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# Generic Failure Rate Evaluation for Jocassee Dam

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# GENERIC FAILURE RATE EVALUATION FOR JOCASSEE DAM BY DIVISION OF RISK ASSESSMENT'S PRA OPERATIONAL SUPPORT BRANCH

The following documents a generic dam failure rate analysis applicable to the Jocassee Dam performed by the PRA Operational Support Branch (APOB) of the Division of Risk Assessment (DRA) in the Office of Nuclear Reactor Regulation (NRR). The analysis, technical justifications, and databases used in support of the calculations for the derived value are briefly discussed. Portions of this evaluation were initially performed in 2007 but not formally documented at that time.

## Approach

The approach used in deriving a generic failure rate value applicable to the Jocassee Dam included: (i) an evaluation of the physical characteristics and description of the dam, (ii) an assessment of the overall U.S. dam population for those with similar features to the Jocassee Dam, (iii) a study of U.S. dam performance information for failure events that may be applicable to this subset of the overall population, and (iv) a calculation of a point estimate, as well as consideration of the uncertainty involved, for the failure rate given the observed failure events and the observed time period (in dam-years).

## Jocassee Dam Description

The Jocassee Dam is located in northwest South Carolina, forming a reservoir (Lake Jocassee) with a 7565-acre surface area, a water volume of 1,160,298 acre-feet, and a total drainage area of 147 sq-miles at full pond (1,110 feet elevation above mean sea level). The reservoir was created in 1973 with the construction of the dam. The Jocassee Dam is an embankment dam with an earthen core and rockfilled and random rockfilled zones (see Figure 1).

(b)(7)(F)

The dam is 385 feet in height (1,125 crest elevation above mean sea level) and 1,825 feet in length and, along with two homogeneous earthfill dikes and a reinforced concrete spillway, is part of a hydroelectric station and pumped storage project. The underground powerhouse generating units receive water from two cylindrical intake towers through eight openings. The water is channeled from the intake towers to four hydro turbines by two bifurcated power tunnels which are constructed through the bedrock of the east abutment. Two gates 33 feet in height and 38 feet in width control the outflow of the spillway.

**Databases**

The staff used two databases to obtain information about the population of dams in the US: the National Inventory of Dams (NID), maintained by the US Army Corps of Engineers, and the National Performance of Dams Program (NPDP), developed by the Department of Civil and Environmental Engineering at Stanford University. The NID database contains data describing multiple attributes such as dimensions, type, impoundment characteristics, etc. The NPDP database contains a collection of dam incident reports searchable by various parameters including dam type, incident type, and consequences.

**Failure Events**

Table 1 lists the applicable dam failures initially derived from the NPDP database. To choose these 13 failures, the analysts used criteria based on the previously discussed dam characteristics (i.e., dam type and height). However, due to the ambiguity in the classification of the dam type (i.e., based on material composition) between and within the NID and NPDP databases, as well as the lack of information to establish an exact link with the Jocassee Dam characteristics for every data point, the staff considered both rockfill dams and mixed-rockfill dams (i.e., those classified exclusively as rockfill dams as well as mixed dam types that include rockfill in their categorization). It should be noted that the NPDP database does not list any failures post-2006 and at least two well-known large dam failures in the U.S. are not included: the Big Bay Dam in Mississippi (March 2004) and the Taum Sauk Reservoir (December 2005) in Missouri. While the Big Bay Dam was an earthen dam (i.e., excluded based on dam type), the Taum Sauk Reservoir consisted of a concrete-faced rockfill dam approximately 100 feet in height and was, therefore, included in the current analysis.

Additionally, the list was screened to take into consideration (i) failure events observed between 1900 and 2005, and (ii) failure events observed between 1940 and 2005; under the assumption that events prior to these construction periods could produce different results representative of distinct design practices. In part, this choice was due to the lack of information on the exact construction date of several dams in the database. The staff expended an extensive effort to determine the construction completion date for several dams for which the information was missing in the NPDP database (this information is included in Table 1).

Several failures listed in Table 1 have (or are assumed to have) occurred within a few years of either the start or completion of construction (e.g., the Lower Hell Hole Dam and the Frenchman Dam failures). Based on the information available and the estimated completion dates, the staff screened out such failures since the occurrence of the events was assumed to be related to the construction phase and, therefore, not applicable to a mature dam such as Jocassee.

Finally, the analysts chose to include the Dresser No. 4 Dam failure, because they deemed this dam to be similar to the Jocassee Dam in composition (i.e., a large mixed earthfill-rockfill dam),

despite the fact that it is listed as a tailings dam (i.e., a dam theoretically built under lower standards of quality and maintenance).

Therefore, the final list of failures of dams similar to, and therefore applicable to, the Jocassee Dam includes 6 failures occurring between 1900 and 2005. These six failures are highlighted in Table 1. The staff included these failures based on the following criteria: (i) rockfill or mixed-rockfill dam type, (ii) dam height above 50 feet, (iii) failure occurring after 1900, and (iv) no failures during or within a few years of completion of construction. Note that if failures occurring prior to 1940 are screened, then only 4 events remain: (1) Taum Sauk, (2) Dresser No.4 Dam, (3) Skagway, and (4) Kern Brothers Reservoir. It should be noted that there are 1 to 3 failures of dams built between 1940 and 2005 depending on whether the entries with unknown construction dates are excluded or not, respectively (in similar fashion, there are 3 to 5 failures for dams constructed between 1900-2005 excluding or not entries with unknown construction dates, respectively).

**Total Dam-years Calculation**

To calculate the dam failure rate, the staff needed to obtain the total number of dam-years of both failed and non-failed dams. The analysts extracted a subset of dams from the NID database based on a set of parameters to narrow the US population of dams to those reflecting the characteristics of the Jocassee Dam discussed above, i.e., large rockfill dams. They assumed that dams above 50 feet in height appropriately reflect design practices and structural characteristics of larger dams such as Jocassee. This height criterion was consistent with the large dam definition (WCD, 2000) established by the International Commission on Large Dams (ICOLD) which "defines a large dam as a dam with a height of 15m or more from the foundation." If dams are between 5-15 meters high and have a reservoir volume of more than 3 million cubic meters, ICOLD also classified such dams as large. Hence, the staff used this definition as a screening criterion. The dams considered for calculation of the total dam-years were those in the NID database that were categorized exclusively as 'Rockfill' dams (i.e., those listed under the 'ER' abbreviation, intended to correspond to rockfill dams for NID cataloguing purposes).

The staff included the dam-year contributions from Skagway and the replacement for the failed Frenchman Dam, while those from Kern Brothers Reservoir, Dresser No. 4 Dam, Penn Forest, and the failed Frenchman Dam were not included. This was because the staff judges that including the dam-year contribution from these specific dams would not significantly impact the resulting dam-year total. The staff calculated the final result using the difference between the last year in the available data (2005) and either 1900 or 1940. For the 1900-2005 period, the staff obtained a total of 21,490 dam-years; while for 1940-2005 the result was 13,889 dam-years. See Appendix A for a tabulation of the dams and the associated dam-years.

**Table 1: Initial List of dam failure events applicable to the Jocassee Dam**

| Dam Name | Incident Year | Completion Year (Est.) | Incident Type | Dam Type | Height (ft) | Description From NPDP Database (Except Taum Sauk) |
|---|---|---|---|---|---|---|
| Taum Sauk | 2005 | 1963 | Overtopping | Rockfill | 94 | Overtopped due to over-pumping of reservoir. Independent analysis indicated several root causes (e.g., lack of monitoring, spillway). |
| Dresser No.4 Dam | 1975 | Unknown | Piping | Earth Rockfill /Tailings | 105 | Catastrophic failure that created a breach 300 feet wide in the levee. |
| Skagway | 1965 | 1925 | Inflow Flood - Hydrologic Event | Rockfill | 79 | The dam failed during a flood in 1965. |
| Hell Hole | 1964 | 1964 | Not Known | Rockfill | 410 | Dam failed during construction. Overtopped by 100 feet - washing out most of the fill. |
| Penn Forest | 1960 | 1960 | Piping | Concrete Earth Rockfill | 151 | Partial failure. Sinkhole occurred in upstream slope of dam. |
| Frenchman Dam | 1952 | 1951 | Inflow Flood - Hydrologic Event | Rockfill | 63 | Runoff from melting snow. A dike section was overtopped early morning April 15, 1952. Later that day, dam breached. |
| Kern Brothers Reservoir | 1949 | Unknown | Settlement | Earth Rockfill | 54 | Failure due to excessive settlement of fill. |
| Lake Francis | 1899 | 1899 | Piping | Earth Rockfill | 79 | Blowout failure under concrete spillway weir structure during period of heavy spillway flow. Spillway failure thought to be due to piping in soft saturated foundation. |
| Lafayette | 1928 | 1928 | Embankment Slide | Earth Rockfill | 132 | Foundation slide during construction (at 120 feet). Height raised to 170 feet in 1932. Not sure if this is considered a failure. |
| Manitou | 1924 | 1917 | Seepage | Earth Rockfill | 123 | Partial failure was disintegrating and converted into gravel fill. |
| Lyman | 1915 | 1912 | Piping | Earth Rockfill | 76.4 | Failure by piping through abutment; undermined by passage of water under cap of lava rock which flanked dam and extended beneath spillway. Main part of dam uninjured. |
| Lower Otay | 1916 | 1897 | Spillway | Earth Rockfill | 154 | Foundation slide during construction (at 120 feet). Height raised to 170 feet in 1932. Not sure if this is considered a failure. |
| Black Rock | 1909 | 1908 | Piping | Earth Rockfill | 70 | Failure by piping through abutment; undermined by passage of water under cap of lava rock which flanked dam and extended beneath spillway. Portion of spillway dropped 7 feet; some fill at south end washed out. Main part of dam uninjured. |

**Generic Point Estimate of the Dam Failure Rate**

The staff calculated the point estimate by dividing the number of applicable dam failures (see Table 1 above) by the total applicable dam-years (derived as described previously). Assuming a 1900-2005 range for the year of occurrence of the failure events and the dam-year estimation (based on completion year), the analysts obtained a failure rate of 2.8E-4 per dam-year. When considering a 1940-2005 range, the staff obtained a result of 2.9E-4 per dam-year.

Because the NID database does not give information regarding the quality of design, construction and/or maintenance, and the NPDP database does not consistently supply information on the dam health (i.e., is it well maintained?) at time of failure, the staff could not derive failure rates for above or below average built and maintained dams. This lack of information precluded the staff from making any judgment as to whether Jocassee is or is not an above average designed, constructed and maintained dam deserving of a failure frequency different than an average failure frequency.

Additionally, the staff recognizes that ambiguity and lack of complete information with respect to dam type, construction completion data, and dam incident reporting, may result in variations in the failure rate estimation. Therefore, the staff performed a simple sensitivity study in order to evaluate the changes due to screening failure events and cut-off year criteria. The results are shown in Table 2 for an assumed number of failures and clearly indicated that the results exhibit small variations for the period cut-off selected (1900-2005 and 1940-2005) and the number of failures considered (6 and 4, respectively). Additionally, the extent of the variation in the point estimate is shown for other number of failures and cut-off years based on the subset of dams selected. The table illustrates that the order-of-magnitude failure frequency estimate does not change significantly if the number of failures is increased or decreased slightly.

**Table 2: Failure Rate Sensitivity Analysis**

| | | | ASSUMED NUMBER OF FAILURES | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CUT-OFF | DAM-YEARS | # DAMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ALL | 25137 | 484 | 4.0E-05 | 8.0E-05 | 1.2E-04 | 1.6E-04 | 2.0E-04 | 2.4E-04 | 2.8E-04 |
| 1900 | 21490 | 466 | 4.7E-05 | 9.3E-05 | 1.4E-04 | 1.9E-04 | 2.3E-04 | 2.8E-04 | 3.3E-04 |
| 1910 | 19778 | 449 | 5.1E-05 | 1.0E-04 | 1.5E-04 | 2.0E-04 | 2.5E-04 | 3.0E-04 | 3.5E-04 |
| 1920 | 18389 | 434 | 5.4E-05 | 1.1E-04 | 1.6E-04 | 2.2E-04 | 2.7E-04 | 3.3E-04 | 3.8E-04 |
| 1930 | 16475 | 410 | 6.1E-05 | 1.2E-04 | 1.8E-04 | 2.4E-04 | 3.0E-04 | 3.6E-04 | 4.2E-04 |
| 1940 | 13889 | 373 | 7.2E-05 | 1.4E-04 | 2.2E-04 | 2.9E-04 | 3.6E-04 | 4.3E-04 | 5.0E-04 |
| 1950 | 12269 | 346 | 8.2E-05 | 1.6E-04 | 2.4E-04 | 3.3E-04 | 4.1E-04 | 4.9E-04 | 5.7E-04 |
| 1960 | 8453 | 270 | 1.2E-04 | 2.4E-04 | 3.5E-04 | 4.7E-04 | 5.9E-04 | 7.1E-04 | 8.3E-04 |
| 1970 | 3242 | 143 | 3.1E-04 | 6.2E-04 | 9.3E-04 | 1.2E-03 | 1.5E-03 | 1.9E-03 | 2.2E-03 |
| 1980 | 1339 | 82 | 7.5E-04 | 1.5E-03 | 2.2E-03 | 3.0E-03 | 3.7E-03 | 4.5E-03 | 5.2E-03 |
| 1990 | 381 | 36 | 2.6E-03 | 5.2E-03 | 7.9E-03 | 1.0E-02 | 1.3E-02 | 1.6E-02 | 1.8E-02 |
| | | | FAILURE RATE GIVEN # NUMBER OF FAILURES AND CUTOFF YEAR | | | | | | |

**Bayesian Estimate of the Dam Failure Rate**

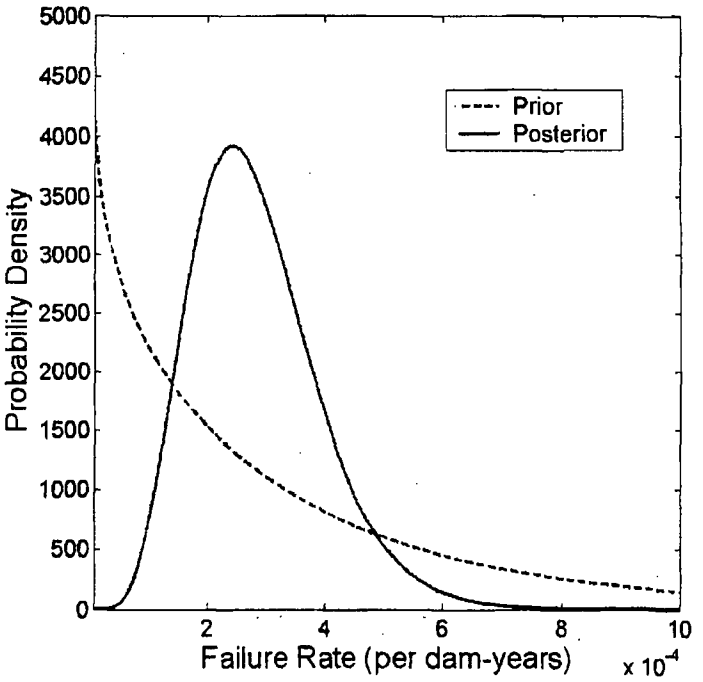
To evaluate the dam failure rate uncertainty, the staff conducted a Bayesian analysis of the failure rate for the 1900-2005 period via a Bayesian analysis approach (Atwood et al, 2003). In this approach, a prior distribution was assumed from the number of failures and dam-years for all large dams (according to the ICOLD definition) identified in the NID and NPDP databases. Failures identified as 'infantile failures' in NPDP were excluded and only dams built since 1900 according to NID were used for total dam-year calculation. Under these assumptions, the total number of failures for all large dams for 1900-2005 was 84 with a total of 260,960 dam-years. This corresponds to a point estimate of the failure rate equivalent to 3.2E-4/dam-year. A distribution was fitted around this mean. The number of dam failure events was modeled as a Poisson distribution for which its conjugate prior was assumed to follow a Gamma distribution (i.e., the conjugate prior in a Gamma-Poisson model). The staff, based on judgment, chose a Gamma distribution with the point estimate obtained from the large dam failure rate above and a $5^{th}$ percentile corresponding to 1E-5/dam-year. With these assumptions, the staff obtained a prior Gamma distribution with parameters $\alpha = 0.8333$ and $\beta = 2589$, which has a $5^{th}$ percentile equivalent to 1E-5/dam-year and a $95^{th}$ percentile corresponding to 1E-3/dam-year. The staff updated this prior distribution with the data used to obtain the large rockfill dam point estimate (e.g., 6 failures in 21,490 dam-years) to calculate the posterior distribution. The resulting posterior has a mean of 2.8E-4/dam-year, a $5^{th}$ percentile of 1.3E-4/dam-years, and a $95^{th}$ percentile of 4.8E-4/dam-years (with parameters $\alpha = 6.8333$ and $\beta = 24{,}079$). Figure 2 shows both the generic large dam prior and the posterior specific to rockfill dams.

**Conclusions**

The staff estimated generic dam failure rates for large rockfill dams, which it considers applicable to the Jocassee Dam, as 2.8E-4/dam-year. Given the nature of the data and the assumptions involved in narrowing the applicable failure events and subset of the U.S. dam population comparable to this specific dam, the staff performed a Bayesian analysis. Using available data on the domestic inventory of dams and dam failures, the range obtained varies between 1.3E-4/dam-year and 4.8E-4/dam-year ($5^{th}$ – $95^{th}$ percentile) around a mean of 2.8E-4/dam-year.

A literature review performed by the authors for statistical studies of dam failures appears to corroborate this conclusion. Such studies were found in Baecher et al (1980), Martz and Bryson (1982), Donnelly (1994), ICOLD (1995), Foster (2000a), and Foster et al (2000b).

**Figure 2: Failure Rate Probability Distributions Used in Bayesian Updating**

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## Appendix A: Dam-Year Tabulation

| Dam Name | NID ID Number | Year Completed | NID Height (ft.) | NID Storage (cubic yards) | Dam Years (since 2005 | Dam Years Running total (since 2005) |
|---|---|---|---|---|---|---|
| FRANCIS, LAKE | CA00886 | 2000 | 79 | 1,905 | 5 | 5 |
| DIAMOND VALLEY LAKE | CA01410 | 2000 | 284 | 800,000 | 5 | 10 |
| HANSEN RECREATIONAL LAKE | CA01448 | 1999 | 80 | 85 | 6 | 16 |
| LOLONIS VINEYARDS | CA01423 | 1999 | 67 | 209 | 6 | 22 |
| SEVEN OAKS | CA10324 | 1999 | 550 | 145,800 | 6 | 28 |
| MELROSE AVENUE | CA01400 | 1998 | 57 | 52 | 7 | 35 |
| AMARGOSA CREEK | CA01408 | 1998 | 65 | 1,187 | 7 | 42 |
| HICKS CANYON RB | CA01414 | 1997 | 60 | 110 | 8 | 50 |
| DENNIS NO 2 | CA01398 | 1997 | 60 | 148 | 8 | 58 |
| RMG WEST TAILINGS DAM | NV10506 | 1997 | 94 | 9,567 | 8 | 66 |
| LOS VAQUEROS | CA01396 | 1997 | 197 | 100,000 | 8 | 74 |
| ARUNDELL BARRANCA | CA01412 | 1996 | 57 | 155 | 9 | 83 |
| SEA RANCH | CA01411 | 1996 | 81 | 300 | 9 | 92 |
| ILLINOIS CREEK HEAP LEACH DAM | AK00281 | 1996 | 83 | 103 | 9 | 101 |
| CHASE GULCH | CO02788 | 1996 | 100 | 1,250 | 9 | 110 |
| Slack | AZ00225 | 1995 | 54.7 | 59 | 10 | 120 |
| Gold Gulch 1A | AZ00224 | 1995 | 106 | 110 | 10 | 130 |
| HUCKLEBERRY CREEK DAM | AR01522 | 1995 | 110 | 23,342 | 10 | 140 |
| BEE CANYON RB | CA01360 | 1994 | 62 | 243 | 11 | 151 |
| BRICK FLAT PIT CONT | CA01397 | 1994 | 85 | 220 | 11 | 162 |
| ROUND CANYON RB | CA01378 | 1994 | 98 | 286 | 11 | 173 |
| JAMESTOWN MINES T | CA01245 | 1994 | 200 | 12,100 | 11 | 184 |
| MACKS CREEK | ID00480 | 1993 | 52.5 | 469 | 12 | 196 |
| RED DOG TAILINGS DAM | AK00201 | 1993 | 172 | 24,757 | 12 | 208 |
| LANGTRY | CA01350 | 1992 | 50 | 525 | 13 | 221 |
| SANDS HILL SLURRY IMPOUNDMENT DAM | OH02839 | 1992 | 131 | 1,200 | 13 | 234 |
| HEITZ | CA01345 | 1991 | 87 | 272 | 14 | 248 |
| BRADLEY LAKE SPILLWAY DAM | AK83023 | 1991 | 115 | 284,150 | 14 | 262 |
| BRADLEY LAKE DAM | AK83016 | 1991 | 125 | 284,150 | 14 | 276 |
| L PETERS CAN RB | CA01207 | 1990 | 52 | 206 | 15 | 291 |
| PANTHER CREEK RESERVOIR | AR01498 | 1990 | 57 | 280 | 15 | 306 |
| CENTENNIAL | CA01246 | 1990 | 82 | 635 | 15 | 321 |
| MOLYCORP TAILING DAM 5A | NM00531 | 1990 | 73 | 3,830 | 15 | 336 |
| PAD 6 OVERFLOW POND DAM | SC02578 | 1990 | 80 | 55 | 15 | 351 |
| MCCOY/COVE TAILINGS STORAGE FACILITY | NV10301 | 1990 | 140 | 22,425 | 15 | 366 |
| HOMESTAKE TAILINGS | CA01205 | 1990 | 169 | 0 | 15 | 381 |
| PLYMOUTH EFFL | CA01189 | 1989 | 59 | 187 | 16 | 397 |
| HARVEY PLACE | CA01222 | 1989 | 72 | 3,700 | 16 | 413 |
| RED DOG WATER SUPPLY DAM | AK00200 | 1989 | 75 | 884 | 16 | 429 |
| DOVE CANYON | CA01248 | 1989 | 88 | 415 | 16 | 445 |
| NEW SPICER MEADOW | CA01224 | 1989 | 262 | 189,000 | 16 | 461 |
| CSP MULE CREEK | CA01195 | 1988 | 51 | 535 | 17 | 478 |
| FOSS VALLEY | CA01268 | 1988 | 58 | 800 | 17 | 495 |
| FOOTHILL PARK | CA00868 | 1988 | 86 | 67 | 17 | 512 |
| DAY CREEK DB | CA01232 | 1988 | 90 | 140 | 17 | 529 |
| Schoens | AZ00207 | 1988 | 143.6 | 62,000 | 17 | 546 |
| YATESVILLE DAM | KY82201 | 1988 | 156 | 93,300 | 17 | 563 |
| RAMONA | CA01215 | 1988 | 226 | 12,200 | 17 | 580 |
| Mt St Helens Sediment Retention Structure | WA00558 | 1988 | 240 | 126,000 | 17 | 597 |
| ANTELOPE | CA01213 | 1987 | 57 | 784 | 18 | 615 |
| STEVENOT | CA01301 | 1987 | 70 | 150 | 18 | 633 |
| BALSAM MEADOW | CA01283 | 1986 | 127 | 2,040 | 19 | 652 |
| BRADFORD | CA01283 | 1985 | 58 | 440 | 20 | 672 |
| JAYNE S LAKE | CA01262 | 1985 | 70 | 1,225 | 20 | 692 |
| PAPILLION CREEK & TRIB. SITE 18 | NE82202 | 1985 | 80 | 18,262 | 20 | 712 |
| DAVIS CREEK | CA01223 | 1985 | 105 | 6,079 | 20 | 732 |
| RED MOUNTAIN RES | CA00225 | 1985 | 120 | 1,350 | 20 | 752 |
| EDWARDS RES | CA01240 | 1985 | 120 | 596 | 20 | 772 |
| TRABUCO | CA01241 | 1984 | 108 | 138 | 21 | 793 |
| TERROR LAKE | AK83008 | 1984 | 193 | 108,000 | 21 | 814 |
| GARNETT, CITY OF, CEDAR CREEK RESERVOIR | KS07006 | 1983 | 70 | 24,000 | 22 | 836 |
| ANDREW CADEMARTORI | CA01274 | 1983 | 80 | 142 | 22 | 858 |
| CULMBACK | WA00208 | 1983 | 262 | 153,260 | 22 | 880 |
| CALERO | CA01209 | 1982 | 55 | 2,832 | 23 | 903 |
| FLAT ROCK CREEK SITE 1 | AR01442 | 1982 | 57 | 509 | 23 | 926 |
| MERLO | CA01313 | 1982 | 74 | 930 | 23 | 949 |
| COEN C-3 | CA01317 | 1982 | 97 | 480 | 23 | 972 |
| Gold Gulch #2 | AZ00194 | 1982 | 116.3 | 590 | 23 | 995 |
| SOLOMON GULCH SPILLWAY | AK83021 | 1981 | 55 | 31,500 | 24 | 1,019 |
| COMAL RIVER WS SCS SITE 2 DAM | TX04788 | 1981 | 75 | 19,024 | 24 | 1,043 |
| STANLEY A MAHR RES | CA01280 | 1981 | 79 | 188 | 24 | 1,067 |
| LAS LLAJAS | CA01217 | 1981 | 95 | 1,250 | 24 | 1,091 |
| SOLOMON GULCH | AK00027 | 1981 | 115 | 31,500 | 24 | 1,115 |
| Jennings Randolph | MD00069 | 1981 | 296 | 130,900 | 24 | 1,139 |
| LAKEPORT | CA01230 | 1980 | 51 | 650 | 25 | 1,164 |
| PORTOLA | CA01183 | 1980 | 53 | 586 | 25 | 1,189 |
| SAND CREEK | CA01180 | 1980 | 80 | 1,050 | 25 | 1,214 |
| CUCAMONGA CR DB | CA01277 | 1980 | 80 | 355 | 25 | 1,239 |
| DEER CANYON DB | CA01231 | 1980 | 78 | 24 | 25 | 1,264 |
| PEA RIDGE TAILINGS DAM | MO30473 | 1980 | 150 | 4,100 | 25 | 1,289 |
| PAINTSVILLE DAM | KY82202 | 1980 | 180 | 73,500 | 25 | 1,314 |
| APPLEGATE DAM | OR00824 | 1980 | 242 | 89,300 | 25 | 1,339 |
| GRINDING ROCK | CA01184 | 1979 | 55 | 330 | 26 | 1,365 |
| FLAT TOP MINE-#1 IMPOUNDMENT | AL01519 | 1979 | 75 | 35 | 26 | 1,391 |
| BESSIE MINES-#3 IMPOUNDMENT | AL01525 | 1979 | 100 | 95 | 26 | 1,417 |
| SOULAJULE | CA01083 | 1979 | 122 | 10,700 | 26 | 1,443 |
| UPPER OSO | CA01145 | 1979 | 142 | 3,700 | 26 | 1,469 |
| WASTEWATER STORAGE | CA01137 | 1978 | 75 | 212 | 27 | 1,496 |
| SANTA MONICA DB | CA01134 | 1978 | 102 | 78 | 27 | 1,523 |
| QUARTZ | CA01146 | 1978 | 104 | 1,500 | 27 | 1,550 |
| SAFE SHUTDOWN IMPOUNDMENT DAM | TX04912 | 1977 | 70 | 800 | 28 | 1,578 |
| LOS ANGELES RES | CA01081 | 1977 | 130 | 10,000 | 28 | 1,606 |
| DEQUEEN | AR01201 | 1977 | 160 | 370,600 | 28 | 1,634 |

| Dam Name | NIDID Number | Year Completed | NID Height (ft.) | NID Storage (cubic-yards) | Dam Years (since 2005 | Dam Years Running total (since 2005) |
|---|---|---|---|---|---|---|
| NEW U SAN LEANDRO | CA01082 | 1977 | 182 | 42,000 | 28 | 1,862 |
| LITTLE BLUE RUN | PA00917 | 1977 | 400 | 73,000 | 28 | 1,890 |
| SUNFLOWER | CA01116 | 1976 | 50 | 420 | 29 | 1,719 |
| LAKE CO SAN DIST 2 | CA01108 | 1976 | 77 | 870 | 29 | 1,748 |
| HOLMAN | CA01128 | 1976 | 101 | 250 | 29 | 1,777 |
| MISSION VIEJO, LAKE | CA01122 | 1976 | 123 | 4,300 | 29 | 1,806 |
| NEW LAKE ARROWHEAD | CA01124 | 1976 | 225 | 1,970 | 29 | 1,835 |
| WILLIAM L. JESS | OR00612 | 1976 | 345 | 500,000 | 29 | 1,864 |
| POND 2B | CA01092 | 1975 | 55 | 89 | 30 | 1,894 |
| FOREST MEADOWS | CA01120 | 1975 | 60 | 117 | 30 | 1,924 |
| LIVE OAK RES | CA01084 | 1975 | 105 | 2,500 | 30 | 1,954 |
| TRAMPAS CANYON | CA01123 | 1975 | 183 | 5,700 | 30 | 1,984 |
| EAGLE RANCH | CA01101 | 1974 | 66 | 300 | 31 | 2,015 |
| ASU/NORRIS BRANCH | NC01524 | 1974 | 112 | 762 | 31 | 2,046 |
| ELDERBERRY FB | CA01080 | 1974 | 179 | 26,400 | 31 | 2,077 |
| MOKELUMNE HILL | CA01111 | 1973 | 62 | 52 | 32 | 2,109 |
| BOYD NO 2 | CA01054 | 1973 | 53 | 670 | 32 | 2,141 |
| J C JACOBSEN | CA00587 | 1973 | 56 | 1,820 | 32 | 2,173 |
| JOCASSEE SPILLWAY | SC02767 | 1973 | 64 | 1,287,788 | 32 | 2,205 |
| RESERVOIR A | CA01112 | 1973 | 93 | 180 | 32 | 2,237 |
| NOCKAMIXON | PA00734 | 1973 | 102 | 71,000 | 32 | 2,269 |
| ROBERT A SKINNER | CA00223 | 1973 | 109 | 43,800 | 32 | 2,301 |
| JEFF DAVIS | CA00309 | 1973 | 114 | 1,800 | 32 | 2,333 |
| PERRIS | CA00054 | 1973 | 130 | 131,452 | 32 | 2,365 |
| LAUREL DAM | KY03046 | 1973 | 282 | 435,600 | 32 | 2,397 |
| CASTAIC | CA00044 | 1973 | 340 | 323,700 | 32 | 2,429 |
| JOCASSEE | SC00529 | 1973 | 385 | 1,287,788 | 32 | 2,461 |
| RANCHO SECO | CA00825 | 1972 | 68 | 2,950 | 33 | 2,494 |
| SWING | CA00903 | 1972 | 63 | 887 | 33 | 2,527 |
| Lower Rimrock Dam | WA00036 | 1972 | 67 | 550 | 33 | 2,560 |
| CHESBRO | CA00995 | 1972 | 79 | 1,250 | 33 | 2,593 |
| CRAWFORD RANCH | CA00977 | 1972 | 80 | 340 | 33 | 2,626 |
| LAUREL CREEK | PA00576 | 1972 | 135 | 4,080 | 33 | 2,659 |
| WESTLAKE RES | CA00904 | 1972 | 156 | 9,200 | 33 | 2,692 |
| YANKEE DOODLE TAILINGS DAM | MT01425 | 1972 | 570 | 7,200 | 33 | 2,725 |
| CANADA ROAD | CA00055 | 1971 | 52 | 74 | 34 | 2,759 |
| STRAZA | *CA01084* | *1971* | *62* | *185* | *34* | *2,793* |
| LACKAWANNA | PA00913 | 1971 | 69 | 14,200 | 34 | 2,827 |
| ALISAL CREEK | CA00731 | 1971 | 93 | 2,342 | 34 | 2,861 |
| TURNER | CA00905 | 1971 | 111 | 2,000 | 34 | 2,895 |
| MANITOU | CO00426 | 1971 | 124 | 1,100 | 34 | 2,929 |
| POWAY | CA00909 | 1971 | 162 | 3,300 | 34 | 2,963 |
| DON PEDRO | CA00281 | 1971 | 568 | 2,030,000 | 34 | 2,997 |
| MURRAY | CA01061 | 1970 | 55 | 117 | 35 | 3,032 |
| PALO VERDE | CA00789 | 1970 | 67 | 730 | 35 | 3,067 |
| ANTHONY HOUSE | CA00964 | 1970 | 75 | 3,840 | 35 | 3,102 |
| L VAN NORMAN BYPASS | CA00101 | 1970 | 78 | 240 | 35 | 3,137 |
| Willow Springs | AZ00068 | 1970 | 87.7 | 4,230 | 35 | 3,172 |
| DIXON | CA00878 | 1970 | 116 | 2,500 | 35 | 3,207 |
| Silver Basin | AZ00022 | 1970 | 180 | 8,000 | 35 | 3,242 |
| TERMINAL | CA00886 | 1969 | 53 | 844 | 36 | 3,278 |
| Clear Branch Creek Dam | OR00451 | 1969 | 111 | 4,000 | 36 | 3,314 |
| BIG CREEK | CA00652 | 1969 | 120 | 7,850 | 36 | 3,350 |
| WOOD CREEK LAKE DAM | KY00088 | 1969 | 183 | 29,101 | 36 | 3,386 |
| LOPEZ | CA00887 | 1969 | 186 | 52,500 | 36 | 3,422 |
| WIDE CANYON | CA00803 | 1968 | 84 | 1,490 | 37 | 3,459 |
| COYOTE CREEK | CA00572 | 1968 | 92 | 3,375 | 37 | 3,496 |
| SUMMIT RES | CA00146 | 1968 | 124 | 220 | 37 | 3,533 |
| EAU GALLE | WI00780 | 1968 | 127 | 56,900 | 37 | 3,570 |
| SANTA YNEZ CANYON | CA00100 | 1968 | 157 | 356 | 37 | 3,607 |
| WALNUT CANYON | CA00869 | 1968 | 187 | 2,570 | 37 | 3,644 |
| DEL VALLE | CA00043 | 1968 | 222 | 77,100 | 37 | 3,681 |
| MINERAL HOT SPRINGS LAKE | CA01026 | 1967 | 54 | 37 | 38 | 3,719 |
| SWAN | CA00965 | 1967 | 59 | 550 | 38 | 3,757 |
| HILLSIDE RANCH | CA01067 | 1967 | 60 | 210 | 38 | 3,795 |
| MAGNOLIA | CA00966 | 1967 | 68 | 4,150 | 38 | 3,833 |
| INDIAN CREEK | CA00894 | 1967 | 71 | 3,160 | 38 | 3,871 |
| MSD TREATMENT PLANT DAM | NC00320 | 1967 | 75 | 385 | 38 | 3,909 |
| WALNUT CR CLRWELL | CA00175 | 1967 | 102 | 25 | 38 | 3,947 |
| EL TORO RES | CA00875 | 1967 | 106 | 877 | 38 | 3,985 |
| MOLYCORP TAILINGS | CA01394 | 1967 | 118 | 309 | 38 | 4,023 |
| FOSTER | OR00012 | 1967 | 128 | 81,000 | 38 | 4,061 |
| Cabin Creek Upper | CO01239 | 1967 | 216 | 1,600 | 38 | 4,099 |
| HOMESTAKE PROJECT | CO00673 | 1967 | 265 | 45,870 | 38 | 4,137 |
| Fauchere Lake Main | CA00256 | 1966 | 51 | 4,020 | 39 | 4,176 |
| HAWKEYE | CA01052 | 1966 | 66 | 140 | 39 | 4,215 |
| RIGHETTI | CA00725 | 1966 | 83 | 880 | 39 | 4,254 |
| McSwain | CA00242 | 1966 | 97 | 10,000 | 39 | 4,293 |
| Chevelon Canyon | AZ00048 | 1966 | 100 | 8,542 | 39 | 4,332 |
| GRIZZLY VALLEY | CA00039 | 1966 | 115 | 83,000 | 39 | 4,371 |
| N. FORK OF POUND DAM | VA19501 | 1966 | 122 | 11,293 | 39 | 4,410 |
| SAN JOAQUIN RES | CA00853 | 1966 | 224 | 3,036 | 39 | 4,449 |
| LOWER HELL HOLE | CA00857 | 1966 | 410 | 208,400 | 39 | 4,488 |
| HARTZELL | CA00727 | 1965 | 50 | 300 | 40 | 4,528 |
| Yards Creek Upper - West Dike | NJ83004 | 1965 | 52 | 4,900 | 40 | 4,568 |
| HAYNES RES | CA01030 | 1965 | 67 | 5,870 | 40 | 4,608 |
| REBA | CA00842 | 1965 | 70 | 240 | 40 | 4,648 |
| UPPER BLUE | CO00871 | 1965 | 75 | 2,835 | 40 | 4,688 |
| DUTCH FLAT 2 FB | CA00258 | 1965 | 77 | 185 | 40 | 4,728 |
| Youngs River Reservoir | OR03832 | 1965 | 81 | 12,000 | 40 | 4,768 |
| GRASSHOPPER HOLLOW TAILINGS DAM | WV06523 | 1965 | 129 | 1,260 | 40 | 4,808 |
| WOOD RANCH | CA00850 | 1965 | 146 | 11,000 | 40 | 4,848 |
| Dutch Flat Afterbay | CA00257 | 1965 | 165 | 2,040 | 40 | 4,888 |
| JACKSON CREEK | CA00867 | 1965 | 193 | 22,000 | 40 | 4,928 |
| JACKSON MEADOWS | CA00254 | 1965 | 195 | 52,500 | 40 | 4,968 |

| Dam Name | NID ID Number | Year Completed | NID Height (ft.) | NID Storage (cubic yards) | Dam Years (since 2005) | Dam Years Running total (since 2005) |
|---|---|---|---|---|---|---|
| SAN ANTONIO | CA00813 | 1965 | 202 | 350,000 | 40 | 5,008 |
| FALL CREEK | OR00007 | 1965 | 205 | 125,000 | 40 | 5,048 |
| IRON CANYON | CA00417 | 1965 | 214 | 24,300 | 40 | 5,088 |
| L L ANDERSON | CA00858 | 1965 | 231 | 111,333 | 40 | 5,128 |
| MCCLOUD | CA00418 | 1965 | 240 | 35,300 | 40 | 5,168 |
| SUMMERSVILLE DAM | WV06702 | 1965 | 390 | 413,400 | 40 | 5,208 |
| GRIZZLY CREEK | CA00553 | 1964 | 50 | 76 | 41 | 5,249 |
| ADA ROSE, LAKE | CA00871 | 1964 | 60 | 138 | 41 | 5,290 |
| BERNARDO RES | CA00118 | 1964 | 64 | 30 | 41 | 5,331 |
| Clinch River Flyash Dam #1 | VA16703 | 1964 | 55 | 1,240 | 41 | 5,372 |
| BRENTWOOD PARK | CA00851 | 1964 | 58 | 80 | 41 | 5,413 |
| Camp Kwoneesum Dam | WA00131 | 1964 | 60 | 120 | 41 | 5,454 |
| SCOUT LAKE | CA00563 | 1964 | 63 | 1,140 | 41 | 5,495 |
| Clinch River Flyash Dam #2 | VA16702 | 1964 | 65 | 157 | 41 | 5,536 |
| SAN LORENZO CR | CA00841 | 1964 | 65 | 380 | 41 | 5,577 |
| HARBOR VIEW | CA00830 | 1964 | 65 | 28 | 41 | 5,618 |
| SENIOR CANYON | CA01019 | 1964 | 76 | 73 | 41 | 5,659 |
| FISHPOND LAKE DAM | KY00042 | 1964 | 105 | 1,156 | 41 | 5,700 |
| ANTELOPE | CA00037 | 1964 | 113 | 22,566 | 41 | 5,741 |
| JAMES H TURNER | CA00132 | 1964 | 193 | 50,500 | 41 | 5,782 |
| BRIONES | CA00172 | 1964 | 273 | 67,520 | 41 | 5,823 |
| ROUND BUTTE | OR00549 | 1964 | 440 | 535,000 | 41 | 5,864 |
| COUGAR | OR00015 | 1964 | 519 | 219,000 | 41 | 5,905 |
| FOOTHILL REG PARK | CA01057 | 1963 | 51 | 109 | 42 | 5,947 |
| LARSON | CA00712 | 1963 | 54 | 326 | 42 | 5,989 |
| CULL CREEK | CA00840 | 1963 | 56 | 310 | 42 | 6,031 |
| NIMS LAKE DAM | MO30084 | 1963 | 57 | 6,280 | 42 | 6,073 |
| Canyon Creek Meadows Reservoir | OR00385 | 1963 | 58 | 400 | 42 | 6,115 |
| MARSH CREEK | CA00809 | 1963 | 59 | 4,425 | 42 | 6,157 |
| WARD CREEK | CA00839 | 1963 | 71 | 130 | 42 | 6,199 |
| LAKE SYMPSON DAM | KY00045 | 1963 | 73 | 4,994 | 42 | 6,241 |
| MAST | CA00972 | 1963 | 85 | 380 | 42 | 6,283 |
| LOWER SUNSET DB | CA01161 | 1963 | 88 | 37 | 42 | 6,325 |
| TAUM SAUK PS UPPER | MO30040 | 1963 | 94 | 4,350 | 42 | 6,367 |
| MATANZAS CREEK | CA00794 | 1963 | 95 | 1,500 | 42 | 6,409 |
| Loon Lake Auxiliary | CA83089 | 1963 | 102 | 76,500 | 42 | 6,451 |
| LOON LAKE | CA00820 | 1963 | 108 | 76,500 | 42 | 6,493 |
| VILLA PARK | CA00829 | 1963 | 118 | 15,600 | 42 | 6,535 |
| PALISADES RES | CA00843 | 1963 | 146 | 147 | 42 | 6,577 |
| VIRGINIA RANCH | CA00842 | 1963 | 152 | 57,000 | 42 | 6,619 |
| MAERKLE | CA00844 | 1963 | 165 | 800 | 42 | 6,661 |
| CAMANCHE | CA00173 | 1963 | 171 | 417,120 | 42 | 6,703 |
| CAMP FAR WEST | CA00227 | 1963 | 185 | 104,500 | 42 | 6,745 |
| JOHN W FLANNAGAN DAM | VA05101 | 1963 | 250 | 145,700 | 42 | 6,787 |
| UNION VALLEY | CA00816 | 1963 | 453 | 230,000 | 42 | 6,829 |
| TOWBALYLA | CA00589 | 1962 | 51 | 376 | 43 | 6,872 |
| MAYHEW RESERVOIR | CA00897 | 1962 | 53 | 18 | 43 | 6,915 |
| MINERS RANCH | CA00275 | 1962 | 66 | 912 | 43 | 6,958 |
| BOSCH NO 2 | CA01044 | 1962 | 55 | 37 | 43 | 7,001 |
| HIGHLAND CREEK | CA00828 | 1962 | 75 | 3,500 | 43 | 7,044 |
| Lynx Lake | AZ00049 | 1962 | 89.2 | 2,784 | 43 | 7,087 |
| PATTERSON | CA00895 | 1962 | 100 | 46 | 43 | 7,130 |
| HERNANDEZ | CA00848 | 1962 | 124 | 18,000 | 43 | 7,173 |
| OLIVE HILLS RES | CA00870 | 1962 | 140 | 186 | 43 | 7,216 |
| DEVELOPMENT NO. 2 DAM | OR00317 | 1962 | 145 | 26,000 | 43 | 7,259 |
| ROBERT W MATTHEWS | CA00833 | 1962 | 150 | 51,800 | 43 | 7,302 |
| PONDEROSA DIV | CA00274 | 1962 | 180 | 4,760 | 43 | 7,345 |
| MARK EDSON | CA00607 | 1962 | 182 | 20,000 | 43 | 7,388 |
| CHET HARRITT | CA00238 | 1962 | 200 | 9,790 | 43 | 7,431 |
| WILSON DB | CA01162 | 1961 | 50 | 84 | 44 | 7,475 |
| DANVILLE | CA00184 | 1961 | 75 | 45 | 44 | 7,519 |
| NORTH | CA00183 | 1961 | 82 | 244 | 44 | 7,563 |
| BETHANY FOREBAY | CA00033 | 1961 | 95 | 5,250 | 44 | 7,607 |
| SEEGER | CA00209 | 1961 | 115 | 22,400 | 44 | 7,651 |
| ROSEMONT | CO00471 | 1961 | 120 | 3,156 | 44 | 7,695 |
| FRENCHMAN | CA00032 | 1961 | 129 | 55,477 | 44 | 7,739 |
| OXBOW | ID00057 | 1961 | 175 | 58,200 | 44 | 7,783 |
| CORNWALL TAILINGS | PA00597 | 1961 | 200 | 3,880 | 44 | 7,827 |
| LITTLE GRASS VY | CA00269 | 1961 | 210 | 93,010 | 44 | 7,871 |
| FRANCIS E WALTER DAM | PA00008 | 1961 | 239 | 160,290 | 44 | 7,915 |
| SLY CREEK | CA00272 | 1961 | 271 | 65,050 | 44 | 7,959 |
| LEWIS SMITH | AL01420 | 1961 | 300 | 1,670,700 | 44 | 8,003 |
| SANTA ANITA DB | CA01165 | 1960 | 56 | 116 | 45 | 8,048 |
| BIG DALTON DB | CA01156 | 1960 | 59 | 193 | 45 | 8,093 |
| WILLIAM, LAKE | CA00586 | 1960 | 66 | 340 | 45 | 8,138 |
| LITTLE DALTON DB | CA01154 | 1960 | 71 | 234 | 45 | 8,183 |
| DICKSON HILL | CA00885 | 1960 | 80 | 23 | 45 | 8,228 |
| MALONEY | CA00180 | 1960 | 107 | 68 | 45 | 8,273 |
| ASH CREEK | UT00010 | 1960 | 138 | 12,250 | 45 | 8,318 |
| NEWELL | CA00156 | 1960 | 182 | 8,991 | 45 | 8,363 |
| WHALE ROCK | CA00028 | 1960 | 193 | 40,662 | 45 | 8,408 |
| MAMMOTH POOL | CA00443 | 1960 | 408 | 123,000 | 45 | 8,453 |
| BIG CANYON | CA00891 | 1959 | 85 | 600 | 46 | 8,499 |
| RATTLESNAKE CAN | CA00855 | 1959 | 79 | 1,480 | 46 | 8,545 |
| BELL CANYON | CA00149 | 1959 | 95 | 2,530 | 46 | 8,591 |
| ICE HOUSE | CA00814 | 1959 | 150 | 37,120 | 46 | 8,637 |
| CARIBOU AFTERBAY | CA00413 | 1959 | 164 | 2,400 | 46 | 8,683 |
| EARTHQUAKE LAKE | MT00882 | 1959 | 200 | 59,500 | 46 | 8,729 |
| J W WISDA | CA00053 | 1958 | 50 | 45 | 47 | 8,776 |
| SIERRA MADRE VIL | CA01158 | 1958 | 50 | 109 | 47 | 8,823 |
| EARL THOMAS RES | CA00119 | 1958 | 58 | 107 | 47 | 8,870 |
| Pena Blanca | AZ00028 | 1958 | 72 | 1,240 | 47 | 8,917 |
| DEER LAKE | CA00579 | 1958 | 72 | 260 | 47 | 8,964 |
| SAN MARCOS | CA00785 | 1958 | 85 | 320 | 47 | 9,011 |
| MIDDLEFIELD RES | CA00896 | 1958 | 147 | 22 | 47 | 9,058 |

| Dam Name | NID ID Number | Year Completed | NID Height (ft.) | NID Storage (cubic-yards) | Dam Years (since 2008 | Dam Years Running total (since 2005) |
|---|---|---|---|---|---|---|
| Wishon Main | CA00411 | 1958 | 285 | 129,000 | 47 | 9,105 |
| Courtright | CA00412 | 1958 | 315 | 123,000 | 47 | 9,152 |
| MCMAHON | CA00701 | 1957 | 52 | 520 | 48 | 9,200 |
| MURRY | CA01013 | 1957 | 64 | 715 | 48 | 9,248 |
| LUNGA DAM | VA17901 | 1957 | 56 | 9,600 | 48 | 9,296 |
| A L CHAFFIN | CA00552 | 1957 | 65 | 450 | 48 | 9,344 |
| ARROYO SECO | CA00613 | 1957 | 67 | 2,433 | 48 | 9,392 |
| SMALL CANYON | CA00314 | 1957 | 68 | 20 | 48 | 9,440 |
| PLEASANT VALLEY | CA00098 | 1957 | 87 | 3,825 | 48 | 9,488 |
| UVAS | CA00807 | 1957 | 118 | 10,000 | 48 | 9,536 |
| PARADISE | CA00297 | 1957 | 175 | 11,500 | 48 | 9,584 |
| NACIMIENTO | CA00812 | 1957 | 210 | 350,000 | 48 | 9,632 |
| LA VERNE, LAKE | CA00983 | 1956 | 50 | 54 | 49 | 9,681 |
| COIT | CA01011 | 1956 | 54 | 275 | 49 | 9,730 |
| SOUTH | CA00181 | 1956 | 58 | 156 | 49 | 9,779 |
| SYCAMORE | CA00800 | 1956 | 63 | 880 | 49 | 9,828 |
| ALESSANDRO | CA00798 | 1956 | 66 | 370 | 49 | 9,877 |
| TEJON STORAGE 2 | CA00729 | 1956 | 67 | 860 | 49 | 9,926 |
| ANNADEL NO 1 | CA00056 | 1956 | 67 | 395 | 49 | 9,975 |
| Fool Hollow | AZ00051 | 1956 | 78 | 5,617 | 49 | 10,024 |
| PINE CREEK | CA00808 | 1956 | 87 | 225 | 49 | 10,073 |
| MONTGOMERY | CO00372 | 1956 | 112 | 6,100 | 49 | 10,122 |
| CHERRY VALLEY | CA00125 | 1956 | 315 | 273,500 | 49 | 10,171 |
| MOSKOWITE | CA00583 | 1955 | 50 | 472 | 50 | 10,221 |
| BEVANS CREEK | CA00562 | 1955 | 51 | 215 | 50 | 10,271 |
| PORTAL PH FOREBAY | CA00442 | 1955 | 65 | 325 | 50 | 10,321 |
| DICK WEEK | CA00585 | 1955 | 70 | 3,140 | 50 | 10,371 |
| SAWPIT DB | CA01157 | 1955 | 82 | 152 | 50 | 10,421 |
| ELMER J CHESBRO | CA00806 | 1955 | 95 | 8,086 | 50 | 10,471 |
| Steer Branch Dam | VA19503 | 1955 | 210 | 40 | 50 | 10,521 |
| LUCKY PEAK | ID00288 | 1955 | 340 | 307,000 | 50 | 10,571 |
| HARRISON STREET | CA00797 | 1954 | 50 | 208 | 51 | 10,622 |
| NULL | CA00933 | 1954 | 54 | 188 | 51 | 10,673 |
| RICHARDSON | CA00994 | 1954 | 65 | 520 | 51 | 10,724 |
| PINON CANYON DETENTION | CO00105 | 1954 | 73 | 561 | 51 | 10,775 |
| UPPER STONE CANYON | CA00097 | 1954 | 111 | 426 | 51 | 10,826 |
| GARVEY RES | CA00217 | 1954 | 160 | 1,810 | 51 | 10,877 |
| VERMILION VALLEY | CA00441 | 1954 | 167 | 125,000 | 51 | 10,928 |
| PETERS | CA00208 | 1954 | 230 | 32,900 | 51 | 10,979 |
| FRENCHMAN DAM | MT00003 | 1953 | 63 | 21,000 | 52 | 11,031 |
| EAGLE ROCK | CA00084 | 1953 | 113 | 254 | 52 | 11,083 |
| GREEN VERDUGO | CA00096 | 1953 | 118 | 89 | 52 | 11,135 |
| JAMES J LENIHAN | CA00293 | 1953 | 208 | 21,430 | 52 | 11,187 |
| CRYSTAL | CA00573 | 1952 | 51 | 105 | 53 | 11,240 |
| DEBELL | CA00686 | 1952 | 53 | 120 | 53 | 11,293 |
| SUTRO RESERVOIR | CA00135 | 1952 | 55 | 86 | 53 | 11,346 |
| SCHUBIN | CA01045 | 1952 | 56 | 226 | 53 | 11,399 |
| POMPONIO RANCH | CA01008 | 1952 | 63 | 258 | 53 | 11,452 |
| Lower Bear | CA00409 | 1952 | 245 | 54,000 | 53 | 11,505 |
| MALLACOMES | CA00591 | 1951 | 57 | 200 | 54 | 11,559 |
| NIEGEL | CA01047 | 1951 | 61 | 145 | 54 | 11,613 |
| RICKEY | CA01009 | 1951 | 84 | 47 | 54 | 11,667 |
| Little Hell s Canyon | AZ00215 | 1951 | 89.5 | 1,545 | 54 | 11,721 |
| NOVATO CREEK | CA00321 | 1951 | 71 | 4,430 | 54 | 11,775 |
| MIDDLE CREEK DAM | MT00018 | 1951 | 110 | 10,230 | 54 | 11,829 |
| BELLETT | CA00542 | 1950 | 54 | 90 | 55 | 11,884 |
| GLEN MARTIN | CA00754 | 1950 | 55 | 33 | 55 | 11,939 |
| DIEDERICH RES | CA00064 | 1950 | 80 | 174 | 55 | 11,994 |
| PEABODY | CA00685 | 1950 | 63 | 68 | 55 | 12,049 |
| MARLOWE HEIRS REFUSE DAM-WHITE OAK BRANCH | KY00665 | 1950 | 80 | 316 | 55 | 12,104 |
| STOCKTON CREEK | CA00699 | 1950 | 95 | 368 | 55 | 12,159 |
| AUSTRIAN | CA00680 | 1950 | 185 | 6,200 | 55 | 12,214 |
| LEROY ANDERSON | CA00294 | 1950 | 236 | 91,280 | 55 | 12,269 |
| SYPHON CANYON | CA00749 | 1949 | 59 | 500 | 56 | 12,325 |
| GLENOAKS 008 RES | CA00065 | 1949 | 62 | 28 | 56 | 12,381 |
| QUEENS CREEK | NC00333 | 1949 | 78 | 718 | 56 | 12,437 |
| BON TEMPE | CA00207 | 1949 | 88 | 4,300 | 56 | 12,493 |
| LOS PADRES | CA00692 | 1949 | 148 | 3,100 | 56 | 12,549 |
| BIG DRY CREEK | CA01075 | 1948 | 50 | 30,200 | 57 | 12,606 |
| JACOBS CREEK | CA00232 | 1948 | 53 | 587 | 57 | 12,663 |
| LA HERRADURA | CA00582 | 1948 | 73 | 110 | 57 | 12,720 |
| French Lake | CA00247 | 1948 | 100 | 13,800 | 57 | 12,777 |
| SCOTTS FLAT | CA00253 | 1948 | 175 | 49,000 | 57 | 12,834 |
| MUD MOUNTAIN DAM | WA00300 | 1948 | 425 | 106,000 | 57 | 12,891 |
| KUHN | CA00683 | 1947 | 67 | 85 | 58 | 12,949 |
| DOS PUEBLOS | CA00730 | 1946 | 78 | 300 | 59 | 13,008 |
| CONN CREEK | CA00104 | 1946 | 125 | 31,000 | 59 | 13,067 |
| RECTOR CREEK | CA00011 | 1946 | 184 | 4,587 | 59 | 13,126 |
| RUBIO DB | CA00202 | 1944 | 84 | 44 | 61 | 13,187 |
| PIT 5 COND EMBANK | CA00403 | 1943 | 61 | 1,147 | 62 | 13,249 |
| ELYSIAN | CA00089 | 1943 | 71 | 167 | 62 | 13,311 |
| NANTAHALA | NC00371 | 1942 | 250 | 126,000 | 63 | 13,374 |
| CHORRO CREEK | CA01076 | 1941 | 77 | 90 | 64 | 13,438 |
| ORANGE COUNTY RESERVOIR | CA00218 | 1941 | 103 | 217 | 64 | 13,502 |
| LONG VALLEY | CA00090 | 1941 | 126 | 183,465 | 64 | 13,566 |
| THORPE | NC00376 | 1941 | 150 | 67,100 | 64 | 13,630 |
| THORPE LAKE DAM #1 (NP&L FERC) | NC00336 | 1941 | 150 | - | 64 | 13,694 |
| CALAVERA | CA00781 | 1940 | 67 | 520 | 65 | 13,759 |
| GRANT LAKE | CA00089 | 1940 | 87 | 47,525 | 65 | 13,824 |
| CHEVY CHASE 1290 | CA01078 | 1940 | 90 | 17 | 65 | 13,889 |
| MUNICIPAL | CA00155 | 1939 | 56 | 169 | 66 | 13,955 |
| KIMBALL CREEK | CA00310 | 1939 | 80 | 344 | 66 | 14,021 |
| PALOS VERDES RES | CA00215 | 1939 | 82 | 1,100 | 66 | 14,087 |
| NORTH FORK | CA00299 | 1939 | 100 | 6,150 | 66 | 14,153 |
| YELLOW WATER MAIN DAM | MT00012 | 1936 | 55 | 6,100 | 67 | 14,220 |

| Dam Name | NID ID Number | Year Completed | NID Height (ft.) | NID Storage (cubic-yards) | Dam Years (since 2005) | Dam Years Running total (since 2005) |
|---|---|---|---|---|---|---|
| RANCHO DEL CIEVRO | CA00719 | 1938 | 65 | 165 | 67 | 14,287 |
| SUNSET N BASIN | CA00134 | 1938 | 74 | 275 | 67 | 14,354 |
| SUTTENFIELD | CA00010 | 1938 | 76 | 800 | 67 | 14,421 |
| C L TILDEN PARK | CA00161 | 1938 | 68 | 266 | 67 | 14,488 |
| GREGORY, LAKE | CA00224 | 1938 | 90 | 2,100 | 67 | 14,555 |
| MATHEWS | CA00212 | 1938 | 264 | 182,000 | 67 | 14,622 |
| SAN GABRIEL NO 1 | CA00200 | 1938 | 320 | 44,183 | 67 | 14,689 |
| GLACIER LAKE NORTH DAM | MT00068 | 1937 | 57 | 4,980 | 68 | 14,757 |
| UNIV MOUND S BN | CA00133 | 1937 | 61 | 260 | 68 | 14,825 |
| CHERRY FLAT | CA00168 | 1936 | 60 | 500 | 69 | 14,894 |
| EATON WASH DB | CA00201 | 1936 | 63 | 721 | 69 | 14,963 |
| WEST VALLEY | CA00300 | 1936 | 65 | 23,000 | 69 | 15,032 |
| ALMADEN | CA00289 | 1936 | 110 | 2,000 | 69 | 15,101 |
| COYOTE | CA00287 | 1936 | 140 | 23,666 | 69 | 15,170 |
| BIG CANYON CR | CA00611 | 1935 | 63 | 395 | 70 | 15,240 |
| LAKE QUIVIRA, CITY OF, LAKE QUIVIRA DAM | KS02874 | 1935 | 80 | 2,998 | 70 | 15,310 |
| CALERO | CA00288 | 1935 | 90 | 9,850 | 70 | 15,380 |
| STEVENS CREEK | CA00292 | 1935 | 130 | 3,800 | 70 | 15,450 |
| GUADALUPE | CA00290 | 1935 | 142 | 3,460 | 70 | 15,520 |
| COGSWELL | CA00190 | 1935 | 266 | 8,969 | 70 | 15,590 |
| BOUQUET CANYON | CA00088 | 1934 | 190 | 36,505 | 71 | 15,661 |
| UPPER HOLLYWOOD | CA00087 | 1933 | 87 | 196 | 72 | 15,733 |
| SANTIAGO CREEK | CA00298 | 1933 | 136 | 25,000 | 72 | 15,806 |
| PETERS CANYON | CA00746 | 1932 | 54 | 1,090 | 73 | 15,876 |
| WHITTIER RES NO 4 | CA00153 | 1931 | 55 | 32 | 74 | 15,952 |
| SWANZY, LAKE | CA00144 | 1931 | 86 | 107 | 74 | 16,026 |
| SALT SPRINGS | CA00382 | 1931 | 332 | 141,900 | 74 | 16,100 |
| MOCCASIN LOWER | CA00122 | 1930 | 60 | 554 | 75 | 16,175 |
| GRIZZLY | CO01545 | 1930 | 65 | 987 | 75 | 16,250 |
| FELT LAKE | CA00870 | 1930 | 87 | 900 | 75 | 16,325 |
| Haskins Creek Dam | OR00115 | 1930 | 85 | 704 | 75 | 16,400 |
| BRAND PARK | CA00081 | 1930 | 99 | 32 | 75 | 16,475 |
| LAFAYETTE | CA00163 | 1929 | 132 | 4,250 | 76 | 16,551 |
| GEUNOC LAKE | CA00584 | 1926 | 50 | 3,237 | 77 | 16,628 |
| WUEST | CA00780 | 1926 | 50 | 280 | 77 | 16,705 |
| COYOTE FLAT | CA00513 | 1926 | 52 | 5,250 | 77 | 16,782 |
| THOMPSON CREEK | CA00198 | 1926 | 66 | 543 | 77 | 16,859 |
| BUCKS STORAGE | CA00332 | 1926 | 122 | 103,000 | 77 | 16,936 |
| PUDDINGSTONE | CA00194 | 1926 | 147 | 18,342 | 77 | 17,013 |
| BIG TOOTH | CO00445 | 1927 | 120 | 205 | 78 | 17,091 |
| BOWMAN | CA00245 | 1927 | 175 | 64,000 | 78 | 17,169 |
| PHILBROOK | CA00345 | 1926 | 85 | 5,180 | 79 | 17,248 |
| CURRY, LAKE | CA00140 | 1926 | 107 | 10,700 | 79 | 17,327 |
| BLACK ROCK CR | CA00693 | 1925 | 57 | 30 | 80 | 17,407 |
| SKAGWAY | CO00481 | 1925 | 79 | 3,570 | 80 | 17,487 |
| THOMPSON | CA00445 | 1925 | 114 | 1,010 | 80 | 17,567 |
| DIX RIVER DAM | KY00316 | 1925 | 267 | 230,500 | 80 | 17,647 |
| BRIDGEPORT | CA00284 | 1924 | 63 | 44,100 | 81 | 17,728 |
| ENCINO | CA00070 | 1924 | 188 | 9,789 | 81 | 17,809 |
| STONE CANYON | CA00083 | 1924 | 166 | 10,372 | 81 | 17,890 |
| HENDERSON | CA00005 | 1923 | 56 | 500 | 82 | 17,972 |
| EL DORADO FOREBAY | CA00375 | 1923 | 91 | 472 | 82 | 18,054 |
| DRINKWATER | CA00077 | 1923 | 105 | 92 | 82 | 18,136 |
| CAPLES LAKE | CA00378 | 1922 | 71 | 21,580 | 83 | 18,219 |
| Spruce Hollow | MD00349 | 1920 | 50 | 150 | 85 | 18,304 |
| SAN PABLO | CA00186 | 1920 | 170 | 43,193 | 85 | 18,389 |
| Deggs | AZ00013 | 1919 | 66 | 13,750 | 86 | 18,475 |
| BOX ELDER CREEK (CHATFIELD) | UT00050 | 1916 | 50 | 511 | 89 | 18,564 |
| MAIN STRAWBERRY | CA00386 | 1916 | 143 | 18,312 | 89 | 18,653 |
| Drews Reservoir | OR00049 | 1914 | 63 | 65,000 | 91 | 18,744 |
| CUCHARAS #5 | CO01146 | 1913 | 145 | 103,000 | 92 | 18,836 |
| SAND CANYON | CA00854 | 1912 | 58 | 960 | 93 | 18,929 |
| Lyman | AZ00004 | 1912 | 76.4 | 44,500 | 93 | 19,022 |
| MORENA | CA00110 | 1912 | 181 | 50,208 | 93 | 19,115 |
| VALLEY, LAKE | CA00361 | 1911 | 74 | 8,127 | 94 | 19,209 |
| Wenas Dam | WA00002 | 1911 | 90 | 5,500 | 94 | 19,303 |
| SAWMILL LAKE | CA00250 | 1910 | 60 | 3,040 | 95 | 19,398 |
| CENTRAL | CA00182 | 1910 | 55 | 485 | 95 | 19,493 |
| HILLSIDE | CA00446 | 1910 | 61 | 12,883 | 95 | 19,588 |
| RELIEF | CA00390 | 1910 | 145 | 15,122 | 95 | 19,683 |
| CRANE VAL STOR | CA00337 | 1910 | 145 | 45,410 | 95 | 19,778 |
| STANISLAUS FB | CA00391 | 1908 | 60 | 340 | 97 | 19,875 |
| MARIE, LAKE | CA00004 | 1908 | 60 | 170 | 97 | 19,972 |
| SABRINA | CA00445 | 1908 | 70 | 8,376 | 97 | 20,069 |
| MADIGAN, LAKE | CA00141 | 1908 | 68 | 1,744 | 97 | 20,166 |
| KUNKLE | CA00344 | 1907 | 54 | 253 | 98 | 20,264 |
| PHOENIX LAKE | CA00206 | 1907 | 80 | 612 | 98 | 20,362 |
| HERMAN, LAKE | CA00851 | 1905 | 51 | 2,210 | 100 | 20,462 |
| BERRYMAN RES | CA00168 | 1905 | 60 | 45 | 100 | 20,562 |
| PIEDMONT | CA00170 | 1905 | 64 | 80 | 100 | 20,662 |
| DESABLA FOREBAY | CA00343 | 1903 | 53 | 280 | 102 | 20,764 |
| MEADOW LAKE | CA00381 | 1903 | 77 | 5,160 | 102 | 20,866 |
| ESTATES | CA00169 | 1903 | 93 | 56 | 102 | 20,968 |
| TERMINAL | CO00895 | 1902 | 103 | 29,800 | 103 | 21,071 |
| CHOLLAS | CA00107 | 1901 | 50 | 310 | 104 | 21,175 |
| Hogan Dam | VA15504 | 1900 | 60 | 1,285 | 105 | 21,280 |
| Upper Bear | CA03276 | 1900 | 77 | 7,400 | 105 | 21,385 |
| BEAR RIVER | CA00379 | 1900 | 83 | 6,818 | 105 | 21,490 |
| TORESON | CA00483 | 1898 | 55 | 1,140 | 107 | 21,597 |
| BEAR GULCH | CA00858 | 1896 | 61 | 872 | 109 | 21,706 |
| River Reservoir #3 | AZ00007 | 1896 | 68.5 | 3,195 | 109 | 21,815 |
| FREY, LAKE | CA00142 | 1894 | 83 | 1,075 | 111 | 21,926 |
| RED ROCK NO 1 | CA00510 | 1893 | 83 | 10,000 | 112 | 22,038 |
| FOREST LAKE | CA00690 | 1892 | 60 | 427 | 113 | 22,151 |
| SUMMIT | CA00171 | 1891 | 61 | 117 | 114 | 22,265 |

| Dam Name | NID ID Number | Year Completed | NID Height (ft.) | NID Storage (cubic-yards) | Dam Years (since 2005 | Dam Years Running total (since 2005) |
|---|---|---|---|---|---|---|
| COWELL RESERVIOR | CA00046 | 1890 | 50 | 175 | 115 | 22,380 |
| SEQUOIA LAKE | CA00709 | 1888 | 51 | 1,370 | 117 | 22,497 |
| YOSEMITE, LAKE | CA00241 | 1888 | 53 | 6,101 | 117 | 22,614 |
| EMERALD LAKE 1 LOWER | CA00668 | 1885 | 57 | 45 | 120 | 22,734 |
| PHOENIX | CA00389 | 1880 | 52 | 455 | 125 | 22,859 |
| SPENSER LAKE | CA00673 | 1876 | 87 | 73 | 129 | 22,988 |
| FORDYCE, LAKE | CA00357 | 1873 | 143 | 48,900 | 132 | 23,120 |
| SAN ANDREAS | CA00129 | 1870 | 107 | 19,027 | 135 | 23,255 |
| TEMESCAL, LAKE | CA00160 | 1869 | 116 | 200 | 136 | 23,391 |
| PILARCITOS | CA00128 | 1866 | 103 | 3,100 | 139 | 23,530 |
| EMERY | CA00818 | 1850 | 53 | 630 | 155 | 23,685 |
| NOTRE DAME | CA00674 | | 51 | 120 | | |
| LOWER STEHLY | CA01227 | | 60 | 145 | | |
| AUXILIARY RESERVOIR C | CA01456 | | 85 | 3,700 | | |
| LANG CREEK DETN BN | CA01368 | | 67 | 283 | | |
| SLICKROCK CREEK | CA01444 | | 155 | 220 | | |
| WESINER HOLLOW SLURRY DAM | PA01841 | | 192 | 3,948 | | |