

STATE OF CALIFORNIA  
STATE WATER RIGHTS BOARD

In the Matter of Application 18475 of  
the City and County of San Francisco  
to Appropriate from La Costa Creek in  
Alameda County

Decision No. D 988

**ADOPTED DEC 20'60**

DECISION APPROVING APPLICATION

Application 18475 was filed January 13, 1959, for a permit to appropriate 20,000 acre-feet per annum of unappropriated water from La Costa (San Antonio) Creek which is tributary to Alameda Creek in Alameda County. The water will be collected in the proposed San Antonio Reservoir, which is to have a capacity of 51,000 acre-feet. Water thus collected plus waters from the City's Hetch Hetchy Project on the Tuolumne River will be regulated and water from its Calaveras Reservoir on Calaveras Creek will be re-regulated at this reservoir and used for municipal and domestic purposes within the service area of the San Francisco Water Department.

Protests to Application 18475 having been filed, public hearings were held in San Francisco on April 5 and 6, 1960, before Chairman Kent Silverthorne and Board Member W. P. Rowe.

The protest of Zone No. 7, Alameda County Flood Control and Water Conservation District, was that the proposed appropriation (1) would reduce the amount of water which naturally percolates and recharges the Sunol Valley Groundwater Basin and (2) would injure the downstream riparian owners in Zone No. 7. Representatives of Zone No. 7 appeared at the hearing as interested spectators but submitted their case on the basis of their

written protest and took no part in the hearing. The City of San Francisco owns in fee the lands within Zone 7 which are riparian to La Costa Creek and adjacent portions of the Sunol Valley Groundwater Basin (S.F. Exh. 6). Since no injury has been shown by Zone No. 7, its protest may be disregarded.

The only protestant to appear and take an active part in the hearing was Alameda County Water District, hereinafter referred to as the District. The District claims on behalf of its landholders that the proposed diversion will deprive it of water that under natural conditions percolates into the Niles Cone and further that the proposed diversion will decrease the amount of water available to it under Permits 8428 and 8429 (Applications 13279 and 13565). Each permit was issued in 1951 to the District and authorized the appropriation of water by diversion to underground storage. The District further claims that the 1916 arbitration agreement and 1920 award (Bailey Formula) which set forth the quantities of water that the City and County of San Francisco (as successor in title to the property and operations of the Spring Valley Water Co.) is required to release for the percolation into the Niles Cone are illegal (R.T. p. 61) and that they are not to be considered by the Board in reaching its decision (R.T. pp. 60, 245, 246, 247).

The applicant's position is that as between itself and the District the Bailey formula and related agreements are still binding; that the City intends to continue to make downstream releases in accordance with the Bailey formula and related agreements; and that even if the Bailey formula and related agreements were held to be invalid or not binding on the Board in determining unappropriated water, there nevertheless is available for its appropriation surplus water which periodically flows through the District and wastes into San Francisco Bay. These issues will

be considered in more detail after a description of the physical situation.

La Costa Creek, which is named San Antonio Creek on some maps, rises in the Coast Range northeasterly of Calaveras Reservoir. The creek flows in a northwesterly direction about ten miles to the proposed dam site, thence two miles westerly to its junction with Alameda Creek near Sunol. Alameda Creek flows northwesterly one mile from the junction thence westerly for about four miles through Niles Canyon to Niles at the upper end of the Niles Cone. Alameda Creek empties into San Francisco Bay at a point about ten miles west of Niles. The Alameda County Water District lies north and south of this reach of Alameda Creek with its easterly boundary at Niles and the westerly boundary at the Bay. There is a substantial degree of identity between lands within District boundaries and lands within the Niles Cone. The Sunol area about five miles east of Niles is the focal point of main tributaries joining Alameda Creek; Calaveras Creek from the southeast, Laguna Creek from the north and east, and La Costa Creek from the east. The watershed above the proposed dam site on La Costa Creek consists of nearly 40 square miles of moderately rough terrain ranging from elevation of about 300 feet at the dam site to about 3820 feet at the crest of the watershed.

The City's predecessor, the Spring Valley Water Company, collected water from the tributaries of Alameda Creek at Sunol under claim of rights dating from 1888 and delivered the water by the Sunol Concrete Aqueduct to the San Francisco area. Calaveras Reservoir on Calaveras Creek was constructed and integrated into this operation in the early 1920's. The City purchased the properties and rights of Spring Valley Water Company and took over its operations in 1930. When the City added its Hetch Hetchy Project on the Tuolumne River in the 1930's, the Coast Range Tunnel and Aqueduct

bringing these waters to San Francisco was built to pass near Sunol and the site of the proposed San Antonio Reservoir. All these operations of the City are now integrated and will become more so with the construction of San Antonio Reservoir and its use in part for terminal storage and regulating purposes.

In determining the availability of unappropriated water the Board must deal with an anomalous situation. Although Calaveras Reservoir was constructed after the effective date of the Water Commission Act, no application was ever filed with the Board or its predecessor for a permit to store water therein, and no evidence was introduced of any "pre-1914 appropriative right" to store water at the site of Calaveras Reservoir. Therefore, for purposes other than this proceeding the Board would apparently be required to regard the Calaveras Reservoir operation as unauthorized (Water Code Section 1225) and the water therein stored and used as still subject to appropriation. However, the City's position which will be considered hereinafter is that so far as the protestant District is concerned, all downstream releases of water have been and will continue to be limited by contract.

In 1916, an action was brought in the State courts by the District against the City's predecessor to enjoin the construction of Calaveras Dam or any other facility for diversion of water on the Alameda Creek system. See Alameda County Water District et al v. Spring Valley Water Co. et al, 67 Cal. App. 533, 227 Pac. 953 (D.C.A. 1924; Hearing Denied by Supreme Court). Subsequent to the filing of the complaint, an arbitration agreement was entered into whereby the controversy was to be settled by three members of the 1916 State Water Commission (predecessor of the Board) acting in their individual rather than official capacities. In 1920, an arbitration

award was returned incorporating by reference the "Bailey Formula" which gives a method of calculating how much water would be prevented from percolating naturally into the Niles Cone as a result of the construction and operation of Calaveras and any other dam that might be constructed on the stream system. A portion of the award consisted of requirements that releases be made from storage during the irrigation season to compensate for the aforementioned losses of natural percolation. In accordance with the arbitration agreement, the physical solution provided in the award was to continue in operation indefinitely, and was to be "final and conclusive upon the parties." Subsequent to the award, the trial court dismissed the injunctive action. On appeal, the District Court of Appeal pointed out that the agreement was in the nature of a common law submission to arbitration and that the arbitration settlement resulted in the court losing all jurisdiction over the merits of the controversy. At that time the court pointed out that any defect in the award could be attacked in a separate equity proceeding.

Subsequent to the aforementioned action, a water user within the District brought suit against Spring Valley Water Company, claiming injury to purported riparian and overlying rights (Patterson et al v. Spring Valley Water Company, 207 Cal. 739, 279 Pac. 1001 (1929)). This decision by the California Supreme Court makes it clear that the arbitration award in question is binding not only on the District but on the landowners within the District for whose benefit the earlier action had been brought.

In 1936, an agreement was entered into by the City and County of San Francisco and Alameda County Water District, whereby the City would make advance releases to the District of "Bailey Formula" water. The

difference between the computed natural percolation and advances thereof under the 1936 agreement and antecedent related agreements amounts to over a 100,000 acre-foot cumulative debit, which can be withheld in the future by San Francisco (R.T. p. 225; S.F. exh. 15; A.C.W.D. Exh. 4).

The District argues that the lapse of time and changed conditions make the Bailey Formula no longer binding and applicable. It introduced evidence in support of its position that the formula is inaccurate (A.C.W.D. Exh. 11). The Board also notes that an annual overdraft of about 16,000 acre-feet in the Niles Cone (R.T. p. 198) if continued sufficiently long is bound to result in a continuing saline intrusion and have an ultimate effect on the area intended to be benefitted by the percolation of water in accordance with the Bailey Formula. But the District has never brought an equity proceeding to set aside the 1920 arbitration award. On the contrary, the District recognized the 1920 award by the 1936 agreement which modified it, and the District has been receiving advance releases of water pursuant thereto through the year 1957-58 (A.C.W.D. Exh. 4). Accordingly, the Board regards the 1920 award as still in effect and binding on the City, the District, and on landowners within the District. This, in effect, means that the obligations of the City to the District and landowners therein are fully complied with as long as it observes the "Bailey Formula". This the City has indicated it intends to do. Since the District cannot compel the City to make additional releases of water downstream without further court action, the District's prior permits, for all practical purposes, are junior in right to the City's application for storage at San Antonio Reservoir.

The District might contend that the arbitration agreement and award apply only to the releases the City must make to satisfy natural ground water recharge and that, to the extent the District's permits authorize appropriation of water in addition to the amount required to maintain natural ground water recharge, it has secured a new and independent right which is entitled to protection without regard to the 1920 award. Such a contention would be contrary to certain recitals in the arbitration agreement and, in any event, could only be determined by a court of competent jurisdiction. The analysis of water supply and usage will be made on the premise that the 1920 arbitration award is still in effect.

The measured and computed flow of La Costa Creek is shown in State Water Resources Board Bulletin No. 13, "Alameda County Investigation", (Staff Exh. 4) and was tabulated by the applicant for the years 1931-32 through 1957-58 (S.F. Exh. 15). Most of this tabulation is reproduced herein as Table I and is supplemented with additional information supplied by the District (A.C.W.D. Exh. 4). An explanation of the entries for 1957-58 in Table I will illustrate the relationship of similar entries for earlier years.

TABLE I

LA COSTA CREEK STREAM FLOW, PERCOLATION, AND AVAILABILITY  
OF UNAPPROPRIATED WATER IN ACRE-FEET  
ASSUMING 1920 ARBITRATION AWARD STILL IN EFFECT

	1	2	3	4	5	6	7	8
	Flow of La Costa Creek			Alameda Creek	Percolation		La Costa Creek	
	in	Claim of			Under	Total		Water Available
	Acre-Feet	Right & Use	by Niles	Flow	Permits	Niles Cone	Niles Cone	for
	Measured &	by San	Gage	Measured	8428 &	Bailey	1920 Award	Appropriation
Year	Estimated	Francisco	Col. 1-2	at Niles	8429	Formula	Agreement	Col. 4-6
								Not to exceed
								Col. 3
1931-32	12,750	8,650	4,100	57,400		6,807	9,000	4,100
33	2,670	2,670	0	7,000		5,032	5,000	0
34	2,000	2,000	0	7,900		4,947	4,000	0
35	5,300	5,300	0	30,500		10,283	22,000	0
36	11,100	8,200	2,900	77,150		9,883	19,000	2,900
37	12,500	8,600	4,000	100,100		10,324	29,000	4,000
38	31,700	9,700	22,000	286,000		13,339	23,000	22,000
39	1,400	1,400	0	15,200		5,561	11,000	0
1939-40	14,100	8,700	5,400	92,600		9,850	18,000	5,400
41	22,500	9,300	13,000	200,000		12,244	20,000	13,000
42	14,400	8,800	6,600	128,000		14,736	17,000	6,600
43	10,200	8,000	2,200	79,500		11,578	16,000	2,200
44	6,300	6,000	300	35,000		9,123	14,000	300
45	8,700	7,800	900	44,100		13,125	15,000	900
46	3,600	3,600	0	15,700		9,935	12,000	0
47	900	900	0	2,100		2,596	5,000	0
48	1,100	1,100	0	900		3,586	1,000	0
49	3,700	3,700	0	5,600		5,203	3,000	0
1949-50	5,000	5,000	0	8,700		7,066	5,000	0
51	27,900	9,500	18,400	110,750	10,000	13,309	28,000	18,400
52	31,700	9,700	22,000	286,000	8,000	14,008	18,000	22,000

(Continued)

TABLE I (Continued)

	1	2	3	4	5	6	7	8
	Flow of La Costa Creek			Alameda Creek	Percolation		La Costa Creek	
	in	Claim of			Under	Total	Niles Cone	Water Available
	Acre-Feet	Right & Use	by Niles	Flow	Permits	Natural to	1920 Award	Appropriation
	Measured &	by San	Gage	Measured	8428 &	Bailey	1936	Col. 4-6
Year	Estimated	Francisco	Col. 1-2	at Niles	8429	Formula	Agreement	Col. 3
1952-53	3,900	3,900	0	24,800	5,000	11,124	13,000	0
54	1,000	1,000	0	4,470	3,000	4,682	7,000	0
55	1,700	1,700	0	6,000	3,000	5,959	6,000	0
56	22,500	9,300	13,200	199,500	5,000	11,445	15,000	13,200
57	1,800	1,800	0	7,890	4,000	4,601	10,000	0
1957-58	28,600	9,600	19,000	245,100	4,000	10,849	14,000	19,000
Total	289,020	155,920		2,077,960		241,195	359,100	
27-Year Average	10,720	5,780		77,000		8,950	13,300	

6-

Column	Source
1	San Francisco Exhibit 15, Staff Exhibit 4
2	San Francisco Exhibit 15
4	Staff Exhibit 5, San Francisco Exhibit 15
5	Alameda County Water District Exhibit 4
6	San Francisco Exhibit 15 USGS calculation of total unadjusted percolation to Niles Cone from flow of Alameda Creek without storage, using Bailey Formula.
7	Alameda County Water District Exhibit 4

The estimated flow of La Costa Creek at the proposed dam site in 1957-58 is shown as 28,600 acre-feet in Column 1 of Table I. San Francisco claims the right to divert and use the first 5,000 acre-feet of the waters of La Costa Creek, and it has diminishing claims to the use of additional flows of La Costa Creek (S.F. Exh. 17). For the year 1957-58, the City's diversion and use of La Costa Creek water under claim of right is shown to be 9,600 acre-feet (Column 2). That means that the unused flow of La Costa Creek was 19,000 acre-feet (Column 3). The latter figure is included in the downstream measurement at the Niles Gage of 245,100 acre-feet of Alameda Creek water from all tributaries, as shown in Column 4. The Niles Gage measurement does not include flows of Calaveras Creek stored in Calaveras Reservoir. The figure of 10,849 acre-feet shown in Column 6 is the amount of water that would percolate naturally into the Niles Cone, according to the Bailey Formula, given the stream flows that actually occurred in 1957-58. The Bailey Formula figure is a constant figure whether or not Calaveras and any other dam and reservoir is in existence and operation on Alameda Creek. To the extent that storage in Calaveras and any other reservoir prevents the natural recharge in the Niles Cone of 10,849 acre-feet in the year 1957-58, it is the obligation of the City to make releases from storage for ground water recharge. Since the Bailey Formula figure represents the total downstream obligation of the City to the District and its landowners, the measured flow at Niles Gage of 245,100 acre-feet must be reduced by 10,849. That leaves about 234,000 acre-feet available for appropriation downstream from Niles. Since the Niles figure includes 19,000 acre-feet of La Costa Creek water, the 19,000 acre-feet would be available for appropriation at San Antonio Reservoir in 1957-58.

Columns 5 and 7 have been added to Table I for comparative information purposes. In 1957-58, the District diverted 4,000 acre-feet to underground storage, pursuant to Permits 8428 and 8429. Column 7 shows that advance releases of Bailey Formula water were made to the extent of about 3,000 acre-feet.

Reviewing Table I and the hearing record as a whole, the evidence indicates and the Board finds that in about half the years unappropriated water is available in the source in amounts ranging up to the amount requested by Application 18475; that when such water is available, it may be taken and used by the applicant as proposed without injury to any lawful user of water; that the proposed use of water is beneficial, and accordingly the application should be approved and a permit issued subject to the terms and conditions set forth in the following Order.

ORDER

IT IS HEREBY ORDERED that Application 18475 be, and the same is, approved, and that a permit be issued to the applicant subject to vested rights and to the following terms and conditions.

1. The amount of water to be appropriated shall be limited to the amount which can be beneficially used and shall not exceed 20,000 acre-feet per annum to be diverted between January 1 and December 31 of each year.

2. The maximum amount herein stated may be reduced in the license if investigation warrants.

3. Actual construction work shall begin on or before April 1, 1962, and thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.

4. Said construction work shall be completed on or before December 1, 1964.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1965.

6. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued.

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

8. The permittee shall clear the site of the proposed reservoir of all structures, trees, and other vegetation which would interfere with the use of the reservoir for water storage and recreational purposes.

9. A separate application for the approval of plans and specifications for construction of the dam shall be filed with, and approved by the Department of Water Resources prior to commencement of construction of the dam described under this approved water right application.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California on the \_\_\_\_\_ day of \_\_\_\_\_, 196 .

---

Kent Silverthorne, Chairman

---

W. P. Rowe, Member

Board Member Ralph J. McGill voluntarily disqualified himself from participating in the hearing or in this Decision and Order for the reason that he is a resident of the City and County of San Francisco.