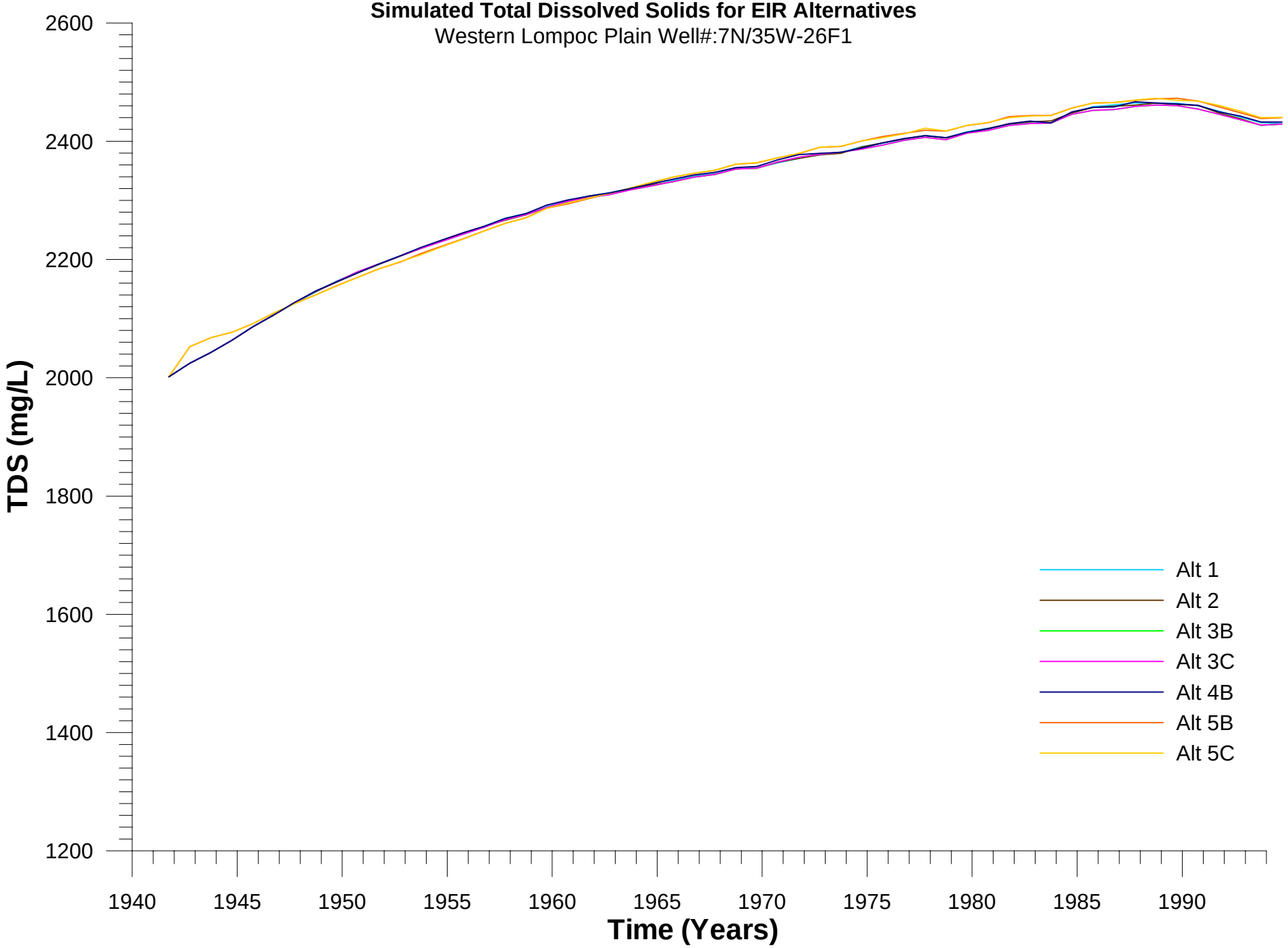



FIGURE 30

F:\DATA\1815\GWMODELS\POST\Alt\HCI\TDS26F1_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

**Simulated Water Levels for EIR Alternatives**

Western Lompoc Plain Well#:7N/35W-25D1,3

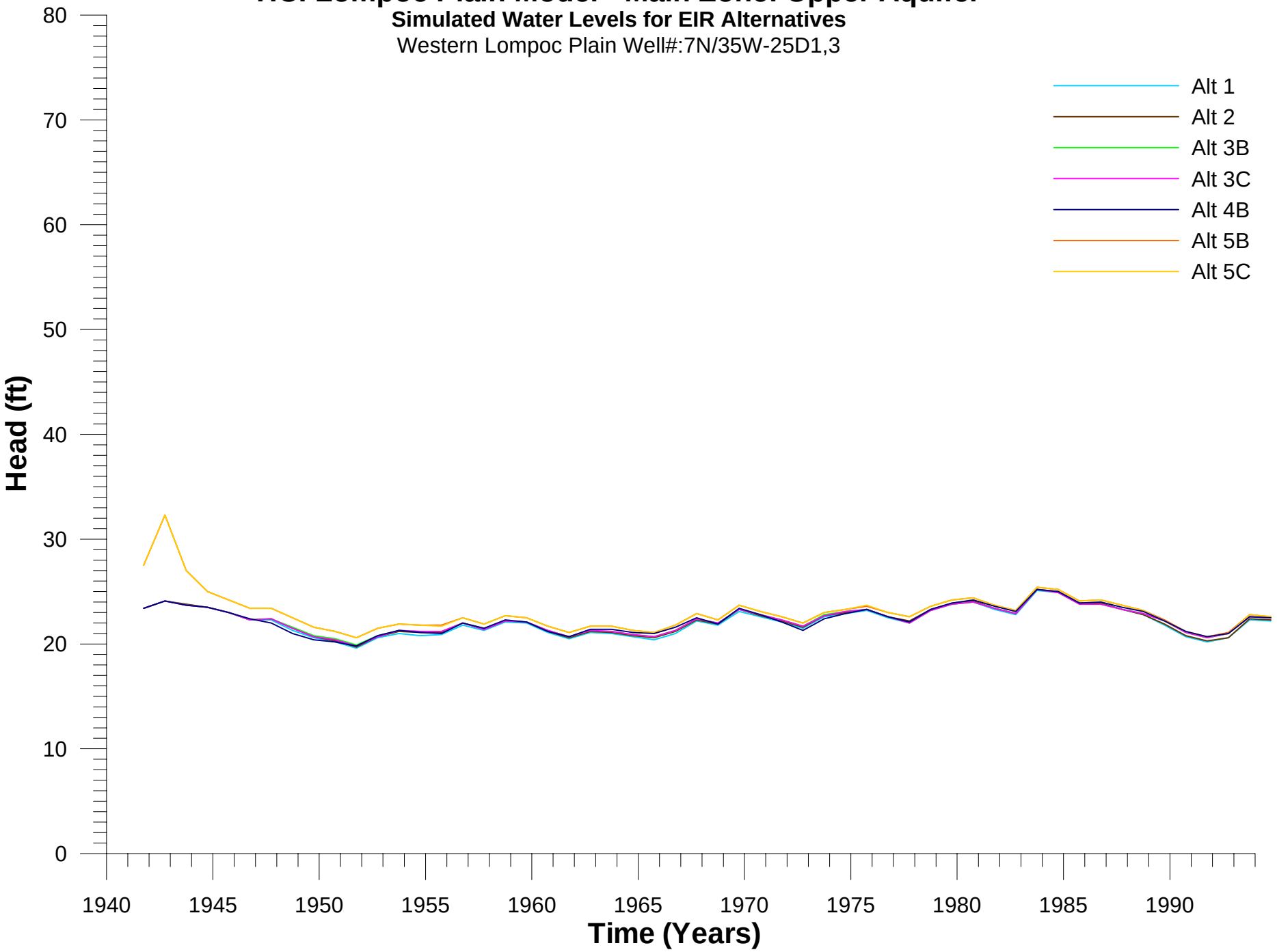



FIGURE 31

F:\DATA\1815\GWMODELS\POST\Alts\HCI\WL\WL25D1_HCI_EIR.GRF

# HCI Lompoc Plain Model - Main Zone: Upper Aquifer

## Simulated Water Levels for EIR Alternatives

Western Lompoc Plain Well#:7N/35W-26F1

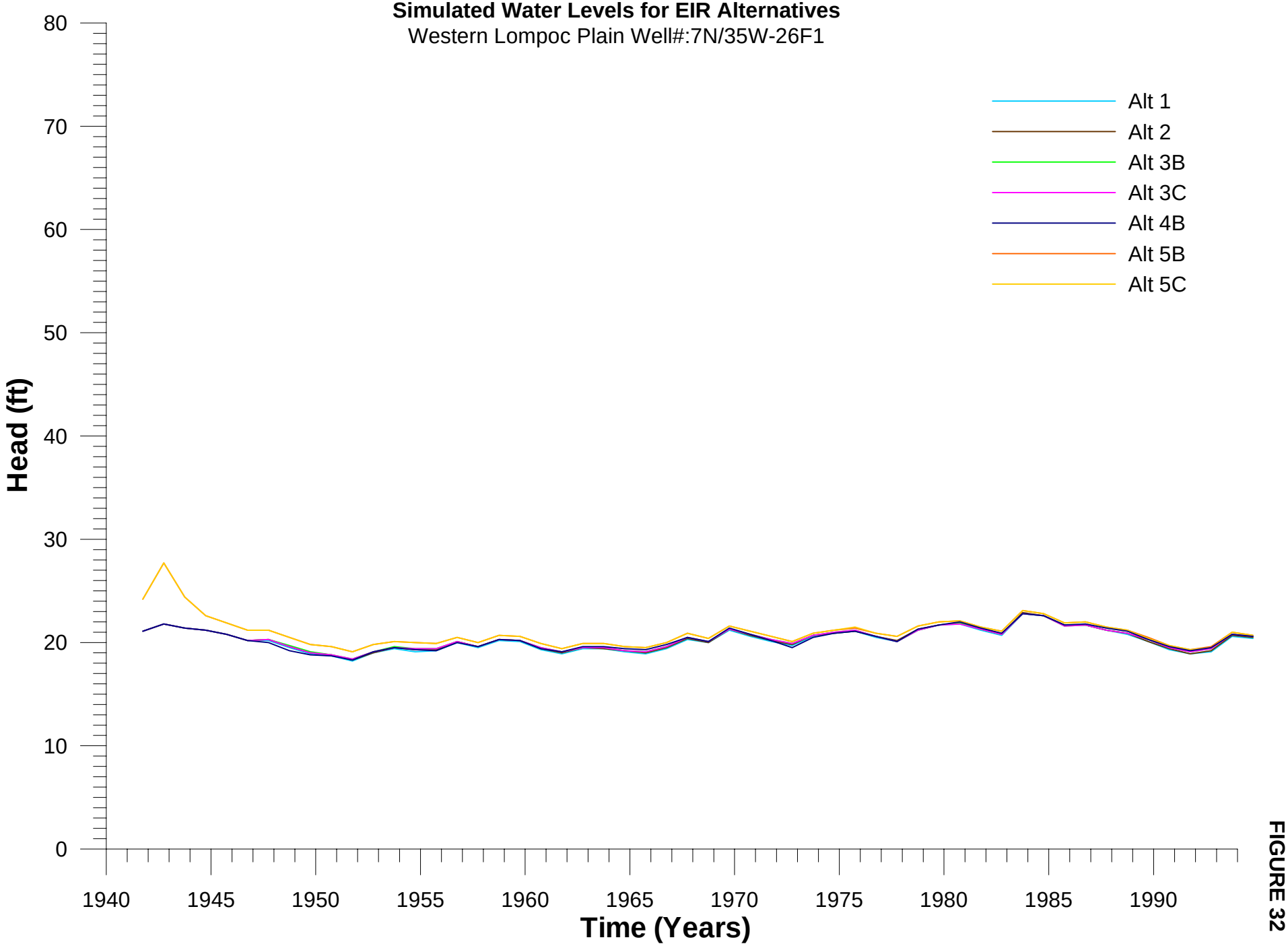



FIGURE 32

F:\DATA\1815\GWMODELS\POST\Alt\HCI\WL\WL26F1_HCI_EIR.GRF