



Bulletin 132-85
December 1985

State of California
The Resources Agency

Department of
Water Resources

Management of the California State Water Project

Appendix D

Costs of Recreation and Fish and Wildlife Enhancement



Gordon K. Van Vleck

Secretary for Resources
The Resources Agency

George Deukmejian

Governor
State of California

David N. Kennedy

Director
Department of Water Resources



ON THE COVER: Swimming Beach at Silverwood Lake.

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Water Resources**

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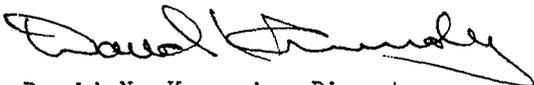
**State of
California**

**Department of
Water Resources**

FOREWORD

The Davis-Dolwig Act (Sections 11900-11925 of the California Water Code) declares that providing for the enhancement of fish and wildlife and for recreation in connection with State water projects benefits all of the people of California and that the costs attributable to such enhancement should be borne by them. The Act also provides a procedure through which the Department of Water Resources will be reimbursed for those project costs which are allocated to recreation and fish and wildlife enhancement and for costs of acquiring property for recreation development. The Department is to annually report such expenditures to the Legislature. If the Legislature approves the reported costs, a like amount of the State's tideland oil and gas revenues will be released to the Department from a continuing \$5,000,000 annual appropriation of tideland revenues which has been authorized specifically for that purpose (Public Resources Code Section 6217).

This constitutes the Department's 1985 report to the Legislature in compliance with the above requirement. An additional \$5,895,067 for recreation and fish and wildlife enhancement is reported herein. This amount consists of \$5,960,398 for joint capital costs of the State Water Project which is allocated to recreation and fish and wildlife enhancement, less \$65,331 for specific recreation land costs. The additional amount is mostly due to costs incurred in 1984 and interest accrued during 1984 on recreation costs not yet reimbursed by the continuing annual appropriation.



David N. Kennedy, Director
Department of Water Resources
The Resources Agency
State of California

State of California
GEORGE DEUKMEJIAN, Governor

The Resources Agency
GORDON K. VAN VLECK, Secretary for Resources

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CALIFORNIA WATER COMMISSION

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CLAIR A. HILL, Vice Chairman, Redding

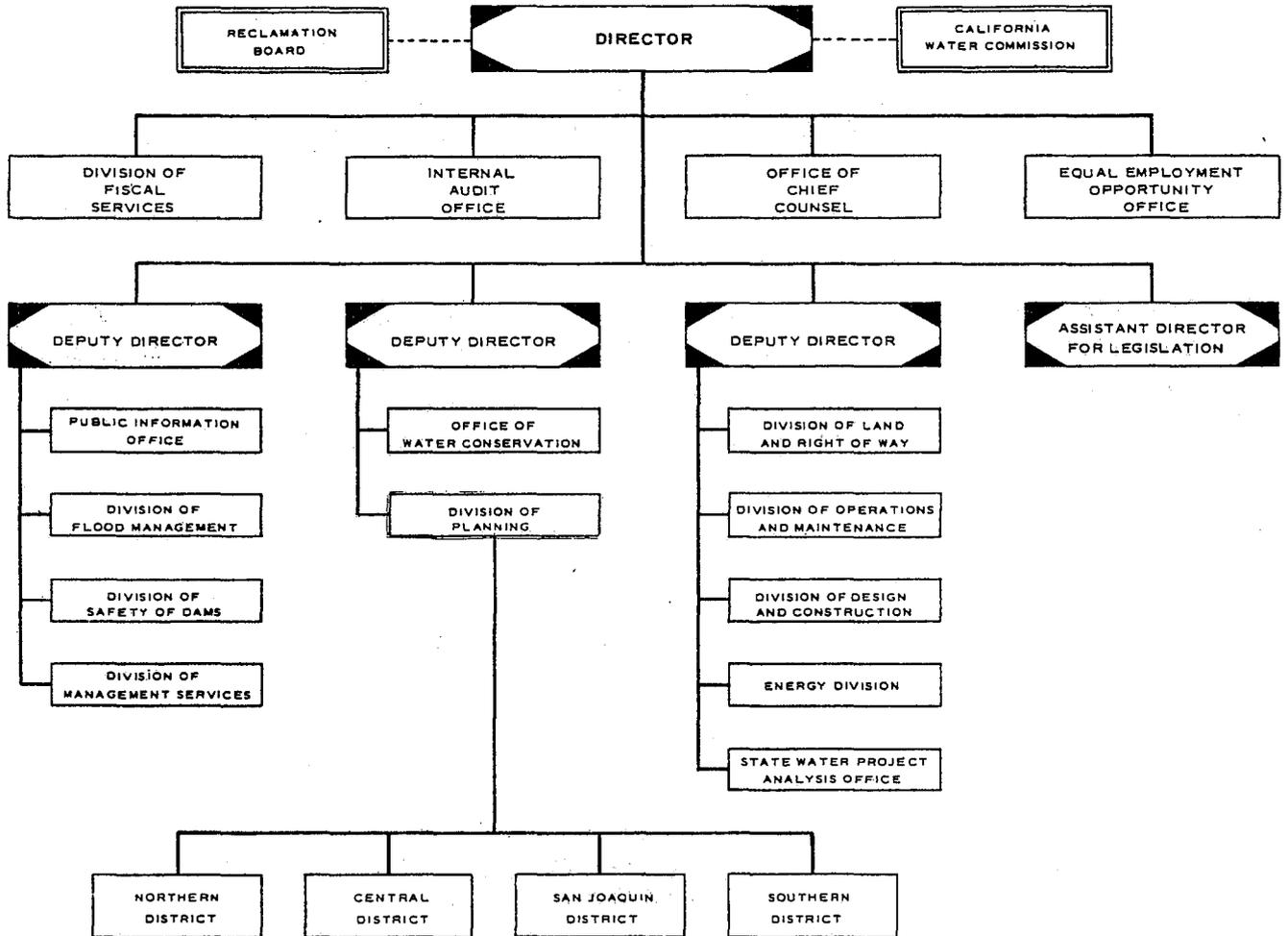
Stanley M. Barnes	Visalia	Katherine B. Dunlap	Los Angeles
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Roy E. Dodson	San Diego	Martin A. Matich	San Bernardino
Jack G. Thomson	Bakersfield		

Orville L. Abbott
Executive Officer and Chief Engineer

Tom Y. Fujimoto
Assistant Executive Officer

The California Water Commission serves as a policy advisory body to the Director of Water Resources on all California water resources matters. The nine-member citizen Commission provides a water resources forum for the people of the State, acts as a liaison between the legislative and executive branches of State Government, and coordinates Federal, State, and local water resources efforts.

ORGANIZATION OF THE DEPARTMENT OF WATER RESOURCES



REPORTING OF RECREATION
AND
FISH AND WILDLIFE ENHANCEMENT COSTS

Section 11912 of the California Water Code assigns to the Department of Water Resources (Department) the following responsibilities:

It shall be the duty of the Department to report annually to the Legislature the costs, if any, which the Department has allocated to recreation and fish and wildlife enhancement for each facility of any state water project. The Department shall also report to the Legislature any revisions which the Department makes in such allocations.

The Department shall submit each such cost allocation to the Department of Navigation and Ocean Development (Department of Boating and Waterways), the Department of Parks and Recreation, and to the Department of Fish and Game. The Department of Navigation and Ocean Development, the Department of Parks and Recreation, and the Department of Fish and Game shall file with the Department of Water Resources their written comments with respect to each such cost allocation, which written comments shall be included in the report required by this section.

It shall also be the duty of the Department to report to the Legislature on any expenditure of funds for acquiring rights-of-way, easements and property pursuant to Section 346 for recreation development associated with such facilities ...

This appendix is the Department's 1985 report, as required by Section 11912 of the California Water Code.

For brevity, "fish and wildlife enhancement" is hereafter referred to as "enhancement". The Department's cost allocations treat recreation and enhancement as one combined purpose of the State Water Project.

Organization of Report

The costs of State Water Project facilities the Department has allocated to recreation and enhancement through December 31, 1984 are shown in Table 1, pages 8 and 9. Table 1 also shows the expenditures for acquiring rights of way, easements, and property for recreation development associated with such facilities. Table 2, on pages 14 and 15, details the accrued interest charges included in the costs shown in Table 1.

The notes to Table 1, pages 10 through 13, explain the Department's procedures for reporting recreation and enhancement costs, describe how the amounts shown in the table are calculated, and reconcile significant changes from costs shown in previous reports.

The costs shown in Table 1 do not reflect new or revised allocations for any facility of the State Water Project. The derivation of allocation percentages indicated for joint capital costs of those multipurpose facilities listed in the upper portion of Table 1 have been described in previous reports. Copies of those descriptions are available on request to the Department.

A summary of allocation percentages is shown on page 16, along with illustrative allocation percentages for facilities not yet reported.

Included at the end of this report are comments by the Department of Boating and Waterways, the Department of Parks and Recreation, and the Department of Fish and Game.

TABLE 1: RECREATION AND ENHANCEMENT
 (Reported to the California Legislature in
 (in

ITEM	DISBURSEMENTS							
	1952-1971	1972	1973	1974	1975	1976	1977	1978
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Joint Capital Costs Allocated to Recreation and Enhancement (b)								
Frenchman Dam and Lake (78.5%)								
California Water Resources Development Bond Fund	101,762	1,235	0	0	0	0	0	0
All Other Funds	2,431,033	1,600	972	1,195	365	916	700	10,531
Subtotal	2,532,795	2,835	972	1,195	365	916	700	10,531
Antelope Dam and Lake (100%)								
California Water Resources Development Bond Fund	1,034,823	1,605	0	0	0	0	0	0
All Other Funds	3,938,609	2,096	1,414	1,806	513	1,731	1,348	18,514
Subtotal	4,973,432	3,701	1,414	1,806	513	1,731	1,348	18,514
Grizzly Valley Dam and Lake Davis (99.0%)								
California Water Resources Development Bond Fund	4,001,359	1,733	0	0	0	0	0	0
All Other Funds	524,702	2,096	25,194	47,579	88,268	22,115	8,197	78,430
Subtotal	4,526,061	4,464	25,194	47,579	88,268	22,115	8,197	78,430
San Luis Dam and Reservoir, O'Neill Forebay and Los Banos Reservoir (5.4%)								
California Water Resources Development Bond Fund	2,014,395	18,604	-268	-381	-253	-130	-118	-56
All Other Funds	1,355,028	5,557	9,347	12,561	11,665	4,870	5,660	-22,713
Subtotal	3,369,423	24,161	9,079	12,180	11,412	4,740	5,542	-22,769
California Aqueduct, Delta to Dos Amigos P.P. (3.4%)								
California Water Resources Development Bond Fund	4,463,670	4,027	-30	0	0	0	0	0
All Other Funds	714,183	6,745	7,861	12,243	21,662	38,409	15,453	19,999
Subtotal	5,177,853	10,772	7,831	12,243	21,662	38,409	15,453	19,999
Oroville Division (2.9%)								
California Water Resources Development Bond Fund	5,720,826	4,661	-37	-42	-18	-15	-15	-19
All Other Funds	3,295,236	10,773	23,796	26,144	28,467	28,067	515,025	83,103
Subtotal	9,016,062	15,434	23,759	26,102	28,449	28,072	515,010	83,084
Del Valle Dam and Lake Del Valle (48.0%)								
California Water Resources Development Bond Fund	10,506,514	40,248	0	0	0	0	0	0
All Other Funds	2,143,858	6,681	9,614	115,645	7,835	9,976	3,656	9,324
Subtotal	12,650,372	46,929	9,614	115,645	7,835	9,976	3,656	9,324
California Aqueduct, Dos Amigos P.P. to Termini (5.7%)								
California Water Resources Development Bond Fund	45,728,491	2,934,889	-2,130	-38,692	131	59	57	-1,440
All Other Funds	18,286,884	1,314,465	2,719,794	1,466,020	1,238,092	974,102	830,248	668,321
Subtotal	64,015,375	4,249,354	2,717,664	1,427,328	1,238,223	974,161	830,305	666,881
TOTAL	106,261,373	4,357,650	2,795,527	1,643,878	1,396,667	1,080,120	1,380,211	1,063,994
Specific Costs of Acquiring Land for Recreation Development: (c)								
Frenchman Dam and Lake								
California Water Resources Development Bond Fund	3,379	0	0	0	0	0	0	0
All Other Funds	49,947	0	0	0	0	0	0	0
Subtotal	53,326	0	0	0	0	0	0	0
Grizzly Valley Dam and Lake Davis								
California Water Resources Development Bond Fund	204,116	0	0	0	0	0	0	0
All Other Funds	5,246	0	0	0	0	0	0	0
Subtotal	209,362	0	0	0	0	0	0	0
Abbey Bridge Dam and Reservoir								
California Water Resources Development Bond Fund	9	0	0	0	0	0	0	0
All Other Funds	9,921	0	0	0	0	0	0	0
Subtotal	9,930	0	0	0	0	0	0	0
San Luis Dam and Reservoir, O'Neill Forebay, and Los Banos Reservoir								
California Water Resources Development Bond Fund	278,592	116,692	0	0	0	0	0	0
All Other Funds	231,099	-42,532	19,102	118	508	692	729	1,075
Subtotal	509,691	74,160	19,102	118	508	692	729	1,075
California Aqueduct, Delta to Dos Amigos P.P.								
California Water Resources Development Bond Fund	460,195	891	0	0	0	0	0	0
All Other Funds	107,807	180	83	113	349	888	617	978
Subtotal	568,002	1,071	83	113	349	888	617	978
Oroville Division								
California Water Resources Development Bond Fund	7,810,973	-753	-74	-87	-53	-45	-45	-57
All Other Funds	333,414	3,347	488	1,015	-3,762	1,880	1,880	101,283
Subtotal	8,144,387	2,594	414	928	-3,815	1,835	1,592	101,226
Del Valle Dam and Lake Del Valle								
California Water Resources Development Bond Fund	519,386	39	0	0	0	0	0	0
All Other Funds	-41,645	758	2,017	820	403	44	-88	707
Subtotal	477,741	797	2,017	820	403	44	-88	707
California Aqueduct, Dos Amigos P.P. to Termini								
California Water Resources Development Bond Fund	489,184	-9,633	-580	0	0	0	0	0
All Other Funds	30,329	10,337	2,876	1,666	11,095	123	561	33,357
Subtotal	519,513	704	2,296	1,666	11,095	123	561	33,357
Castaic Dam and Lake								
California Water Resources Development Bond Fund	1,975,167	-17,551	-2,978	-232	-109	0	0	0
All Other Funds	73,931	68,430	28,270	6,550	89,826	10,841	18,589	49,662
Subtotal	2,049,098	50,879	25,292	6,318	89,717	10,841	18,589	49,662
Cedar Springs Dam and Silverwood Lake								
California Water Resources Development Bond Fund	407,120	18,171	-325	0	0	0	0	0
All Other Funds	167,585	29,654	13,311	28,987	11,865	5,739	2,528	8,402
Subtotal	574,705	47,825	13,186	28,987	11,865	5,739	2,528	8,402
Perria Dam and Lake Perria								
California Water Resources Development Bond Fund	1,122,314	-94,825	-5,176	0	0	0	0	0
All Other Funds	3,622,237	84,874	20,464	8,922	32,890	15	0	84,460
Subtotal	4,744,551	-9,951	15,288	8,922	32,890	15	0	84,460
TOTAL	17,860,306	168,074	77,678	47,872	143,022	20,177	24,704	279,867
TOTAL RECREATION AND ENHANCEMENT COSTS								
California Water Resources Development Bond Fund	85,842,275	3,020,033	-11,598	-39,634	-302	-131	-121	-1,572
All Other Funds	37,279,404	1,505,691	2,884,803	1,731,304	1,539,991	1,100,428	1,405,036	1,345,433
GRAND TOTAL	124,121,679	4,525,724	2,873,205	1,691,750	1,539,689	1,100,297	1,404,915	1,343,861

Footnotes a-f are presented on pages 10 through 13.

**COST OF THE STATE WATER PROJECT (a
Response to Water Code Section 11912)
dollars)**

BY CALENDAR YEAR						TOTAL	INTEREST	TOTAL	PREVIOUS	INCREASE
1979	1980	1981	1982	1983	1984					
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
0	0	0	0	0	0	102,997	1,803	104,800	104,800	0
9,278	56,964	13,705	69,404	64,490	2,484	2,663,537	0	2,663,537	2,660,708	2,929
9,278	56,964	13,705	69,404	64,490	2,484	2,766,534	1,803	2,768,437	2,765,508	2,929
0	0	0	0	0	0	1,036,428	98,396	1,134,824	1,134,824	0
16,099	61,303	4,516	88,787	42,169	47,349	4,225,254	0	4,225,254	4,177,698	48,556
16,099	61,303	4,516	88,787	42,169	47,349	5,262,682	98,396	5,361,078	5,312,522	48,556
0	0	0	0	0	0	4,003,092	417,923	4,421,015	4,421,014	1
45,879	92,353	10,325	51,133	27,798	21,513	1,046,217	0	1,046,217	1,024,575	21,642
45,879	92,353	10,325	51,133	27,798	21,513	5,049,309	417,923	5,467,232	5,445,589	21,643
0	-2,078	-1,419	-35,272	-16,941	-15,474	1,960,609	281,698	2,242,307	2,259,241	-16,934
-2,289	19,269	8,384	281,990	137,965	64,056	1,891,350	0	1,891,350	1,825,142	66,208
-2,289	17,191	6,965	246,718	121,024	48,582	3,851,959	281,698	4,133,657	4,084,383	49,274
0	0	0	0	0	0	4,467,667	749,756	5,217,423	5,217,423	0
32,771	28,506	194,715	145,486	58,578	84,571	1,381,122	0	1,381,122	1,296,072	85,050
32,771	28,506	194,715	145,486	58,578	84,571	5,848,789	749,756	6,598,545	6,513,495	85,050
0	0	0	0	0	0	5,725,225	1,725,254	7,450,479	7,450,480	-1
52,177	28,974	18,411	14,317	17,995	17,211	4,159,716	0	4,159,716	4,142,704	17,012
52,177	28,974	18,382	14,289	17,986	17,211	9,884,941	1,725,254	11,610,195	11,595,184	17,011
0	0	0	0	0	0	10,546,762	5,503,352	16,050,114	16,049,303	811
33,333	35,871	23,936	24,576	77,686	162,493	2,664,484	0	2,664,484	2,500,652	163,832
33,333	35,871	23,936	24,576	77,686	162,493	13,211,246	5,503,352	18,714,598	18,549,955	164,643
-155	3,473	2,382	59,123	28,398	25,946	48,740,332	48,054,130	96,794,462	92,757,273	4,037,189
1,602,475	2,285,613	1,979,749	3,168,039	2,298,174	1,485,028	40,519,004	0	40,519,004	38,984,901	1,534,103
1,602,320	2,290,086	1,982,131	3,227,162	2,326,572	1,511,974	89,259,336	48,054,130	137,313,466	131,742,174	5,571,292
1,789,545	2,611,221	2,254,675	3,887,555	2,736,303	1,896,177	135,134,896	56,832,312	191,967,208	186,006,810	5,960,398
0	0	0	0	0	0	3,379	134	3,513	3,513	0
0	0	0	0	0	0	49,947	0	49,947	49,947	0
0	0	0	0	0	0	53,326	134	53,460	53,460	0
0	0	0	0	0	0	204,116	15,099	219,215	219,215	0
2,348	56,918	76,931	451,796	2,792	-203,509	392,822	0	392,822	596,359	-203,537
2,348	56,918	76,931	451,796	2,792	-203,509	596,938	15,099	612,037	815,574	-203,537
0	0	0	0	0	0	9	0	9	9	0
0	0	0	0	0	0	9,921	0	9,921	9,921	0
0	0	0	0	0	0	9,930	0	9,930	9,930	0
0	0	0	0	0	0	395,284	28,823	424,107	424,107	0
56,049	126	107	278	187	40	267,573	0	267,573	267,483	90
56,049	126	107	278	187	40	662,857	28,823	691,680	691,590	90
0	0	0	0	0	0	461,086	134,710	595,796	595,796	0
21,952	43,344	11,275	44,919	12,825	-57,575	187,755	0	187,755	244,307	-56,552
21,952	43,344	11,275	44,919	12,825	-57,575	648,841	134,710	783,551	840,103	-56,552
-69	-81	-88	-86	-26	0	7,809,509	3,015,073	10,824,582	10,824,584	-2
1,313	1,853	1,033	20,171	40,985	174,188	678,845	0	678,845	491,437	187,408
1,244	1,772	945	20,085	40,959	174,188	8,488,354	3,015,073	11,503,427	11,316,021	187,406
0	0	0	0	0	0	519,425	371,947	891,372	891,372	0
262	389	314	292	499	200	-34,852	0	-34,852	-35,220	368
262	389	314	292	499	200	484,573	371,947	856,520	856,152	368
0	0	0	0	0	0	478,971	327,881	806,852	806,852	0
274,051	125,515	3,826	-11,993	-13,196	3,342	472,089	0	472,089	487,522	4,567
274,051	125,515	3,826	-11,993	-13,196	3,342	951,060	327,881	1,278,941	1,274,374	4,567
0	0	0	0	0	0	1,954,297	1,438,119	3,392,416	3,392,368	48
113,056	469,435	9,173	3,357	6,131	438	947,699	0	947,699	946,919	780
113,056	469,435	9,173	3,357	6,131	438	2,901,996	1,438,119	4,340,115	4,339,287	828
0	0	0	0	0	0	424,966	324,413	749,379	749,371	8
15,953	56,905	3,144	7,530	3,240	825	355,868	0	355,868	354,623	1,245
15,953	56,905	3,144	7,530	3,240	825	780,834	324,413	1,105,247	1,103,994	1,253
0	0	0	0	0	0	1,022,313	832,639	1,854,952	1,854,706	246
206,806	879,590	0	-279	0	0	4,939,979	0	4,939,979	4,939,979	0
206,806	879,590	0	-279	0	0	5,962,292	832,639	6,794,931	6,794,685	246
692,021	1,633,994	105,715	515,985	53,437	-81,851	21,541,001	6,488,838	28,029,839	28,095,170	-65,331
-247	1,287	846	23,737	11,422	10,472	89,856,467	63,321,150	153,177,617	149,156,251	4,021,366
2,481,813	4,243,928	2,359,544	4,359,803	2,778,318	1,803,854	66,819,430	0	66,819,430	64,945,729	1,873,701
2,481,566	4,245,215	2,360,390	4,383,540	2,789,740	1,814,326	156,675,897	63,321,150	219,997,047	214,101,980	5,895,067

Notes to Table 1, Pages 8 and 9

a) Recreation and enhancement costs refer only to (1) multipurpose facility capital costs allocated to recreation, and (2) the capital costs of lands acquired for associated recreation development. These costs are budgeted by the Department of Water Resources from funds that are available for

financing Project construction costs.

The remaining recreation and enhancement costs not reported in Table 1 are budgeted by several State departments. These costs, financed by appropriations from a variety of funds, are summarized as follows:

Type of Recreation and Enhancement Costs Not Reported in Table 1	General Fund Appropriations, unless otherwise noted		
	1985-86 ^(a)	1984-85 ^(b)	Total 1962-63, thru 1985-86 ^(c)
Allocated operation, maintenance, power and replacement costs of multipurpose facilities	\$ 0 ^(d)	\$ 0 ^(d)	\$16,735,000
Capital costs of recreation developments other than for land acquisition	\$1,183,000	\$6,687,000	\$102,122,000 ^(e,f)
Operation, maintenance, and replacement costs of recreation developments	\$7,232,000	\$6,929,000	\$65,668,000

a) Proposed amounts in Governor's budget.
 b) 1984-85 budgeted amount.
 c) Actual through 1983-84 plus a) and b)
 d) The cost allocation for the California Aqueduct reported in Appendix D to Bulletin 132-80 resulted in general funds being overcollected in past years. The budgeted amounts for 1981-82, 1982-83, 1983-84, and 1984-85 reflect a credit equal to the amounts which the Department otherwise would have budgeted from the general fund. Additional credits will be made in the future years until the full amount of the overcollection has been refunded.
 e) Amounts from State recreation bond funds and other State and Federal recreation funds.
 f) Includes \$1,236,000 from the Harbors and Watercraft Revolving Fund, and \$200,000 directly from the Highway Users Tax Fund.

Allocated operation, maintenance, power and replacement costs of multipurpose facilities are budgeted by the Department and financed by annual appropriations from the State General Fund. Capital costs (other than land acquisition costs), along with operation, maintenance, and replacement costs of recreation developments, are budgeted by the Department of Parks and Recreation. However, the costs of constructing boating facilities are budgeted by the Department of Boating and Waterways, and the costs of enhancement developments are budgeted by the Department of Fish and Game.

b) Joint capital costs allocated to recreation and enhancement are based on the Department's derivation, for each multipurpose facility, of the percentages of the total joint costs attributable to each included purpose. These derivations are based on the application of conventional cost allocation methods that weigh the estimated costs to be incurred and the benefits to be realized during a 50-year period of analysis. Allocated costs reflect the application of these percentages to the actual capital costs incurred for each facility, as accounted by the Department.

Costs allocated to recreation and enhancement generally are first reported in the year following the year construction of a facility is completed. However, these allocated costs may be subsequently changed by either the adjustment of accounted capital costs or the revision of allocation percentages.

In response to questions raised by the Department of Finance, the Department of Water Resources is reviewing the method and factors supporting the allocations of Project costs for the State Water Project. Before the Department

changes the allocations, the Department will seek to reach a consensus on appropriate factors to be used in future reports.

c) Specific costs of acquiring land for recreation development are incurred by the Department under the authority of California Water Code Section 346. The Department purchases recreation land concurrently with other lands needed for multipurpose facilities, in order to (1) decrease the total land costs of the Project and (2) acquire property in an orderly manner. Recreation lands acquired for each Project facility through September 30, 1984 are shown in the following table:

SUMMARY OF RECREATION LAND ACQUISITIONS ^(a)

(in acres)

Project Facility	Acquired (^b)	To Be Acquired	Federal Lands(^c)	Total
Frenchman Lake	719	0	0	719
Antelope Lake	1,342	0	0	1,342
Lake Davis	733	0	0	733
San Luis Reservoir and O'Neill Forebay	2,518	0	0	2,518
Oroville Division	2,993	0	212	3,205
Lake Del Valle	1,206	0	0	1,206
California Aqueduct (excluding reservoirs)	1,834(^d)	0(^e)	0	1,834
Castaic Lake	1,915	0	577	2,492
Silverwood Lake	3,223	0	0	3,223
Lake Perris	<u>4,351</u>	<u>115</u>	<u>0</u>	<u>4,466</u>
Total	20,834	115	789	21,738

a) Includes recreation lands for only those project facilities with an established recreation land use and acquisition plan.
b) Costs of acquiring these lands are shown in Table 1.
c) These lands are presently being leased from the Federal Government at a nominal cost to the State.
d) Possession and control of a portion of these lands will be transferred to the Department of Fish and Game for use in the Department's Southern California wildlife mitigation program. When the transfer is made, the acreage will be reduced accordingly.
e) Additional land needs are to be identified by future studies.

The Department reports the annual expenditure of Project funds for acquiring all recreation land in the year following the expenditure. The costs of such lands generally are established when acquired, and they are not affected by allocation percentages for the associated multipurpose Project facility. However, the reported costs of certain lands may be subsequently revised due to (1) receipt of certain revenues (such as federal grants and miscellaneous income from rights of way sales), or (2) modification of the recreation land use plan.

The amounts to be reported in future years will include credits for any reduction in previously reported costs, together with interest income thereon. If recreation land is sold or if grants are received, the amount of the receipt will be reported as a negative cost of the facility in the year received. If recreation land is reclassified as multipurpose Project land, the original purchase price, together with appropriate interest income, will be reported as a negative expenditure for specific land costs, and an appropriate amount will be added to joint capital costs allocated to recreation and enhancement for the associated facility.

The costs of acquiring land for recreation development reported herein include about \$1.1 million for land that will be used to mitigate impacts to wildlife habitat in Southern California resulting from construction of the State Water Project. As these lands are redesignated from recreation to Project (wildlife mitigation) purposes, the amounts to be reported in future years will include credits for the reduction in previously reported costs, together with appropriate interest income thereon.

The costs of acquiring recreation land also include the salaries of Department personnel engaged in recreation land acquisition activities, together with indirect costs distributed on the basis of direct salaries.

- d) Interest accruals are calculated as shown in Table 2. Interest charges are accrued only on the portion of annual disbursements financed by the California Water Resources Development Bond Fund (proceeds from the sale of Burns-Porter bonds) and cease when such disbursements, together with cumulative interest accruals thereon, have been reimbursed. Calculations are based on the weighted average interest costs of Burns-Porter bonds sold to date (4.378 percent for the \$1.57 billion in bonds outstanding on December 31, 1984). This rate differs from the "Project Interest Rate" under Project water supply contracts, in that interest costs on revenue bond sales are not included.

As of December 31, 1984, a total of \$85 million had been reimbursed to the Department under the continuing annual \$5 million appropriation (through fiscal year 1984-85) of State tideland oil and gas revenues, authorized by California Statutes of 1966, First Extraordinary Session, Chapter 27. With no allowance for future interest, reimbursement of the increased costs reported herein would cover the annual appropriations in the full amounts for each fiscal year through fiscal year 2010-11 together with \$4,997,047 of the appropriation for 2011-12. With future interest computed at 4.378 percent, reimbursement of the costs reported herein would be covered by appropriations in the full amounts for each fiscal year through 2030-31 together with \$4,045,890 of the appropriation for 2031-2032.

e) Costs previously reported are as shown in Table 1 (pages 8 and 9) of Appendix D to Bulletin 132-84. Such costs were based on the Department's accounting records as of December 31, 1983. The average interest cost on Burns-Porter bond sales was then 4.378 percent.

f) Reasons for cost increases are outlined below:

- o Additional disbursements during 1984 for recreation lands and for joint capital costs allocated to recreation and enhancement.....\$1,814,000
- o Additional accrued interest on recreation costs not yet reimbursed by the continuing \$5 million annual appropriation due to changes in bond fund expenditures and an additional year of accrual (1984)..\$4,010,000
- o Adjustment to allocated costs for Antelope Valley Dam and Lake for special consulting board work in 1983 processed in 1984.....\$1,000

- o Adjustment to allocated costs for Del Valle Dam and Lake for 1983 activity processed in 1984 and to correct costs previously reported for 1971\$1,000
- o Adjustment to 1983 allocated costs for O'Neill Forebay and San Luis Dam and Reservoir for capitalized O&M costs processed in 1984..\$2,000
- o Adjustment to allocated cost for Dos Amigos to Termini for capitalized O&M costs in 1982 and 1983 at Warne Powerplant....\$49,000
- o Adjustment in previously reported Oroville Division specific recreation land costs for right of way activity after the cut-off date for Appendix D to Bulletin 132-84..\$13,000
- o Adjustment in specific recreation land costs for the California Aqueduct for right of way activity after the cut-off date for Appendix D to Bulletin 132-84.....\$2,000
- o Other retroactive accounting adjustments or costs reported prior to 1984\$3,000

TOTAL INCREASE.....\$5,895,000

TABLE 2: CALCULATION OF INTEREST ACCRUALS ON CALIFORNIA

(in dollars)

JOINT CAPITAL COSTS ALLOCATED TO RECREATION AND ENHANCEMENT											
Year	Item	Frenchman Dam and Lake	Antelope Dam and Lake	Grizzly Valley Dam and Lake Davis	San Luis Dam and Reservoir, O'Neill Forebay and Los Rios Reservoir	California Aqueduct Delta to Dos Amigos P.P.	Oroville Division	Del Valle Dam and Lake Del Valle	California Aqueduct Dos Amigos P.P. Termini	Total	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1952-1980	a. Disbursements										
	1. Calif. Water Resources Development Bond Fund	102,997	1,036,428	4,003,092	2,029,715	4,467,667	5,725,318	10,546,162	48,621,010	76,534,466	
	2. All other funds	2,513,554	4,043,433	935,448	1,398,955	897,772	4,091,782	2,375,793	31,587,014	47,843,751	
b.	Reimbursement 1967 through 1979 applied to:										
	1. Calif. Water Resources Development Bond Fund	104,800	1,134,824	4,421,015	2,315,337	5,217,423	7,450,548	16,050,085	0	36,694,032	
2. All other funds	2,513,554	4,043,433	935,448	1,398,955	897,772	4,091,782	2,375,793	0	0	16,256,737	
c.	Interest accrued to end of 1979	1,803	98,396	417,923	285,622	749,756	1,725,257	5,503,351	32,860,821	41,642,929	
1981	d. Beginning-of-year balance to be reimbursed:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	0	0	0	28	81,485,304	81,485,332	
	2. All other funds	0	0	0	0	0	0	0	31,587,014	31,587,014	
	e. Disbursements during year:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-1,419	0	-29	0	2,382	934	
	2. All other funds	13,705	4,516	10,325	8,384	194,715	18,411	23,936	1,979,749	2,253,741	
	f. Reimbursements during year applied to:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-1,419	0	-29	28	0	-1,420	
2. All other funds	13,705	4,516	10,325	8,384	194,715	18,411	23,936	0	273,992		
g. End-of-year balance without interest for:											
1. Calif. Water Resources Development Bond Fund	0	0	0	0	0	0	0	0	81,487,686	81,487,686	
2. All other funds	0	0	0	0	0	0	0	0	33,566,763	33,566,763	
h.	Interest accrual on average balance of d(1) and g(1)	0	0	0	0	0	0	1	3,567,479	3,567,480	
1982	i. Beginning-of-year balance to be reimbursed:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	0	0	0	1	85,055,165	85,055,166	
	2. All other funds	0	0	0	0	0	0	0	33,566,763	33,566,763	
	j. Disbursements during year:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-35,272	0	-28	0	59,123	23,823	
2. All other funds	69,404	88,787	51,133	281,990	145,486	14,317	24,576	3,168,039	3,843,732		
k. Reimbursements during year applied to:											
1. Calif. Water Resources Development Bond Fund	0	0	0	0	0	0	0	0	0		
2. All other funds	0	0	0	0	0	0	0	0	0		
l. End-of-year balance without interest for:											
1. Calif. Water Resources Development Bond Fund	0	0	0	-35,272	0	-28	1	85,114,288	85,078,989		
2. All other funds	69,404	88,787	51,133	281,990	145,486	14,317	24,576	36,734,802	37,410,495		
m.	Interest accrual on average balance of i(1) and l(1)	0	0	0	-772	0	-1	0	3,725,009	3,724,236	
1983	n. Beginning-of-year balance to be reimbursed:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-36,044	0	-29	1	88,839,297	88,803,225	
	2. All other funds	69,404	88,787	51,133	281,990	145,486	14,317	24,576	36,734,802	37,410,495	
	o. Disbursements during year:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-16,941	0	-9	0	28,398	11,448	
	2. All other funds	64,490	42,169	27,798	137,965	58,578	17,995	77,666	2,298,174	2,724,855	
	p. Reimbursements during year applied to:										
1. Calif. Water Resources Development Bond Fund	0	0	0	0	0	0	0	0	0		
2. All other funds	0	0	0	0	0	0	0	0	0		
q. End-of-year balance without interest for:											
1. Calif. Water Resources Development Bond Fund	0	0	0	-52,985	0	-38	1	88,867,695	88,814,673		
2. All other funds	133,894	130,956	78,931	419,955	204,064	32,312	102,262	39,032,976	40,135,350		
r.	Interest accrual on average balance of n(1) and q(1)	0	0	0	-1,949	0	-1	0	3,890,006	3,888,056	
1984	s. Beginning-of-year balance to be reimbursed:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-54,934	0	-39	1	92,757,701	92,702,729	
	2. All other funds	133,894	130,956	78,931	419,955	204,064	32,312	102,262	39,032,976	40,135,350	
	t. Disbursements during year:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-15,474	0	0	0	25,946	10,472	
	2. All other funds	2,484	47,349	21,513	64,056	84,571	17,211	162,493	1,486,028	1,885,705	
	u. Reimbursements during year applied to:										
1. Calif. Water Resources Development Bond Fund	0	0	0	-70,408	0	-39	1	2,315,439	2,244,993		
2. All other funds	136,378	178,305	100,444	484,011	288,635	49,523	264,755	0	1,502,051		
v. End-of-year balance without interest for:											
1. Calif. Water Resources Development Bond Fund	0	0	0	0	0	0	0	0	90,468,208	90,468,208	
2. All other funds	0	0	0	0	0	0	0	0	40,519,004	40,519,004	
w.	Interest accrual on average balance of s(1) and v(1)	0	0	0	-1,203	0	-1	0	4,010,815	4,009,611	
1985	x. Beginning of 1985 balance to be reimbursed:										
	1. Calif. Water Resources Development Bond Fund	0	0	0	-1,203	0	-1	0	94,479,023	94,477,819	
	2. All other funds	0	0	0	0	0	0	0	40,519,004	40,519,004	
	Total	0	0	0	-1,203	0	-1	0	134,998,027	134,996,823	
	y. Disbursements, 1952 through 1983:										
	1. Calif. Water Resources Development Bond Fund	102,997	1,036,428	4,003,092	1,960,609	4,467,667	5,725,225	10,546,762	48,740,332	76,583,112	
	2. All other funds	2,663,657	4,226,254	1,046,217	1,891,350	1,381,122	4,159,716	2,664,484	40,519,004	58,581,784	
	Total	2,766,654	5,262,682	5,049,309	3,851,959	5,848,789	9,884,941	13,211,246	89,259,336	135,134,896	
	z. Reimbursements applied through 1983 to:										
	1. Calif. Water Resources Development Bond Fund	104,800	1,134,824	4,421,015	2,243,510	5,217,423	7,450,480	16,050,114	2,315,439	38,937,605	
2. All other funds	2,663,637	4,226,254	1,046,217	1,891,350	1,381,122	4,159,716	2,664,484	0	18,032,780		
Total	2,768,437	5,361,078	5,467,232	4,134,860	6,598,545	11,610,196	18,714,598	2,315,439	56,970,385		
TOTAL INTEREST ACCRUALS, 1952 THROUGH 1985		1,803	98,396	417,923	281,698	749,756	1,725,254	5,503,352	48,054,130	56,832,312	

WATER RESOURCES DEVELOPMENT BOND FUND DISBURSEMENTS

@4.378% per annum)

COSTS OF ACQUIRING LAND FOR RECREATION DEVELOPMENT													GRAND TOTAL
Frenchman Dam and Lake	Crizzly Valley Dam and Lake Davis	Abbey Bridge Dam and Reservoir	San Luis Dam and Reservoir O'Neill Forebay and Los Banos Reservoir	California Aqueduct Delta to Dos Amigos P.P.	Oroville Division	Del Valle Dam and Lake Del Valle	California Aqueduct Dos Amigos P.P. To Termini	Castaic Dam and Lake	Cedar Springs Dam and Silverwood Lake	Ferris Dam and Lake Ferris	Total	GRAND TOTAL	
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
3,379 49,947	204,116 64,812	9 9,921	395,284 266,961	461,086 176,311	7,809,709 442,468	519,425 -36,157	478,971 489,910	1,954,297 928,600	424,966 341,129	1,022,313 4,940,258	13,273,555 7,674,160	89,809,990 55,517,911	
3,513 49,947	219,215 64,812	9 9,921	424,107 266,961	595,796 176,311	10,824,791 442,468	890,945 -36,157	806,466 489,910	3,370,806 928,600	732,945 341,129	1,446,736 0	19,315,329 2,733,902	56,009,361 18,990,639	
134	15,099	0	28,823	134,710	3,015,082	371,938	327,873	1,437,605	324,023	822,927	6,478,214	48,121,143	
0	0	0	0	0	0	418	378	21,096	16,044	398,504	436,440	81,921,772	
0	0	0	0	0	0	0	0	0	0	4,940,258	4,940,258	36,527,272	
0	0	0	0	0	-88	0	0	0	0	0	-88	846	
0	76,931	0	107	11,275	1,033	314	3,826	9,173	3,144	0	105,803	2,359,544	
0	0	0	0	0	-88	418	378	21,096	16,044	398,504	436,352	434,932	
0	76,931	0	107	11,275	1,033	314	3,826	9,173	3,144	4,185,273	4,291,076	4,565,068	
0	0	0	0	0	0	0	0	0	0	0	0	81,487,686	
0	0	0	0	0	0	0	0	0	0	754,985	754,985	34,321,748	
0	0	0	0	0	0	9	8	462	351	8,723	9,553	86,064,719	
0	0	0	0	0	0	0	0	0	0	754,985	754,985	34,321,748	
0	0	0	0	0	-86	0	0	0	0	0	-86	23,737	
0	451,796	0	278	44,919	20,171	292	-11,993	3,357	7,530	-279	516,071	4,399,803	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	-86	9	8	462	351	8,723	9,467	85,088,456	
0	451,796	0	278	44,919	20,171	292	-11,993	3,357	7,530	754,706	1,271,056	38,681,551	
0	0	0	0	0	-2	0	0	20	15	382	415	3,724,651	
0	0	0	0	0	-88	9	8	482	365	9,105	9,882	88,813,107	
0	451,796	0	278	44,919	20,171	292	-11,993	3,357	7,530	754,706	1,271,056	38,681,551	
0	0	0	0	0	-26	0	0	0	0	0	-26	11,422	
0	2,792	0	187	12,825	40,985	499	-13,196	6,131	3,240	0	53,463	2,778,318	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	-114	9	8	482	365	9,105	9,855	88,824,529	
0	454,588	0	465	57,744	61,156	791	-25,189	9,488	10,770	754,706	1,324,519	41,459,869	
0	0	0	0	0	-4	0	0	21	16	399	432	3,888,488	
0	0	0	0	0	-118	9	8	503	382	9,504	10,288	92,713,017	
0	454,588	0	465	57,744	61,156	791	-25,189	9,488	10,770	754,706	1,324,519	41,459,869	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	-3	0	0	11	8	208	224	94,478,047	
0	0	0	0	0	0	0	0	0	0	0	0	40,519,004	
0	0	0	0	0	-3	0	0	11	8	208	224	134,997,047	
3,379 49,947 53,326	204,116 392,822 596,938	9 9,921 9,930	395,284 267,573 662,857	461,086 187,755 648,841	7,809,509 678,845 8,488,354	519,425 -34,832 484,573	478,971 472,089 951,060	1,954,297 947,699 2,901,996	424,966 355,868 780,834	1,022,313 4,939,979 5,962,292	13,273,355 8,267,646 21,541,001	89,856,467 66,819,430 156,675,897	
3,513 49,947 53,460	219,215 392,822 612,037	9 9,921 9,930	424,107 267,573 691,680	595,796 187,755 783,551	10,824,585 678,845 11,503,430	891,372 -34,832 856,520	806,852 472,089 1,278,941	3,392,405 947,699 4,340,104	749,371 355,868 1,105,239	1,854,744 4,939,979 6,794,723	19,761,969 8,267,646 28,029,615	58,699,574 26,300,426 85,000,000	
134	15,099	0	28,823	134,710	3,015,073	371,947	327,881	1,438,119	324,413	832,639	6,488,838	63,321,150	

Summary of Allocation Percentages

Each year the Department determines water contractor charges for the State Water Project based on allocations of costs among purposes of facilities used for more than a single purpose. These determinations are based on the

percentages previously reported to and approved by the Legislature, as well as preliminary estimates for facilities not yet reported. These percentages are summarized in the following table:

SUMMARY OF COST ALLOCATION PERCENTAGES

(in percent of joint costs of the respective facilities)

Facilities of the State Water Project	Reimbursable Purposes	Nonreimbursable Purposes		Total
	Water Supply and Power Generation	Flood Control	Recreation and Fish and Wildlife Enhancement	
Capital Costs of Features Jointly Used				
<u>Project Conservation Facilities</u>				
Frenchman Dam and Lake ^(a)	21.5	0	78.5	100.0
Antelope Dam and Lake ^(a)	0	0	100.0	100.0
Grizzly Valley Dam and Lake Davis ^(a)	1.0	0	99.0	100.0
Oroville Division ^{(a)(b)}	97.1	0	2.9	100.0
California Aqueduct, Delta, to Dos Amigos Pumping Plant ^(a)	96.6	0	3.4	100.0
Delta Facilities ^(c)	86.0	0	14.0	100.0
<u>Project Transportation Facilities</u>				
Grizzly Valley Pipeline	100.0	0	0	100.0
North Bay Aqueduct ^(c)	100.0	0	0	100.0
South Bay Aqueduct:				
Del Valle Dam and Lake Del Valle ^(a)	25.2	26.8	48.0	100.0
Remainder of South Bay Aqueduct	100.0	0	0	100.0
California Aqueduct:				
California Aqueduct, Delta, to Dos Amigos Pumping Plant ^(a)	96.6	0	3.4	100.0
California Aqueduct, Dos Amigos Pumping Plant to Termini excluding the Coastal Branch ^(a)	94.3	0	5.7	100.0
Coastal Branch	100.0	0	0	100.0
<p>a) Final percentages, subject to periodic review as discussed on Page 11.</p> <p>b) Percentages are applicable to Capital Costs of Features Jointly Used, minus Federal Flood Control Payments.</p> <p>c) Illustrative percentages only, assumed for current project financial and repayment analyses.</p> <p>NOTE: Percentages shown are those applicable to the costs of the facilities as accounted by the State, or, in the case of Federal-State joint-use facilities (San Luis Facilities), only the State's share of the total cost.</p>				

COMMENTS
BY
THE DEPARTMENT OF BOATING AND WATERWAYS,
THE DEPARTMENT OF PARKS AND RECREATION,
AND THE DEPARTMENT OF FISH AND GAME

Memorandum

To : David N. Kennedy
Director
Department of Water Resources
1416 9th Street, A-36
Sacramento, California 95814

Date : OCT 22 1985

Subject: Cost Allocations to
Recreation and Fish &
Wildlife Enhancement,
State Water Projects

From : **Department of Boating and Waterways**

In accordance with Section 11912 of the California Water Code, this Department has reviewed Appendix D of the Department of Water Resources' Bulletin 132-85 and we have no comment.


WILLIAM H. IVERS
Director

Memorandum

Date : OCT 31 1985

To : David N. Kennedy, Director
Department of Water Resources

From : Department of Parks and Recreation

Subject: Annual Report to the Legislature, Cost Allocations
to Recreation and Fish and Wildlife Enhancement
State Water Project

In accordance with California Water Code Section 11912, the Department of Parks and Recreation has reviewed your Bulletin 132-85 (Cost of Recreation and Fish and Wildlife Enhancement) Appendix D. Since it would take a great deal of research and staff time to verify your allocations and the report appears consistent with those presented in previous years, we will assume the figures to be correct and will be verified at a later date by an audit.



Wm. S. Briner
Director

Memorandum

To : David N. Kennedy, Director
Department of Water Resources
1416 Ninth Street, Rm. 1115-1
Sacramento, CA 95814

Date : November 27, 1985

From : Department of Fish and Game

Subject: Annual Report to the Legislature, State Water Project Costs of
Recreation and Fish and Wildlife Enhancement

In accordance with California Water Section 11912, you requested our written comments on State Water Project joint costs allocated to recreation, fish and wildlife enhancement, as reported in the review draft of Appendix D to Bulletin 132-85. We have reviewed the report and it appears consistent with previous reports. As noted last year the Department does not employ an economist, or have the availability of other staff to review the costs in a detailed economic analysis.

We still stand ready as noted last year to work with you in the early stages of the preparation of next year's report if you feel it would be useful to prepare a more complete comment to the Legislature along these lines. Mr. Bob Orcutt in the Environmental Services Branch at 445-1383 is available to discuss our participation in more detail.


Jack C. Parnell
Director

CONVERSION FACTORS

Quantity	To Convert from Metric Unit	To Customary Unit	Multiply Metric Unit By	To Convert to Metric Unit Multiply Customary Unit By
Length	millimetres (mm)	inches (in)	0.03937	25.4
	centimetres (cm) for snow depth	inches (in)	0.3937	2.54
	metres (m)	feet (ft)	3.2808	0.3048
	kilometres (km)	miles (mi)	0.62139	1.6093
Area	square millimetres (mm ²)	square inches (in ²)	0.00155	645.16
	square metres (m ²)	square feet (ft ²)	10.764	0.092903
	hectares (ha)	acres (ac)	2.4710	0.40469
	square kilometres (km ²)	square miles (mi ²)	0.3861	2.590
Volume	litres (L)	gallons (gal)	0.26417	3.7854
	megalitres	million gallons (10 ⁶ gal)	0.26417	3.7854
	cubic metres (m ³)	cubic feet (ft ³)	35.315	0.028317
	cubic metres (m ³)	cubic yards (yd ³)	1.308	0.76455
	cubic dekametres (dam ³)	acre-feet (ac-ft)	0.8107	1.2335
Flow	cubic metres per second (m ³ /s)	cubic feet per second (ft ³ /s)	35.315	0.028317
	litres per minute (L/min)	gallons per minute (gal/min)	0.26417	3.7854
	litres per day (L/day)	gallons per day (gal/day)	0.26417	3.7854
	megalitres per day (ML/day)	million gallons per day (mgd)	0.26417	3.7854
	cubic dekametres per day (dam ³ /day)	acre-feet per day (ac-ft/day)	0.8107	1.2335
Mass	kilograms (kg)	pounds (lb)	2.2046	0.45359
	megagrams (Mg)	tons (short, 2,000 lb)	1.1023	0.90718
Velocity	metres per second (m/s)	feet per second (ft/s)	3.2808	0.3048
Power	kilowatts (kW)	horsepower (hp)	1.3405	0.746
Pressure	kilopascals (kPa)	pounds per square inch (psi)	0.14505	6.8948
	kilopascals (kPa)	feet head of water	0.33456	2.989
Specific Capacity	litres per minute per metre drawdown	gallons per minute per foot drawdown	0.08052	12.419
Concentration	milligrams per litre (mg/L)	parts per million (ppm)	1.0	1.0
Electrical Conductivity	microsiemens per centimetre (uS/cm)	micromhos per centimetre	1.0	1.0
Temperature	degrees Celsius (°C)	degrees Fahrenheit (°F)	(1.8 × °C) + 32	(°F - 32)/1.8

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