

[SUMMARY OF FINAL SUBMITTED VERSION]**PROGRESS REPORT BY PERMITTEE FOR 2013**

Primary Owner: CALIF DEPT OF WATER RESOURCES

Primary Contact: Nancy Quan

Date Submitted: 2014-06-30

Application Number: A005630

Permit Number: 016478

Source(s) of Water	POD Parcel Number	County
FEATHER RIVER		Butte
FEATHER RIVER		Butte
FEATHER RIVER		Butte
ITALIAN SLOUGH		Contra Costa
SACRAMENTO RIVER DELTA CHANNELS		Sacramento

MAX Direct Diversion Rate: 1400.0 CFS
 MAX Collection to Storage: 380000.0 AC-FT
 Face Value: 1393568.5 AC-FT

Permitted Use(s)	Acres	Direct Diversion Season	Storage Season
Domestic	0.0	01/01 to 12/31	09/01 to 07/31
Fish and Wildlife Protection and/or Enhancement	0.0	01/01 to 12/31	09/01 to 07/31
Incidental Power	0.0	01/01 to 12/31	09/01 to 07/31
Industrial	0.0	01/01 to 12/31	09/01 to 07/31
Irrigation	999999.9	01/01 to 12/31	09/01 to 07/31
Municipal	0.0	01/01 to 12/31	09/01 to 07/31
Other	0.0	01/01 to 12/31	09/01 to 07/31
Recreational	0.0	01/01 to 12/31	09/01 to 07/31

1. Permit Review

I have reviewed my water right permit	Yes
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2. Compliance with Permit Terms and Conditions

I am complying with all terms and conditions	Yes
Description of noncompliance with terms and conditions	

3. Changes to the Project

Intake location has been changed	
Description of intake location changes	
Type of use has changed	
Description of type of use changes	
Place of use has changed	
Description of place of use changes	
Other changes	

Description of other changes

4-6. Permitted Project Status

Project Status	Not Complete
6a. Construction work has commenced	Yes
6b. Construction is completed	Yes
6c. Beneficial uses of water has commenced	Yes
6d. Project will be completed within the time period specified in the permit	No
6e. Explanation of work remaining to be done	Construction of the East Branch Extension of the California Aqueduct is not yet complete. The facilities link the SWP at the Devil Canyon power plant to the eastern part of San Bernardino Valley Municipal Water District and San Geronio Pass Water Agency. Phase 1 of the East Branch Extension project is complete. DWR certified the Final Environmental Impact Report for Phase 2 of the East Branch Extension and approved the project on March 2, 2009. Work has begun on Phase 2 with completion of major construction activities currently projected for late 2014. Other facilities may be required depending on the outcome of current efforts to address issues in the Sacramento/San Joaquin Delta. Maximum annual diversion to storage at Lake Oroville and peak rate of direct diversion authorized under Permit 16478 have been reached. However, additional time is required to maximize the total annual diversion and beneficial use authorized under Permit 16478 and the remaining permits governing SWP operations at Oroville and in the Delta, Permits 16479, 16481, 16482 and 16483. Annual diversions to storage are dependent on numerous factors including end of season storage, annual hydrology, SWP demands and regulatory constraints. Maximum diversion rate, total annual diversion to storage and maximum annual use are expected to increase as demands within the SWP service area increase. DWR filed a Petition for Time Extension with the State Water Resources Control Board on December 31, 2009. There are a number of factors creating uncertainty as to the ultimate demands for project water and the quantities available and timing of diversions including the current Bay-Delta Conservation Plan (BDGP) process. At this time, DWR is requesting a 5 year extension to allow time for the current planning processes to be completed. Following completion of the BDGP process DWR should be better able to estimate future demands for Project water.
6f. Estimated date of completion	12/31/2035

7. Purpose of Use

Other	salinity control
Industrial	mixed industrial
Domestic	see Remarks
Recreational	boating, fishing, water contact sports
Fish and Wildlife Protection and/or Enhancement	streamflow enhancement, fish & wildlife protection
Irrigation	750000 Acres Mixed Crop Types
Incidental Power	1876 MW

Municipal

25000000

8. Amount of Water Diverted and Used

Month	Amount directly diverted or collected to storage (Acre-Feet)	Amount used (Acre-Feet)
January	11	11
February	5	5
March	7	7
April	35	51413
May	14	173827
June	0	90225
July	0	0
August	0	0
September	94	94
October	544	544
November	0	0
December	0	0
Total	710	316126
Comments		

9. Maximum Rate of Diversion for each Month

Month	Maximum Rate of Diversion (CFS)
January	0.2
February	0.1
March	0.1
April	0.6
May	1.2
June	0
July	0
August	0
September	4.8
October	9.4
November	0
December	0

10. Storage

Reservoir name	Spilled this year	Feet below spillway at maximum storage	Completely emptied	Feet below spillway at minimum storage	Method used to measure water level
Oroville	No	0	No	0	Nitrogen Bubbler

Conservation of Water

11. Are you now employing water conservation efforts?	Yes
Description of water	Since 1979, DWR has provided water conservation and water use efficiency information and assistance to water users. The Department's Office of Water Use Efficiency provides expertise to local agencies and individuals regarding agricultural and urban water and energy conservation, reclamation and reuse of water, land and water use, and drainage management. The office also manages the California Irrigation Management Information

conservation efforts	System (CIMIS), assists in establishing mobile laboratories that conduct irrigation system evaluations, carries out data analysis, demonstration projects, and research to achieve energy and water use efficiency, and provides loans and grants to make more efficient use of water and energy resources. In addition to DWR's efforts, the agencies receiving SWP water implement local water conservation programs.
12. Amount of water conserved	

Water Quality and Wastewater Reclamation

13. During the period covered by this Report, did you use reclaimed water from a wastewater treatment facility, water from a desalination facility, or water polluted by waste to a degree which unreasonably affects the water for other beneficial uses?	No
14. Amount of reclaimed, desalinated, or polluted water used	

Conjunctive Use of Groundwater and Surface Water

15. During the period covered by this Report, were you using groundwater in lieu of available surface water authorized under your permit?	No
16. Amounts of groundwater used	

Additional Remarks

See attached remarks and tables.

Attachments

File Name	Description	Size
2013 FR Settlement Contract Deliveries.pdf		35 KB
2013 SWP Reservoir Operations.pdf		48 KB
2013_SWP_Project_Deliveries.pdf		38 KB
5630-remarks_13.pdf		23 KB

Contact Information of the Person Submitting the Form

First Name	Nancy
Last Name	Quan
Relation to Water Right	Primary Owner of Record
Has read the form and agrees the information in the report is true to the best of his/her knowledge and belief	Yes

**Deliveries to SWP Settlement Contractors from
Thermalito Afterbay/Feather River
2013**

Month	Thermalito Deliveries	Feather River Deliveries	Total
Jan	37,897	0	37,897
Feb	0	0	0
Mar	1,850	358	2,208
Apr	55,478	4,130	59,608
May	179,046	7,676	186,722
Jun	167,755	5,349	173,104
Jul	183,073	8,415	191,488
Aug	137,567	3,030	140,597
Sep	42,750	1,530	44,280
Oct	88,789	2,428	91,217
Nov	130,556	270	130,826
Dec	94,441	57	94,498
Total	1,119,202	33,243	1,152,445

Note:

Deliveries to water rights settlement contractors on Feather River are made through SWP facilities with a combination of natural flow and storage releases. Only those quantities made available through storage releases are reported in Item 7.

**State Water Project Reservoir/Pumping Operations
2013**

Month	Oroville End of Month Storage ¹⁾	Diversion to Storage at Oroville	Banks Pumping Plant - SWP Pumping ²⁾	Pumping of Non-SWP Water at Banks ³⁾	San Luis Reservoir End of Month Storage	Pyramid Lake End of Month Storage	Castaic Lake End of Month Storage	Silverwood Lake End of Month Storage	Lake Perris End of Month Storage	Total Diversion to Storage from Delta ⁴⁾
	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
Jan	2,691,911	166,814	162,455	0	486,247	166,210	286,525	71,873	62,531	48,421
Feb	2,848,383	156,472	96,508	0	461,372	167,153	284,532	71,292	71,753	0
Mar	2,982,217	142,581	157,850	0	520,433	167,153	283,311	71,264	73,279	59,338
Apr	3,040,685	128,829	74,304	3,027	431,140	166,847	284,201	73,224	71,902	0
May	2,812,374	0	54,793		319,756	164,321	274,304	70,648	72,868	0
Jun	2,558,018	0	112,894		199,245	167,882	254,815	71,606	68,832	0
Jul	2,143,834	0	275,409	40,261	208,227	164,839	292,048	71,473	69,217	0
Aug	1,783,566	0	293,259	62,611	323,113	165,676	285,382	71,150	70,830	0
Sep	1,633,290	0	136,166	59,096	280,598	166,961	284,946	72,063	72,570	0
Oct	1,528,375	0	70,736		182,397	163,866	277,539	71,892	73,279	0
Nov	1,391,620	0	114,743		234,163	168,138	273,575	72,264	73,541	0
Dec	1,286,039	0	100,725		274,425	167,383	287,691	70,252	72,459	0
Total		594,696	1,649,842	164,995						107,759

Notes:

- Oroville Storage represents water use authorized under Permits 16478 and 16479.
- Banks Pumping shown represents SWP pumping only authorized under Permits 16478, 16479, 16481, and 16482.
- Quantities shown include pumping of Central Valley Project water and Transfer water at Banks Pumping Plant. Diversion and use of the water is reported under the water rights of Reclamation or the water right holder transferring water.
- Quantities shown do not include redirection of Oroville Storage

State Water Project Deliveries 2013

Month	Deliveries from Feather (AF)	North Bay Aqueduct (AF)	Downstream of Banks PP (AF)	Recreation (AF)	Total (AF)
Jan	11	916	104,024	49	105,000
Feb	5	913	93,400	74	94,392
Mar	7	443	99,265	144	99,859
Apr	35	1,215	136,130	124	137,504
May	73	5,732	179,014	124	184,943
Jun	1,226	6,344	235,790	198	243,558
Jul	1,675	4,804	234,303	186	240,968
Aug	1,467	4,587	164,812	177	171,043
Sep	283	3,868	134,856	124	139,131
Oct	581	4,249	165,885	184	170,899
Nov	312	2,371	109,950	73	112,706
Dec	85	2,026	79,584	84	81,779
Total	5,760	37,468	1,737,013	1,541	1,781,782

Notes:

All quantities shown are in acre-feet.

The quantities shown represent SWP deliveries from water appropriated under Permits 16478, 16479, 16481, 16482, and 16483.

Term 91 in effect 5/7/2013 through 9/20/13 and 10/30/13 through 12/31/13; Water diverted at North Bay Aqueduct during the period when Term 91 is in effect is reported under Permits 16478 and 16479. Of the water diverted at the NBA, 11,396 af was diverted under Permit 16483.

SWP Deliveries from Lake Davis under Permits 15254 and 15255 are reported separately.

Quantities shown represent SWP deliveries only. Quantities do not include deliveries of water under water rights settlement agreements or for fish and Wildlife enhancement, maintenance of water quality or other environmental purposes.

All data is preliminary and subject to change.

Water diversion and use have been allocated to the individual Permits 16478, 16479, 16481, 16482, and 16483 governing the primary operations of the State Water Project (SWP) consistent with the water rights priorities. However, SWP operations are not segmented by individual permit. The SWP is operated as a single coordinated project consistent with the joint terms and conditions specified in Water Rights Decision 1641 (D1641) and the criteria specified in the biological opinions for the protection of Delta smelt and anadromous fishes. Operations are also coordinated with the U.S. Department of Interior, Bureau of Reclamation consistent with the provisions of the Coordinated Operations Agreement (COA) dated November 24, 1986. The SWP is a large complex project nearly 700 miles of aqueduct, numerous storage and regulating reservoirs, multiple diversion facilities, and several different water supply sources. Allocating diversion and use to individual permits requires numerous simplifying assumptions due to the substantial geographic distribution of facilities, multiple water sources, numerous redirection and delivery locations and multiple authorized purposes of use, both consumptive and non-consumptive. In order to allow allocation of diversion and use to individual permits, for purposes of annual reporting, project operations were assumed to be instantaneous at any location throughout the project on any given day. While it is recognized that there is substantial time lag between diversion and subsequent releases at Lake Oroville, the Sacramento/San Joaquin Delta and ultimate delivery throughout the SWP, the assumption of are necessary to allow allocation of diversion and use to individual permits. The simplifying assumptions used for reporting purposes may result in the introduction of small discrepancies between quantities pumped and diverted to storage on a given day. Summary tables for total SWP operations for all relevant permits are attached to this report. The assumptions used were reviewed by SWRCB staff and are considered sufficient for annual reporting purposes.

Item 2: SWP water rights permit terms and conditions are specified in D1641. There were some exceedences of the EC objectives at two locations in the Delta in 2013 due to influences beyond the control of DWR. All exceedences were reported to the SWRCB. The EC objective at the Old River at Tracy Road Bridge station was exceeded on four occasions in 2013; January 29 through February 19, April 9 through April 23, April 30 through May 4 and June 14 through August 31. The exceedences were due to degradation within the Delta channels downstream of Vernalis. DWR does not contribute towards and has no ability to control salinity levels within the South Delta. The exceedences were reported to the SWRCB on February 27, April 24, May 24 and July 12, respectively. There were also two exceedences of the EC objective at Emmaton; April 28 through May 18 and June 9 through June 22. The exceedences were due to greater than expected depletions on from the Sacramento River. The exceedences were reported to the SWRCB on May 24 and July 9, 2013, respectively.

- Item 6: Construction of the East Branch Extension of the California Aqueduct is not yet complete. The facilities link the SWP at the Devil Canyon power plant to the eastern part of San Bernardino Valley Municipal Water District and San Geronio Pass Water Agency. Phase 1 of the East Branch Extension project is complete. DWR certified the Final Environmental Impact Report for Phase 2 of the East Branch Extension and approved the project on March 2, 2009. Work has begun on Phase 2 with completion of major construction activities currently projected for late 2014. Other facilities may be required depending on the outcome of current efforts to address issues in the Sacramento/San Joaquin Delta.

Maximum annual diversion to storage at Lake Oroville and peak rate of direct diversion authorized under Permit 16478 have been reached. However, additional time is required to maximize the total annual diversion and beneficial use authorized under Permit 16478 and the remaining permits governing SWP operations at Oroville and in the Delta, Permits 16479, 16481, 16482 and 16483. Annual diversions to storage are dependent on numerous factors including end of season storage, annual hydrology, SWP demands and regulatory constraints. Maximum diversion rate, total annual diversion to storage and maximum annual use are expected to increase as demands within the SWP service area increase. DWR filed a Petition for Time Extension with the State Water Resources Control Board on December 31, 2009. There are a number of factors creating uncertainty as to the ultimate demands for project water and the quantities available and timing of diversions including the current Bay-Delta Conservation Plan (BDCP) process. Following completion of the BDCP process DWR should be better able to estimate future demands for Project water.

- Item 7: The SWP is a large complex water supply system consisting of 29 dams, 30 pumping and generating plants and approximately 675 miles of aqueducts. DWR diverts water under its permits for irrigation, industrial, municipal, domestic, incidental power, recreation, salinity control and fish and wildlife enhancement purposes. The SWP delivers water to 29 long-term water supply contractors serving approximately 25 million people and providing irrigation to approximately 750,000 acres of farmland. Recreation opportunities at SWP facilities include boating, fishing, water contact sports, camping, and equestrian among others. DWR generates incidental power under permits 16478, 16479, 16481, and 16482 at the Gianelli, Alamo, Warne, Mojave Siphon, and Devil Canyon powerplants. (total installed capacity 626 MW) Power is also generated by the flows appropriated under the above permits at the Castaic Powerplant owned and operated by Los Angeles Department of Water and Power (1250 MW). Specific information regarding SWP operations and deliveries are contained in DWR Bulletin 132. The Division of Water Rights receives a copy of Bulletin when it is released. It is also available online at <http://www.water.ca.gov/swpao/bulletin.cfm>.

Item 8: The quantities shown in Item 8 reflect diversion and use allocated to Permit 16478 only. The data contained in the attached tables reflect the overall operation of the SWP and include water use under Permits 16478, 16479, 1648, and 16482 which authorize use for irrigation, domestic, municipal, industrial, salinity control, recreational and fish and wildlife enhancement purposes, both consumptive and nonconsumptive purposes. The authorized season of diversion to storage at Oroville under Permits 16478 and 16479, September 1 through July 31, does not coincide with the annual reporting period of January 1 through December 31. The calendar year reporting period encompasses portions of the 2012/2013 and 2013/2014 water years. The season for direct diversion is January 1 through December 31 of each year. The quantities shown in item 8 reflect the water directly diverted or diverted to storage consistent with the terms and conditions of Permit 16478 during each month of calendar year 2013 for all authorized purposes of use. Total diversion to storage in 2013 at Lake Oroville under Permits 16478 and 16479 was 1,937,241 acre-feet.

Item 9: Direct diversion is authorized under Permit 16478 at both the Oroville/Thermalito complex and from the Sacramento San Joaquin Delta channels. The quantities shown reflect diversions at both locations.

Item 10: Water level at minimum storage during 2013 was 109.5 feet below the sill of the gated spillway for Oroville Dam (Elevation 813.60 feet). Water level at maximum storage was 871.8 feet (58.2 feet above the sill of the gated spillway). Normal operating maximum elevation for Oroville Reservoir is 899.0 feet.

The SWP reservoirs south of the Delta are built for offstream storage and are operated to avoid spill. Water may be directly diverted from the Delta channels or rediverted from Lake Oroville. Water levels fluctuate substantially throughout the year as DWR diverts or rediverts water to individual reservoirs depending on Project supplies and regional demands.

Item 11: Since 1979, DWR has provided information and assistance to water users. The Department's Office of Water Use Efficiency provides expertise to local agencies and individuals regarding agricultural and urban water and energy conservation, reclamation and reuse of water, land and water use, and drainage management. The office also manages the California Irrigation Management Information System (CIMIS), assists in establishing mobile laboratories that conduct irrigation system evaluations, carries out data analysis, demonstration projects, and research to achieve energy and water use efficiency, and provides loans and grants to make more efficient use of water and energy resources. In addition to DWR's efforts, the agencies receiving SWP water implement local water conservation programs.