SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, CA
Board of Directors Engineering Workshop
Agenda
January 8, 2018 at 1:30 p.m.

1. **Call to Order, Flag Salute and Roll Call**

2. **Public Comment:**
   Members of the public may address the Board at this time concerning items relating to any matter within the Agency's jurisdiction. To comment on specific agenda items, please complete a speaker's request form and hand it to the board secretary.

3. **Review of State Water Project Operations and Water Supply Situation* (p. 3)**

4. **Review of State Water Project Water Management Issues* (p. 23)**

5. **Update on Cal Water Fix**

6. **Discussion of Fiesta Recharge Project and Bids* (p. 26)**

7. **Announcements**
   A. Office closed Monday, January 15, 2018 in observance of Martin Luther King, Jr. Day
   B. Regular Board Meeting, **Tuesday**, January 16, 2018 at 1:30 p.m.
   C. Southern California Water Committee Quarterly Luncheon,
   Friday, January 19, 2018 at 11:00 a.m.
   Victoria Club
   2521 Arroyo Drive, Riverside
   D. Finance and Budget Workshop, January 22, 2018 at 1:30 p.m.

8. **Closed Session (3 Items)**
   A. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION
   (Paragraph (1) of subdivision (d) of Government Code Section 54956.9
   Name of case: San Gorgonio Pass Water Agency vs. Beaumont Basin Watermaster
   Case No. RIC 1716346

   B. CONFERENCE WITH REAL PROPERTY NEGOTIATORS
   Pursuant to Government Code Section 54956.8
   Property: Potential transfer of State Water Project rights/supplies among
   State Water Project Contractors
   Agency negotiator: Jeff Davis, General Manager
   Negotiating parties: Dudley Ridge Water District, Dale Melville, Manager-Engineer
   Under negotiation: price and terms of payment

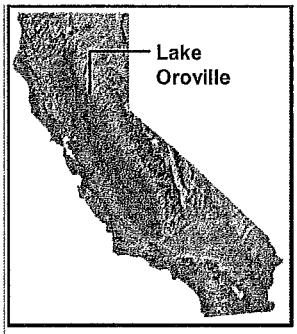
   C. CONFERENCE WITH REAL PROPERTY NEGOTIATORS
   Pursuant to Government Code section 54956.8
   Property: Potential water rights/supplies offers from the City of Ventura
   Agency negotiator: Jeff Davis, General Manager
   Negotiating parties: Lynn Takaichi
   Under negotiation: price and terms of payment

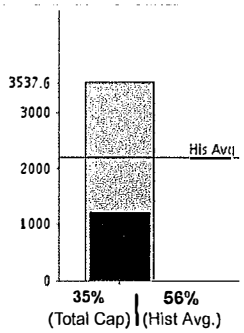
9. **Adjournment**

***Information included in Agenda Packet**

(1) Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for Public inspection in the Agency's office at 1210 Beaumont Avenue, Beaumont during normal business hours. (2) Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection at the Agency's office, located at 1210 Beaumont Avenue, Beaumont, California 92223, during regular business hours. When practical, these public records will also be made available on the Agency's Internet Web site, accessible at http://www.sgpwa.com." (3) Any person with a disability who requires accommodation in order to participate in this meeting should telephone the Agency (951 845-2577) at least 48 hours prior to the meeting in order to mak 1 / 28 a disability-related modification or accommodation.

OROVILLE - STORAGE CONDITIONS AS OF JANUARY 03, 2018





Data as of Midnight: January 03, 2018

- Current Storage: 1226763 AF
- 35% of Total Capacity
- 56% of Historical Avg. For This Date
- (Total Capacity: 3537577.0 AF)
- (Avg. Storage for January 03: 2187700.0 AF)

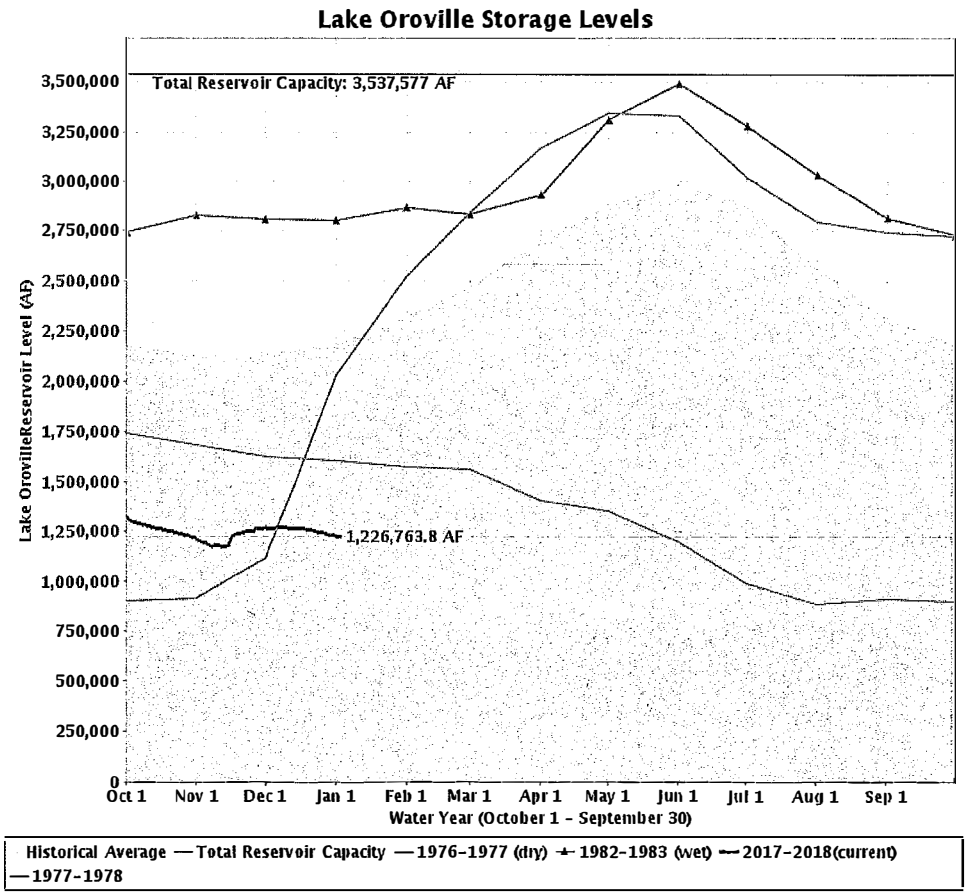
Change Date: 03-Jan-2018

Major Reservoir Current Conditions Graphs Printable Version of Current Data

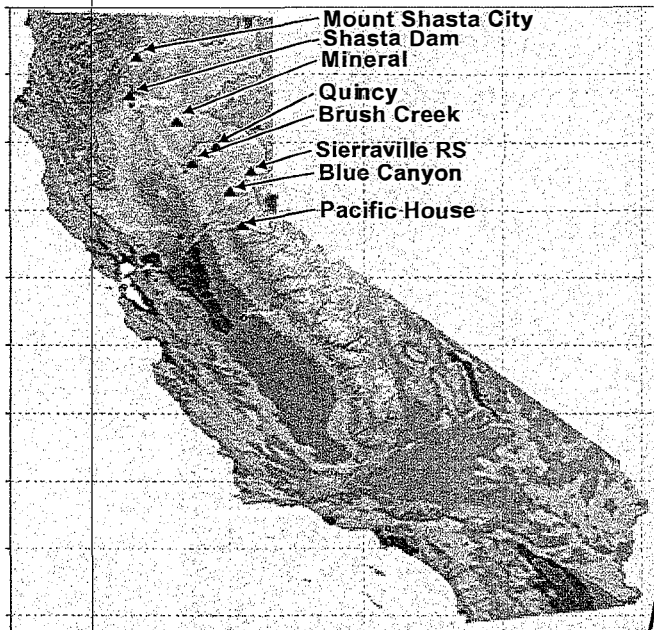
Oroville Storage Level Graph: **Choose water years to plot:**

1976-1977 (dry)
1977-1978
1982-1983 (wet)
1988-1989
1989-1990
1990-1991

(ctrl+click for multiple selections)



North Sierra Precipitation: 8-Station Index, January 04, 2018



Percent of Average for this Date: 65%

2016-2017 Daily Precip (wettest) 94.7

1982-1983 (2nd wettest) 88.5

1997-1998 82.4

Average (1966-2015) 51.8

2014-2015 Daily Precip 37.2

1976-1977(2nd driest & driest thru Aug) 19.0

Current Daily Precip:12.8

Cumulative Daily/NWS Precipitation (inches)

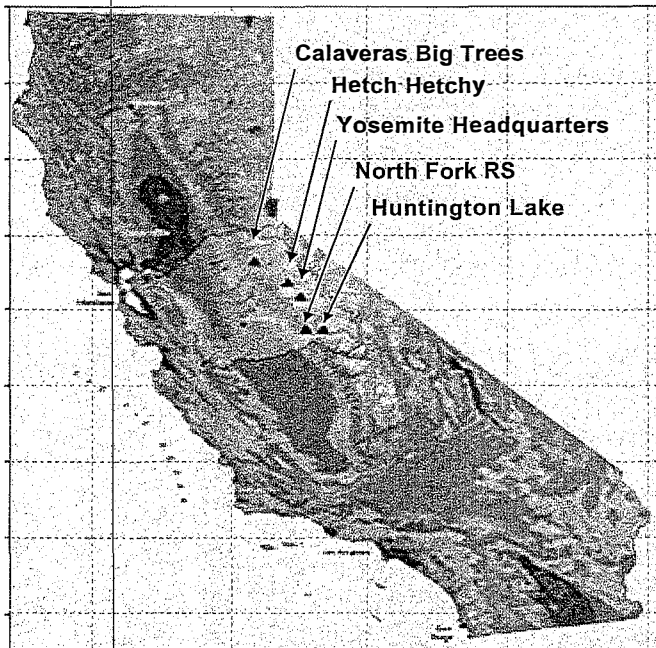
Total Water Year Precipitation

100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1

Water Year (October 1 - September 30)

San Joaquin Precipitation: 5-Station Index, January 04, 2018



Percent of Average for this Date: 36%

1982-1983 (wettest) 77.4

72.7 2016-2017 Daily Precip (2nd wettest)

1997-1998 65.2

Average (1966-2015) 40.2

2014-2015 Daily Precip 19.0

15.4

Current Daily Precip.5.1

1976-1977(2nd driest & driest thru Aug)

Cumulative Daily/NRCS 4/28 Precipitation (inches)

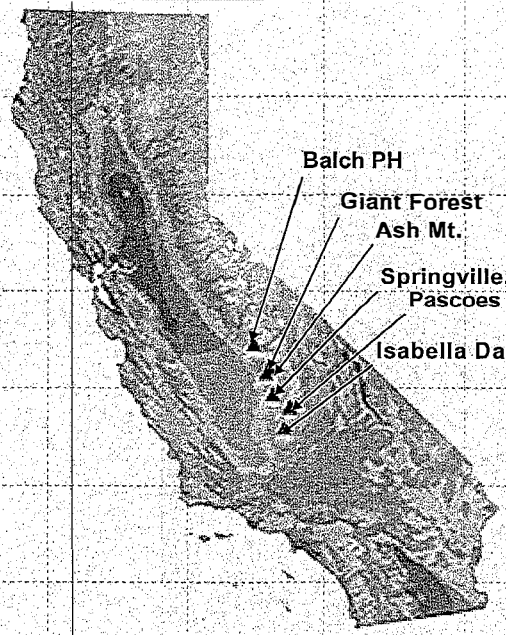
Total Water Year Precipitation

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1

Water Year (October 1 - September 30)

Tulare Basin Precipitation: 6-Station Index, December 26, 2017



Percent of Average for this Date: 25%

1968-1969 (Wettest) 56.3

1997-1998 (2nd wettest) 54.2

2016-2017 Daily Precip 46.9

Average (1966-2015) 28.8

2014-2015 Daily Precip 13.5

1976-1977 Daily Precip (Driest) 10.9

Current Daily Precip:2.0

Cumulative Daily/N 8 / 5 Precipitation (inches)

Total Water Year Precipitation

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1

Water Year (October 1 - September 30)

Managing & Protecting California's Water Resources

The Department of Water Resources (DWR) is responsible for managing and protecting California's water resources. DWR works with other agencies to benefit the State's people and to protect, restore and enhance the natural and human environments.

Spotlight

Dry December Produces Below-Average Snowpack

Media gather at Phillips Station in the Sierra Nevada for January's snow survey. DWR/2018.

Office of Governor
Edmund G. Brown Jr.

Natural Resources Agency
John Laird

Department of Water Resources
Grant Davis

Top DWR Sites

Drought

Groundwater

California WaterFix

CA Water Plan

Public Notices

Rainfall in California was far above average in November. Then came December, one of the state's driest months on record. It's not a surprise that the first snow survey of the season, on January 3, revealed meager results: just 0.4 inches of snow water equivalent (SWE). The average for early January readings at Phillips Station, in the Sierra Nevada, is 11.3 SWE inches.

Electronic readings show that the average statewide SWE is 2.6 inches, or just 24 percent of the

January 3 average.

"As we're only a third of the way through California's three wettest months, it's far too early to draw any conclusions about what kind of season we'll have this year," said DWR Director Grant Davis.

California's wettest months are December through February, so there's still time for Mother Nature to build her mountain "reservoir" and eventually provide the runoff California needs when it melts.

For more information on January's snow survey, read our press release.

Spotlight Archive | Recent News

Tweets by @CA_DWR

CA - DWR Retweeted

Save Our Water
@saveourwater

A dry December means CA has a below-average snowpack. Rain or shine, conservation is a way a life, visit saveourwater.com for water-

Embed View on Twitter

Jeff Davis

From: State Water Contractors <mtonetti=fionahuttonassoc.com@mail241.atl21.rsgsv.net> on behalf of State Water Contractors <mtonetti@fionahuttonassoc.com>
Sent: Wednesday, January 3, 2018 11:48 AM
To: Jeff Davis
Subject: First Manual Snow Survey of Year Reveals Below-Average Water Content, Highlights Need for Improved Water Capture System

STATE WATER CONTRACTORS
FOUNDED 1982

Press Release

FOR IMMEDIATE RELEASE:
January 3, 2018

CONTACT:
Michael Tonetti
mtonetti@fionahuttonassoc.com
818-760-2121

First Manual Snow Survey of Year Reveals Below-Average Water Content, Highlights Need for Improved Water Capture System

Dry Start to Water Year Underscores Volatility of California's Climate

Sacramento, CA – The California Department of Water Resources today conducted its first manual snow survey of the new water year at Phillips Station, determining water content in the Sierra Nevada snowpack to be three percent of average for this time of year. After California's wettest year on record last year, the 2017-2018 water year has been off to a considerably dry start, with precipitation levels across the state lower than anticipated. State Water Contractor members use DWR's monthly snow surveys to anticipate runoff from the mountains during the spring snowmelt and better plan their yearly operations.

"This first survey reiterates California's need for water infrastructure that can keep up with our increasingly dynamic climate," said Jennifer Pierre, general manager of SWC. "A flexible water system will allow us to more effectively capture water during wet years and in turn, better endure dry periods like we've seen so far this winter."

###

The State Water Contractors is a statewide, non-profit association of 27 public agencies from Northern, Central and Southern California that purchase water under contract from the California State Water Project. Collectively the State Water Contractors deliver water to more than 25 million residents throughout the state and more than 750,000 acres of agricultural land.

For more information on the State Water Contractors, please visit www.swc.org

SFGATE
https://www.sfgate.com/news/article/There-s-almost-no-snow-in-the-Sierra-but-water-12471125.php

There's almost no snow in the Sierra, but water officials aren't panicking

By Peter Fimrite Updated 11:58 am, Wednesday, January 3, 2018

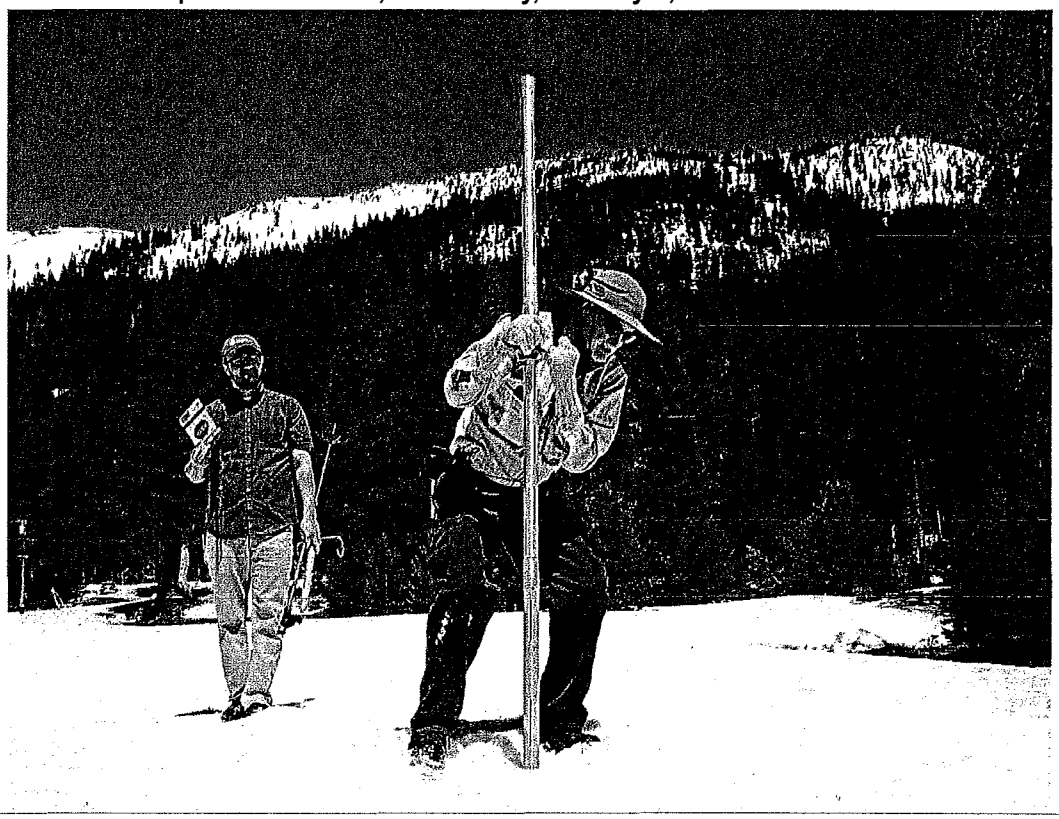


IMAGE 1 OF 13

Frank Gehrke, chief of the California Cooperative Snow Surveys Program for the Department of Water Resources, right, plunges the snow survey tube into the snow pack, as DWR's Wes McCandless looks on. ... more

The giddiness California water resources officials felt last winter as storms dropped record amounts of rain and snow has faded under a relentless barrage of blue sky and sun, but this week's promise of stormy weather is giving them hope.

Snow surveyors measured only 3 inches of water in the Sierra snowpack Wednesday, a dismal 24 percent of average for this time of year.

The paltry measurements came as the California Department of Water Resources

conducted its first of five monthly snow surveys, which sample snow in hundreds of places across the Sierra in an attempt to measure the state's frozen water supply and predict how much will end up in reservoirs.

The central Sierra, including the Lake Tahoe region, stands at 29 percent of average, better than the rest of the state. The northern portion of the Sierra is at 21 percent of normal and the south is at 20 percent of the historical average for this time, according to the surveys.

"We're still very early in the wettest part of the winter — December, January and February — when California

n," said Doug Carlson, a

00:02 00:58 HD

rd Northern California, Carlson said, "we hope that we see something akin to normal rainfall this winter. However, we don't know what's going to come this way."

RELATED STORIES

Bulk of storm to make landfall in Bay Area in time for afternoon commute

Carlson acknowledged that things aren't off to a good start. Last month was the **fourth-driest Decembe**r on record statewide.

But the situation is far from dire. California's reservoirs filled up and were spilling over after the storms last winter and spring. The amount of water in the 154 reservoirs that the state keeps track of stands at 109 percent of average for this time of year.

Shasta Dam, the largest reservoir in the state, is at 70 percent of capacity, which is 113 percent of average for this time of year. The 602-foot dam, on the upper

Sacramento River northwest of Redding, holds back 4.5 million acre-feet of water. An acre-foot is enough to cover one acre in a foot of water.

Oroville Dam, however, is only at 35 percent of capacity, which is 56 percent of average for this time of year. Shasta and Oroville together carry 80 percent of the state's reservoir supply, which is used to irrigate 8 million acres of farmland and provide water to close to 30 million people.

The two reservoirs are kept below capacity during the winter to avoid flooding in the event of major storms, such as those that prompted Oroville Dam officials to release a torrent of water in February that caused the main spillway to partially collapse. The dam's emergency spillway had to be used for the first time ever and the hillside began to erode, forcing 180,000 people in downstream communities to evacuate.

The nation's tallest dam was the site of the **fastest construction projects** in modern state history, as hundreds of workers labored around the clock since last spring to rebuild the chute before wet winter weather returns.

Peter Fimrite is a San Francisco Chronicle staff writer. Email: ***pfimrite@sfchronicle.com****. Twitter:* ***@pfimrite***

AP

California: Hardly any snow but not in drought again, yet

Today

https://apn

RELATED TOPICS
Droughts
California
Science
U.S. News

More from
North America

PHILLIPS STATION, Calif. (AP) — The grassy brown Sierra meadow where California's water managers gave the results of the winter's first manual snowpack measurements Wednesday told the story — the drought-prone state is off to another unusually dry start in its vital winter rain and snow season.

"We would like to have had more snow," Grant Davis, head of California's Department of Water Resources, told news crews gathered in this mountain field, bare of all but a few crusty dots of old snow.

"It's early," Davis said. "We're obviously hopeful there will be more snow the next time we come out here."

He spoke after Frank Gehrke, head of the state's snow survey team, stuck a metal pole into one of the few patches of snow at the site, measuring just over an inch (2.5 centimeters), or 3 percent of normal.

Climate change increasingly is changing the mountain snowfall equation, but historically up to 60 percent of Californians' water supply each year starts out as snowfall in the Sierras. That makes the state's manual and electronic snowpack measurements in these mountains crucial gauges of how much water cities and farms will get in the year ahead.

This winter, one month into the state's peak storm season, snowpack across the Sierras stood Wednesday at 24 percent of normal.

The dry spell is even more acute in Southern California, including Los Angeles, which the National Weather Service said this week was marking its driest 10-month period on record. Residents there last saw significant rainfall in February.

The dry start to the rain and snow season is raising worries the state could be plunging right back into drought. The scene Wednesday was remiscent of 2015, when Gov. Jerry Brown stood in a brown, dry Sierra meadow equally bare of snow to declare a drought emergency, including mandatory water cutbacks by cities and towns.

Near-record rainfall last winter snapped the historic drought, filling reservoirs and sending many rivers over their banks. Reservoirs remain at 110 percent of normal storage thanks to the last wet winter, water officials said.

As Californians, "we live in the most variable climate in the country," Davis said Wednesday, surrounded by forecasters and water officials in parkas for their mountain-meadow news conference. "That variability is what we have to manage."

He called for more improvements in long-range forecasting, to help the state's reservoir managers better operate dams for both water supplies and flood control. As the climate changes, much of the state's water is coming in the form of rain during storms known as "atmospheric rivers," Davis noted.

"It's very clear to us that we need to have more information" about how atmospheric rivers behave overall, Davis said.

This winter, in contrast to the previous rain-sodden one, meteorologists point to a strengthening La Nina weather pattern in the Pacific, which typically brings drier weather.

A stubborn ridge of high pressure in the Pacific — the same bad guy during the state's drought — has been blocking storms from reaching Southern California in particular.

In December, dry winds and parched vegetation combined for the state's biggest wildfires on record in the Los Angeles area, after deadlier wildfires in Northern California in October.

Even as the water officials spoke Wednesday, a welcome new storm carried some of the first rain in weeks into Northern California, which also had marked one of its driest Decembers on record.

Parts of Northern California will see rain — but not massive amounts of it — through the first half of January, with 1 or 2 inches (2.5 or 5 centimeters) of snow expected in the Sierras, the weather service said.

—

Knickmeyer reported from San Francisco.

—

This story has been corrected to show Grant Davis, head of California's Department of Water Resources, said he was

NMFS & FWS Biological Opinions

Reasonable and Prudent Alternatives

DRAFT

CRITERIA	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
National Marine Fisheries Service												
Action IV. 1.2 DCC Gate Operation	Oct 1 - Nov 30 Gates Are Closed if Fish Are Present		Dec 1 - 14	Dec 15 - Jan 31 Gates Are Closed	Feb 1 - May 15 Gates Are Closed per D1641			May 16 - Jun 15 up to 14 Days Closed per D1641				
Action IV. 2.1 San Joaquin River Inflow/Export Ratio			Gates Are Closed except for Experiments/WQ							OP Water Supply in WY Type		
Action IV. 2.2 Six-Year Acoustic Tag Experiment						Mar 1 - Jun 15						
Action IV. 2.3 Old & Middle River Flow Management				Jan 1 - Jun 15 OMR (-5000 to -2500 cfs) until after Jun 1 Water Temperature @ Mossdale ≥ 72°F for 7 Days								
Action IV. 3 Reduce Likelihood of Entrainment or Salvage		Nov 1 - Dec 31										
Fish & Wildlife Service												
Action 1 Adult Migration & Entrainment (1st Flush)			Dec 1 - 20	After Dec 20 Triggers: Turbidity or Salvage Off Ramps: Water Temperature or Biological								
Action 2 Adult Migration & Entrainment			Begins Immediately After Action 1 Suspension of Action: Flow Off Ramps: Water Temperature or Biological									
Action 3 Entrainment Protection of Larval Smelt					Triggers: Water Temperature or Biological Off Ramps: Water Temperature or June 30							
Action 4 Estuarine Habitat During Fall (X2)	Oct 1 - Nov 30											Sep 1 - 30
Action 5 Temporary Spring HORB & the TBP							Apr 1 - May 15					

NMFS BO http://swr.nmfs.noaa.gov/ocap/NMFS_Biological_and_Conference_Opinion_on_the_Long-Term_Operations_of_the_CVP_and_SWP.pdf

ACTION IV.1.2 - OPERATION OF DCC TO ENHANCE PROTECTION OF EMIGRATING SALMONIDS/GREEN STURGEON

Page 635

Timing: October 1 – November 30
Triggers:
- Water quality criteria per D-1641 are met and either Knights Landing Catch Index (KLCI) or the Sacramento Catch Index (SCI) are greater than 3 fish per day but less than or equal to 5 fish per day. Within 24 hours of trigger, DCC gates are close. Gates will remain closed for 3 days
- Water quality criteria per D-1641 are met and either KLCI or SCI is greater than 5 fish per day. Within 24 hours, close the DCC gates and keep closed until the catch index is less than 3 fish per day at both the Knights Landing and Sacramento monitoring sites.
- KLCI or SCI triggers are met, but water quality criteria are not met per D-1641 criteria. DOSS reviews monitoring data and makes recommendation to NMFS and WOMT per procedures in Action IV. 5 (page 658).

Timing: December 1 – December 14
Triggers:
- Water quality criteria per D-1641 are met. DCC gates are closed. If Chinook salmon migration experiments are conducted during this time period, the DCC gates may be opened according to the experimental design, with NMFS' prior approval of the study.
- Water quality criteria are not met but both KLCI or SCI are less than 3 fish per day. DCC gates may be opened until water quality criteria are met. Once water quality criteria are met, the DCC gates will be closed within 24 hours of compliance.
- Water quality criteria are not met, but either KLCI or SCI is greater than 3 fish per day. DOSS reviews monitoring data and makes recommendation to NMFS and WOMT per procedures in Action IV. 5 (page 658).

Timing: December 15 – January 31
Triggers:
- DCC gates are closed December 15 – January 31.
- NMFS-approved experiments may be conducted. Agency sponsoring the experiment may request gate opening for up to 5 days; NMFS will determine whether opening is consistent with ESA obligations.
- One-time event between December 15 to January 5, when necessary to maintain Delta water quality in response to the astronomical high tide, coupled with low inflow conditions. Upon concurrence of NMFS, DCC gates may be opened one hour after sunrise to one hour before sunset, for up to 3 days, then return to full closure. USBR and DWR will also reduce Delta exports down to a health and safety level during the period of this action.

Timing: February 1 – June 15
Triggers:
- DCC gates are closed February 1 – May 15 as per D1641 and WQCP.
- May 16 – June 15, DCC gates may be closed for up to 14 days as per D-1641 and 2006 WQCP, if NMFS determines it is necessary.

ACTION IV.2.1 - MAINTAIN SAN JOAQUIN RIVER INFLOW/EXPORT RATIO

Page 641

Timing: April 1 – May 31 (Phase I: Interim Operations 2010-2011)

- Flows at Vernalis (7-day running average shall not be less than 7% of the target requirement) shall be based on the New Melones Index. In addition to the Goodwin flow schedule for the Stanislaus River prescribed in Action III.1.3 and Appendix 2-E, USBR shall increase its Goodwin Reservoir releases, if necessary, in order to meet the flows required at Vernalis, as provided in the following table. NMFS expects that tributary contributions of water from the Tuolumne and Merced rivers, through the SJRA, will continue through 2011 and that the installation of a fish barrier at the Head of Old River will continue during this period as permitted.

New Melones Index (TAF)	Minimum flow required at Vernalis (cfs)
0-999	No new requirements
1000-1399	D-1641 requirements or 1500, whichever is greater
1400-1999	D-1641 requirements or 3000, whichever is greater
2000-2499	4500
2500 or greater	6000

- Combined CVP and SWP exports shall be restricted through the following:

Flow at Vernalis (cfs)	Combined CVP and SWP Export
0-6,000	1,500 cfs
6,000-21,750	4:1 (Vernalis flow:export ratio)
21,750 or greater	Unrestricted until flood recedes below 21,750

In addition
- USBR/DWR shall seek supplemental agreement with the SJRGA as soon as possible to achieve minimum long-term flows at Vernalis (see following table) through the existing authorities.

San Joaquin River Index (60-20-20)	Minimum long-term flow at Vernalis (cfs)
Critically Dry	1500
Dry	3000
Below Normal	4500
Above Normal	6000
Wet	6000

ACTION IV. 2.2 - ACOUSTIC TAG EXPERIMENT

Page 645

Timing: March 1 – March 31
- Exports will be operated in accordance with the requirements dictated by Action IV.2.3.

Timing: April 1 – May 30
- Exports will be dictated by the requirements of Action IV.2.1.

Timing: June 1 – June 15
- Reclamation shall operate to a minimum 1:1 inflow to export ratio, allowing exports to vary in relation to inflows from the San Joaquin to test varying flow to export ratios during this period. If daily water temperature at Mossdale exceed 72ºF for seven consecutive days during this period, then the inflow to export ratio may be relaxed.

ACTION IV. 2.3 - REDUCED EXPORTS TO LIMIT NEGATIVE FLOWS IN OMR DEPENDING ON PRESENCE OF SALMONOIDS

Page 648

Timing: January 1 – June 15

Action:
- Exports are managed to a level that produces a 14-day running average of the tidally filtered flow of -5,000 cfs in Old and Middle River (OMR). A five-day running average flow shall be calculated from the daily tidally filtered values and be no more than 25 percent more negative than the targeted requirement flow for the 14-day average flow.

Timing: January 1 – June 15
First Stage Trigger (increasing level of concern):
- Daily SWP/CVP older juvenile loss density (fish per taf) 1) is greater than incidental take limit divided by 2000 (2 percent WR JPE ÷ 2000), with a minimum value of 2.5 fish per taf, or 2) daily loss is greater than daily measured fish density divided by 12 taf (daily measured fish density ÷ 12 taf) or 3) CNFH CWT LFR or LSNFH CWT WR cumulative loss greater than 0.5%, or 4) daily loss of wild steelhead (intact adipose fin) is greater than the daily measured fish density divided by 12 taf (daily measured fish density ÷ 12 taf).

Action:
- Reduce exports to achieve an average net OMR flow of (minus) -3,500 cfs for a minimum of 5 consecutive days. The five day running average OMR flows shall be no more than 25 percent more negative than the targeted flow level at any time during the 5-day running average period (e.g., -4,375 cfs average over five days). Resumption of (minus) -5,000 cfs flows is allowed when average daily fish density is less than trigger density for 3 consecutive days following the 5 consecutive days of export reduction. Reductions are required when any one criterion is met.

Timing: January 1 – June 15
Second Stage Trigger (analogous to high concern level):
- Daily SWP/CVP older juvenile loss density (fish per taf) is 1) greater than incidental take limit (2 percent of WR JPE) divided by 1000 (2 percent of WR JPE ÷ 1000), with a minimum value of 2.5 fish per taf, or 2) daily loss is greater than daily fish density divided by 8 taf (daily fish density ÷ 8 taf), or 3) CNFH CWT LFR or LSNFH CWT WR cumulative loss greater than 0.5%, or 4) daily loss of wild steelhead (intact adipose fin) is greater than the daily measured fish density divided by 8 taf (daily measured fish density ÷ 8 taf).

Action:
- Reduce exports to achieve an average net OMR flow of (minus) -2,500 cfs for a minimum 5 consecutive days. Resumption of (minus) -5,000 cfs flows is allowed when average daily fish density is less than trigger density for 3 consecutive days following the 5 consecutive days of export reduction. Reductions are required when any one criterion is met.

Timing: January 1 – June 15
End of Triggers:
- Continue action until June 15 or until average daily water temperature at Mossdale is greater than 72°F (22°C) for 7 consecutive days, whichever is earlier.

ACTION IV. 3 - REDUCE LIKELIHOOD OF ENTRAINMENT OR SALVAGE AT EXPORT FACILITIES

Page 652

Timing: November 1 – December 31
Triggers:
- Daily SWP/CVP older juvenile loss density greater than 8 fish/taf, or daily loss is greater than 95 fish/day, or Coleman National Fish Hatchery coded wire tagged late fall-run Chinook salmon (CNFH CWTLFR) or Livingston Stone National Fish Hatchery coded wire tagged winter-run (LSNFHCWT WR) cumulative loss greater than 0.5%. Reduce exports to a combined 6,000 cfs for 3 days or until CVP/SWP daily density is less than 8 fish/taf. Export reductions are required when any one of the four criteria is met.

- Daily SWP/CVP older juvenile loss density greater than 15 fish/taf, or daily loss is greater than 120 fish/day, or CNFH CWTLFR or LSNFHCWTWR cumulative loss greater than 0.5%. Reduce exports to a combined 4,000 cfs for 3 days or until CVP/SWP daily density is less than 8 fish/taf. Export reductions are required when any one of the four criteria is met.

Text for the Biological Opinion Actions have been condensed to fit within this limited space. Page numbers in the upper right hand corner of each Action block have been provided for referencing the actual document.

FWS BO http://www.fws.gov/sacramento/es/documents/SWP-CVP_OPs_BO_12-15_final_OCR.pdf

ACTION 1: ADULT MIGRATION AND ENTRAINMENT (FIRST FLUSH)

Page 329

Action: Limit exports so that the average daily OMR flow is no more negative than 2,000 cfs for a total duration of 14 days, with a 5-day running average no more negative than 2,500 cfs (within 25 percent).

Timing:
Part A: December 1 to December 20 – Based upon examination of turbidity data from Prisoner's Point, Holland Cut, and Victoria Canal and salvage data from CVP/SWP (see Triggers below), and other parameters important to the protection of delta smelt including, but not limited to, preceding conditions of X2, FMWT, and river flows; the SWG may recommend a start date to USFWS. USFWS will make the final determination.
Part B: After December 20 – The action will begin if the 3-day average turbidity at Prisoners Point, Holland Court, and Victoria Canal exceeds 12 NTU. However, the SWG can recommend a delayed start or interruption based on other conditions such as Delta inflow that may affect vulnerability to entrainment.

Triggers (Part B): Turbidity: 3-day average of 12 NTU or greater at all three stations (Prisoner's Point, Holland Cut, Victoria Canal) or Salvage: Three days of delta smelt salvage after December 20 at either facility or cumulative daily salvage count that is above a risk threshold based upon the "daily salvage index" approach reflected in a daily salvage index value ≥0.5 (daily delta smelt salvage > one half prior year FMWT index value). The window for triggering Action 1 concludes when either off-ramp condition described below is met. These off-ramp conditions may occur without Action 1 ever being triggered. If this occurs, then Action 3 is triggered, unless USFWS concludes on the basis of the totality of available information that Action 2 should be implemented instead.

Off-ramps:
Temperature: Water temperature reaches 12°C based on a three station daily mean at Mossdale, Antioch and Rio Vista, *or*
Biological: Onset of spawning (presence of spent females in SKT or at Banks or Jones).

ACTION 2: ADULT MIGRATION AND ENTRAINMENT

Page 352

Action: The range of net daily OMR flows will be no more negative than -1,250 to -5,000 cfs. Depending on extant conditions (and the general guidelines below), specific OMR flows within this range are recommended by the SWG from the onset of Action 2 through its termination. The SWG will provide weekly recommendations based upon review of the sampling data, from real-time salvage data at the CVP and SWP, and utilizing most up-to-date technological expertise and knowledge relating population status and predicted distribution to monitored physical variable of flow and turbidity. USFWS will make the final determination.

Timing: Beginning immediately after Action 1. Before this date (in time for operators to implement the flow requirement) the SWG will recommend specific required OMR flows based on salvage and/or physical and biological data on an ongoing basis. If Action 1 is not implemented, the SWG may recommend a start date for the implementation of Action 2 to protect adult delta smelt.

Suspension of Action: Flow: OMR flow requirements do not apply whenever a three day flow average is greater than or equal to 90,000 cfs in Sacramento River at Rio Vista and 10,000 cfs in San Joaquin River at Vernalis. Once such flows have abated, the OMR flow requirements of the Action are again in place.

Off-ramps:
Temperature: Water temperature reaches 12°C based on a three station daily average (Rio Vista, Antioch, Mossdale), *or*
Biological: Onset of spawning (presence of spent females in SKT or at either facility).

ACTION 3: ENTRAINMENT PROTECTION OF LARVAL SMELT

Page 367

Action: Net daily OMR flow will be no more negative than -1,250 to -5,000 cfs based on a 14-day running average with a simultaneous 5-day running average within 25 percent of the applicable requirement for OMR. Depending on extant conditions (and the general guidelines below) specific OMR flows within this range are recommended by the SWG from the onset of Action 3 through its termination. The SWG will provide these recommendations based upon a weekly review of sampling data, from real-time salvage data at the CVP/SWP, and expertise and knowledge relating population status and predicted distribution to monitored physical variables of flow and turbidity. USFWS will make the final determination.

Timing: Initiate the action after reaching the triggers below, which are indicative of spawning activity and the probable presence of larval delta smelt in the South and Central Delta. Based upon daily salvage data, the SWG may recommend an earlier start to Action 3. USFWS will make the final determination.

Triggers:
Temperature: When temperature reaches 12°C based on three station average at Mossdale, Antioch, and Rio Vista. *or*
Biological: Onset of spawning (presence of spent females in SKT or at either facility).

Off-ramps:
Temporal: June 30 *or*
Temperature: Water temperature reaches a daily average of 25°C for three consecutive days at Clifton Court Forebay.

ACTION 4: ESTUARINE HABITAT DURING FALL

Page 369

Action: Subject to adaptive management as described below, provide sufficient Delta outflow to maintain average X2 for September and October no greater (no further eastward) than 74 km in the Fall following Wet years and 82 km in the Fall following Above Normal years. The monthly average X2 must be maintained at or seaward of these values for each individual month and not averaged over the two month period. In November, the inflow to CVP/SWP reservoirs in the Sacramento Basin will be added to reservoir releases to provide an added increment of Delta inflow and to augment Delta outflow up to the fall target. The action will be evaluated and may be modified or terminated as determined by USFWS.

Timing: September 1 to November 30

Triggers: Wet and above normal WY type classification from the 1995 Water Quality Control Plan that is used to implement D-1641

ACTION 5: TEMPORARY SPRING HEAD OF OLD RIVER BARRIER (HORB) AND THE TEMPORARY BARRIER PROJECT (TBP)

Page 377

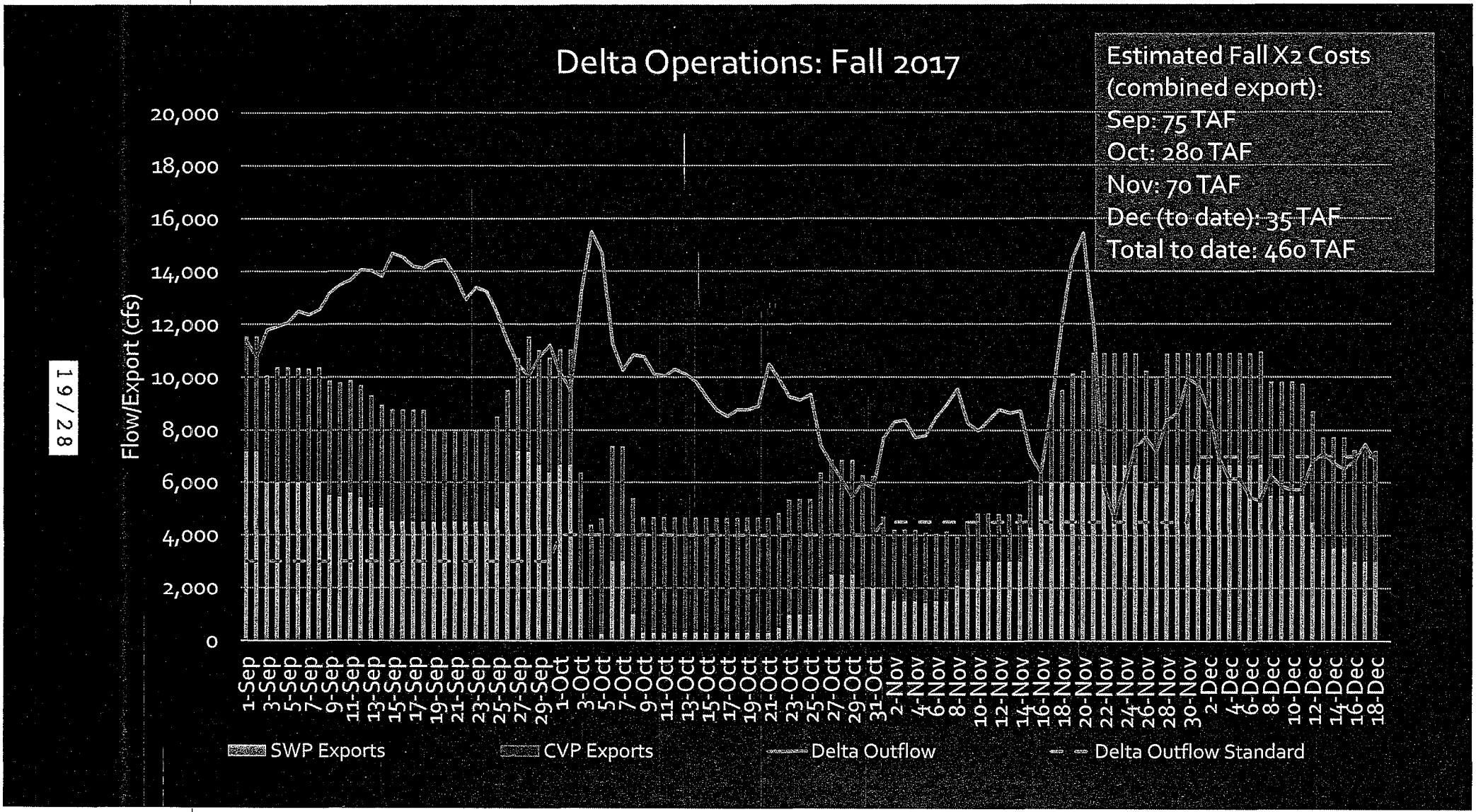
Action: Do not install HORB if delta smelt entrainment is a concern. If installation of the HORB is not allowed, the agricultural barriers would be installed as described in the Project Description. If installation of the HORB is allowed, the agricultural barriers could be installed, but the flap gates would be tied in the open position until May 15.

Timing: The timing of the action would vary depending on the conditions. The normal installation of the spring temporary HORB and the TBP is in April.

Triggers: For Delta smelt, installation of the HORB will only occur when PTM results show that entrainment levels of Delta smelt will not increase beyond 1 percent at Station 815 as a result of installing the HORB.

2017 Fall X2

- FWS Action 4: Fall X2
  - September:
    - Operated to meet 74 km (~75 TAF reduced export)
  - October:
    - FWS modified to 80 km
    - CDFW decided mid-month on modification to 79 km
  - November:
    - Pass through inflows (no additional storage) to maintain up to 74 km
    - Export restrictions based on Delta inflow
  - December
    - Provide any stored water in November as additional outflow
      - Effectively changed Delta outflow standard from 4,500 cfs to 6,984 cfs


Delta Operations: Fall 2017
Estimated Fall X2 Costs (combined export):
Sep: 75 TAF
Oct: 280 TAF
Nov: 70 TAF
Dec (to date): 35 TAF
Total to date: 460 TAF
Flow/Export (cfs)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1-Sep 3-Sep 5-Sep 7-Sep 9-Sep 11-Sep 13-Sep 15-Sep 17-Sep 19-Sep 21-Sep 23-Sep 25-Sep 27-Sep 29-Sep 1-Oct 3-Oct 5-Oct 7-Oct 9-Oct 11-Oct 13-Oct 15-Oct 17-Oct 19-Oct 21-Oct 23-Oct 25-Oct 27-Oct 29-Oct 31-Oct 2-Nov 4-Nov 6-Nov 8-Nov 10-Nov 12-Nov 14-Nov 16-Nov 18-Nov 20-Nov 22-Nov 24-Nov 26-Nov 28-Nov 30-Nov 2-Dec 4-Dec 6-Dec 8-Dec 10-Dec 12-Dec 14-Dec 16-Dec 18-Dec
SWP Exports
CVP Exports
Delta Outflow
Delta Outflow Standard

December 18, 2017

Delivered via email: paul_souza@fws.gov and via U.S. Mail

Mr. Paul Souza
Regional Director
U.S. Fish and Wildlife Service
2800 Cottage Way
Sacramento, CA 95825

Subject: Fall X2 10-year Review

Dear Mr. Souza:

The U.S. Fish and Wildlife Service Biological Opinion for continued operations of the Central Valley Project and State Water Project includes the following statement regarding the Fall X2 Action:

> The Service shall conduct a comprehensive review of the outcomes of the Action and the effectiveness of the adaptive management program ten years from the signing of the biological opinion, or sooner if circumstances warrant. This review shall entail an independent peer review of the Action. The purposes of the review shall be to evaluate the overall benefits of the Action and to evaluate the effectiveness of the adaptive management program. At the end of 10 years or sooner, this action, based on the peer review and Service determination as to its efficacy shall either be continued, modified or terminated. *(Biological Opinion at page 283).*

The Biological Opinion did not define how this 10-year review should be conducted, and we have learned much over the last decade with the various review panels that have engaged on Delta issues. This letter is meant to outline how the public water agencies believe the review should occur in order to maximize its usefulness in ongoing management actions. We look forward to participating in the review process and believe it should proceed as follows.

(1) The review should be completed in order to allow the Commissioner of the U.S. Bureau of Reclamation and the Director of the U.S. Fish and Wildlife Service the latitude to reinitiate with respect to the Fall X2 Action before September 2018.

1121 L Street, Suite 1050 • Sacramento, California 95814-3944 • 916.447.7357 • FAX 916.447-2734 • www.swc.org

(2) The review should include:

(a) A scientific assessment by an independent expert panel directed to the Commissioner and Director that establishes whether the justification for the Action in the 2008 biological opinion comports with the best available scientific information, whether scientific information that has emerged since the issuance of the 2008 biological opinion, on balance, reinforces or refutes the Action, and the effectiveness of the adaptive management program, including monitoring efforts carried out over the past decade;

(b) An opportunity for the public to provide input to the experts both in person and in writing prior to their deliberations, subject to reasonable limitations;

(c) An opportunity for the pubic to provide input to the Commissioner and Director respecting the panel report before they determine whether or not to reinitiate with respect to the Fall X2 Action; and

(d) A written response by the Commissioner and/or Director to the panel report.

(3) The independent scientific review should be conducted consistent with the below set of procedures for review, drawn from best practices including those identified in Appendix I of the Delta Science Plan (Delta Science Program policy and procedures for independent scientific review).

(4) The Review Planning Group will be composed of one representative of each of the U.S. Fish and Wildlife Service, the U.S. Bureau of Reclamation, the Department of Water Resources, the Central Valley Project contactors, the State Water Project contractors, and the community of environmental non-governmental organizations.

Recommended Procedures for Fall X2 Independent Science Review

- The Review Planning Group will draft the charge to the Independent Scientific Review Panel.

- The Review Planning Group will select the membership of the Independent Scientific Review Panel. The Panel will have no fewer than five members. The selection of panelists will consider an individual's standing in the scientific community, expertise in disciplinary areas that include quantitative ecology, conservation biology, and biostatistics (with emphasis on population dynamics and species-habitat relationships), and technical skills relevant to the documents and technical issues subject to review. Panel participation should avoid conflicts of interest; but where, as here, widely recognized differences in opinion exist regarding pertinent technical issues, the composition of a panel should encourage representativeness and balance.

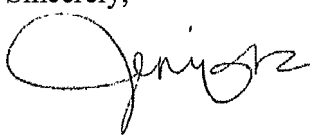
- The Independent Scientific Review Panel will serve and deliberate as a panel. The review report should be a report from the Panel as a whole, but will articulate areas of disagreement on the panel.

- The Review Planning Group will determine the range of materials to be reviewed by the Independent Scientific Review Panel. At a minimum they should include the 2008 biological opinion and reasonable and prudent alternatives, the 2010 National Research Council committee report, the FLaSH documents and peer reviews of draft FLaSH documents, the "milestone" draft adaptive management plan (Reclamation) and public comments on that document, the MAST documents and peer reviews of draft MAST documents, pertinent published works including articles regarding Delta Smelt abundance, distribution, and habitat requirements, Delta Smelt population-dynamic and life-cycle models, declarations of experts regarding the Fall X2 Action and analyses provided by court-appointed Rule 706 experts submitted in the litigation challenging the 2008 biological opinion, and the Fall X2 analysis conducted to support the BiOp amendment in 2017.

- The Independent Scientific Review Panel must be provided sufficient funding and time to complete their work, but with an objective of completing their report by early summer 2018.

- No direct communications by interested parties, including the U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation, with panel members on issues pertinent to the review during the review period should be made without the knowledge and consent of the Review Planning Group.

Sincerely,



Jennifer Pierre
General Manager

NOTICE TO STATE WATER PROJECT CONTRACTORS

Date: DEC 1 8 2017

Number: 17- 11

Subject: **Water Management and the Existing Long-Term Water Supply Contracts**

From: _____
Grant Davis, Director
Department of Water Resources

The recent drought in California has highlighted the importance and need for flexibility in managing the State's limited water resources. To that end, the Department encourages the State Water Project Contractors to pursue water management actions that ensure supplies from the State Water Project (SWP) are used effectively.

In particular, the existing Long-Term Water Supply Contracts (Contracts) provide flexibility as to how SWP supplies are transferred, exchanged, and managed over extended periods of time. Accordingly, Attachment A is intended to clarify the Department's considerations and objectives with respect to bona fide exchanges and multi-year water transfers. In reviewing SWP Contractor requests for water management actions, the Department will follow a similar approach it has used in past years. That is, the Department will review requests on an individual, case-by-case basis and will examine:

1. any adverse impact on the ability of the SWP Contractor to continue to make payments under its Contract;
2. any adverse effect the action may have on the water rights permits granted to the Department for the operation of the SWP;
3. any adverse impact on the ability of the Department to make deliveries to other SWP Contractors or to meet other obligations of the SWP; and
4. consideration of any issues identified by and compliance with the California Environmental Quality Act.

Furthermore, although the Department believes that the water management actions listed in Attachment A already are available under the terms of the existing Contracts, the Department intends to confirm and supplement its position in the public process that was initially noticed on November 21, 2014. The Department intends to resume this process to include discussion of the water management actions specified above. The Department will issue a public notice for these negotiations.

If you have any questions or need additional information, please contact Joel Ledesma at (916) 653-8043.

Attachment

Attachment A
Department Considerations Related to Bona Fide Exchanges and Multi-Year Water Transfers Under the Water Supply Contracts

In reviewing and approving any proposed bona fide exchanges or multi-year transfers, the Department will apply the following considerations:

A. Bona Fide Exchanges: In the review of bona fide exchanges, the Department will apply Article 56(f) of the Contracts, which provides that "an exchange of water involving a contractor and another party where the primary consideration for one party furnishing water to another is the return of a substantially similar amount of water, after giving due consideration to the timing or other nonfinancial considerations of the return."

1. Return Period: Flexibility is provided under the existing Contracts regarding the return period, provided the return period is not greater than 10 years or does not extend beyond the expiration date of the current Contract.

   If the return for the exchange cannot be completed within 10 years, the Department may approve an extension for an additional 10 years or to the end of the current Contract, whichever is shorter. The exchange parties shall provide adequate justification for the extension of the exchange agreement. Adequate justification may include reasons such as hydrologic conditions, allocation percentages, capacity/conveyance limitations, economic hardships, health and safety issues, etc.

2. Return Ratio: Flexibility is provided under the existing Contracts regarding the exchange ratio, provided the amount of water returned is of a "substantially similar amount" and considering timing and other non-financial considerations. The following ratios are consistent with the above considerations, including differing hydraulic conditions, subject to review under the Department's existing authority:

   For allocations >= 50%, return ratio is up to 2 : 1
   For allocations >25 & <50%, return ratio is up to 3 : 1
   For allocations <25%, return ratio is up to 4 : 1

3. Time of Delivery: If an exchange agreement is executed in the latter half of the calendar year, capacity limitations may prohibit delivery in the year the exchange agreement is executed. To allow for delivery in the following year, the Department will allow reclassification of exchange water so long as it complies with Article 56 of the Contracts.

4. Cost Compensation: Maximum cost compensation for a bona fide exchange may not exceed the exchanging SWP Contractor's transportation capital charges.

B. Multi-year Transfers:

1. All multi-year transfers must be consistent with the existing Contracts.
2. Multi-year transfers pertain only to SWP Table A water (not Articles 21, 55, or 56 and area of origin supplies) in the year in which the water moves from one SWP Contractor to another for compensation, which does not need to include the return of water.
3. SWP Contractors can be engaged in multiple multi-year temporary transfers as a buyer or seller, provided that a Contractor cannot be both a buyer or seller in the same year.
4. Compensation for multi-year transfers will be determined by the transfer proponents.
5. Proponents of multi-year transfers must comply with all existing environmental (including CEQA compliance) and regulatory requirements. The Department will serve as a lead or responsible agency where applicable.
6. The term of each multi-year transfer must be at least two years.
7. A multi-year transfer cannot be used to pay back any existing water exchange obligation.
8. The Department will review and approve multi-year transfers consistent with the terms of the Contracts, including but not limited to, assuring that: (1) the terms of multi-year temporary transfer comply with the existing SWP Contracts; (2) the delivery of the water is possible/feasible considering the hydrologic conditions and delivery capacity of the SWP; and (3) the financial and operational integrity of the SWP is not impaired.
9. The Department retains its right to review and reconsider at any time a multi-year transfer agreement if it determines that delivery under the agreement is impairing the financial feasibility of project facilities or is impacting any other SWP Contractor's ability to deliver/store its SWP Table A.

BARF project

lazyb1 to you

9:30AM Show Details

To the members of the Board of Directors:

At our last board meeting, President Fenn suggested I communicate my concerns in writing to the board about rebidding the BARF project and the timeline leading to the rebid.

I will limit my remarks to two main reasons I feel the Board should have waited to go thru the rebid process.

1. I believe accepting a bid and signing a contract to construct now will hinder the Pass Agency's ability to receive state grant funding. Even though staff has indicated we would still be eligible for post construction reimbursement, I believe there would be no incentive for the state to do so because we would already be funding the construction using local taxpayers money. We should wait until the state releases their grant requirements to consider constructing a project of this nature and spare our taxpayers any undue extra expense.

2. The second concern I have with this project is the new findings of potential leaking of the Beaumont Basin on the eastern side. It is my understanding that the Watermaster is funding research that is due out in early 2018 that will help us understand more clearly the extent of this potential problem and hopefully give some methods to diminish any losses (if indeed it is leaking). I believe we should wait until the science is received and understood before we cause injury or harm to this basin or other agency facilities and inadvertently waste water or the people's money.

Thank you for your consideration of these points.

Director Ball

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159
Email: info@bcvwd.org

http://www.bcvwd.org

December 27, 2017

Jeff Davis, General Manager
San Gorgonio Pass Water Agency
1210 Beaumont Avenue
Beaumont, CA 92223

RE: Beaumont Avenue Recharge Facility aka Fiesta Recharge Facility

Dear Mr. Davis,

Please be advised that the Beaumont-Cherry Valley Water District (BCVWD) is concerned that the San Gorgonio Pass Water Agency's proposed Beaumont Avenue Recharge Facility may adversely impact BCVWD's existing and planned recharge operations at our Noble Creek Recharge Facility Phase 1 and 2, and limit BCVWD's ability to fully utilize the current capacity available in our Noble Creek Recharge Facility to meet the current and future needs of our service area.

At this time, BCVWD has invested in excess of $16,000,000 in our Noble Creek Recharge Facility and associated facilities and could suffer substantial financial damage if our facility is unable to be fully utilized as intended now or in the future.

BCVWD currently identifies the probable annual capacity of our Noble Creek Recharge Facility in excess of 25,000 acre feet of recharge per year (possibly as much as 30,000 acre feet per year) based upon its performance in 2017. If constructed in its current proposed location, the SGPWA's Beaumont Avenue Recharge Facility, once it becomes operational, may limit the capacity of the Noble Creek Recharge Facility. Most significantly, SGPWA has identified that its Beaumont Avenue Recharge Facility will most likely be used when extra water (i.e. Article 21 Water) is available. That availability of surplus water would likely coincide with BCVWD's maximum recharge activities (wet year recharge) at our Noble Creek Recharge Facility, which is necessary to provide conjunctive use as demand increases.

Based upon the BCVWD Urban Water Management Plan's projected imported water supply needs of 17,334 acre feet in 2040, the Noble Creek Recharge Facility was constructed to provide as much as 25,000 to 30,000 acre feet to meet the needs of our service area at that time when allowing for an average State Water Project reliability of 62% to 64% (with the California Water Fix). In other words, more recharge capacity will be needed by BCVWD during wet years in the future to provide conjunctive use of the basin to meet the District's service area needs in order to provide the average annual imported water supply requirement of 17,334 acre feet.

The BCVWD's primary concerns related to the SGPWA's proposed Recharge Facility are:

1. **Proximity to BCVWD's Existing Recharge Facility:** The SGPWA's proposed Recharge Facility is located directly across the street and downhill

Beaumont-Cherry Valley Water District

Phone: (951) 845-9581 Fax: (951) 845-0159
Email: info@bcvwd.org

tp://www.bcvwd.org

from the BCVWD's existing Noble Creek Recharge Facility Phase 1 and 2. The location of the SGPWA's Beaumont Avenue Recharge Facility may hydraulically constrain the BCVWD's existing and planned recharge operation at the Noble Creek Recharge Facility due to increased water mounding and associated hydraulic conductance loss in the vicinity of our recharge operation now and into the future.

2. **Potential for Increased Basin Leakage Due to Stored Water:** The location of the SGPWA's proposed Beaumont Avenue Recharge Facility on the eastern side of the Beaumont Basin may cause increased stored water leakage from the Basin. At this time, BCVWD understands that the Beaumont Basin Watermaster's hydrogeologist believes this leakage occurs near the southeast edge of the Beaumont Groundwater Basin (i.e. Banning Side). This leakage is being studied and modeled by the Watermaster's hydrogeologist as work currently identified as "Potential Storage Loss Evaluation" and BCVWD staff understands that the Watermaster's hydrogeologist will report on this item in early 2018. In the event increased water storage on the east side of the Basin creates loss, BCVWD is concerned that any water the SGPWA stores on the east side of the Basin may adversely impact BCVWD's existing and planned Basin storage account volumes due to potential increased leakage due to increased water storage.

The Beaumont Cherry Valley Water District requests that you and the SGPWA Board of Directors consider our concerns identified herein and postpone award of construction of the Beaumont Avenue Recharge Facility Project at least until results of the pending Beaumont Basin Watermaster Potential Storage Loss Evaluation are available. At that time, impacts from changes to recharge activities (i.e. increased storage activities, etc.) may be better understood by all parties and discussed at least between the SGPWA and BCVWD prior to moving forward with construction of additional recharge facilities right next door to existing facilities. The Beaumont Avenue Recharge Facility may ultimately be found to be positioned in a location that inversely condemns the BCVWD's existing facilities for the reasons identified above.

Again, BCVWD is very concerned about the impacts of the SGPWA's proposed recharge facility on our existing facilities and we welcome the opportunity to discuss this matter further with you and your staff.

Sincerely,

Dan Jaggers
General Manager

cc: San Gorgonio Pass Water Agency Board of Directors

560 Magnolia Avenue Beaumont CA 92223