# EXHIBIT E TO SWANSON DECLARATION

# Summary of DAT Conference Call 5/22/2007

Participants: EChappell (DWR), PJohnsen (FWS), RGartz(DFG), BOppenheim(NMFS), KFleming(DFG), JWhite(DFG), MWhite(DWR), NHindman(FWS), JSnow(WWD), TBoardman(SLDMWA). THinojosa(DWR), MGuerin(CCWD), SGreene(DWR). JSpeegle(FWS), AChu(DWR), TSwanson(BI), PBrandes(FWS), CKao(SCVWA), DSchuster(SWRI), MFord(DWR)

#### Conclusions and Recommendations

There were no new operational recommendations today.

VAMP ends today, Tuesday 5/22. VAMP started on April 22<sup>nd</sup> with a flow target of 3200cfs on the San Joaquin River at Vernalis and a combined export rate of 1500cfs. High mortalities of the acoustically tagged fish were observed in a small area on the lower San Joaquin River near the Highway 4 Bridge. A crew from the RWQCB will conduct water testing in the area this week.

20mm Survey Update – DFG started Survey 6 yesterday, 5/20. DFG has processed the first tow of the south Delta stations and no delta smelt were caught. Sampling in the central delta may have to be postponed due to the presence of the two whales near Rio Vista which are affecting boat traffic. So far this season DFG has caught a total of 25 larval delta smelt. This the lowest total on record for this time period. The results from the 20mm surveys are posted at http://www.delta.dfg.ca.gov/data/20mm/.

DSWG Update – The DSWG met yesterday, 5/21, to review survey results and water temperature data. The DSWG decided to use the average of three stations for the water temperature criteria. The stations are Holland Tract, Prisoner's Point, and Victoria Canal. Currently, water temperatures at those three stations range from 66 to 68F (~19C). The group will recommend continuing the action to keep the combined 5-day average flows in Old River and Middle River no more negative than 0 cfs until south Delta water temperatures reach 25C at WOMT today, 5/22. The science upon which the recommendation is based will be posted in the 5/14/2007 DSWG meeting summary at http://www.fws.gov/sacramento/es/delta\_smelt.htm.

The group also requested PTM runs to look at whether it

would be beneficial to open the DCC gates. The PTM runs were not available before the meeting so the DSWG will meet again on Thursday, 5/24 to review the results.

General Discussion(s) – Tina Swanson (BI) raised a concern about the DSWG only using south Delta temperature stations in their criteria. She is concerned that fish in the central delta may be drawn into the south delta when the action is stopped. Tina suggested that the DSWG consider using a broader area for the temperature criteria. Kevin Fleming (DFG) responded that water temperature rarely exceed 25C in the south Delta during this early in the season. She is also concerned about the loss of fish that can tolerate higher temperature and thereby reducing the population's genetic variability. Tina also recommended that the DSWG should be looking more closely at the current operation of the agricultural barriers. The DSWG responded that they will look at ag barriers operations at their meeting on Thursday.

Next DAT Conference Call Tuesday, 5/30/2007, 9:00 am -11:00 am. Phone number - TBA.

# Chinook Monitoring

**Upper Sacramento River** 

Red Bluff Diversion Dam - The RBDD gates were lowered for the season on May 15<sup>th</sup>. No update on fish passage this week.

FWS posts biweekly reports on the Bay-Delta and Tributaries Project website, at http://baydelta.ca.gov/Php/Special Reports/red bluff.php

Mill Creek – The catch of both Chinook and steelhead is starting to taper off. DFG caught 962 fry/smolt Chinook and 11 steelhead. Water temperature has remained below 65F but flows have decreased due to water diversions.

Deer Creek – The catch of Chinook decreased in the last week. DFG caught 705 fry/smolt Chinook and 4 steelhead. Flows have decreased due to water diversions and water temperatures are above 65F so DFG pulled the trap for the season on May 18<sup>th</sup>.

- Butte Creek DFG pulled the traps on May 3<sup>rd</sup> for major repairs. They are done sampling for this season.
- GCID For four days of sampling, the catch of fry/smolt Chinook ranged from 2 to 425 per day. DFG also caught 1 adclipped Chinook. Debris is still heavy and is affecting trap operations.
- Knights Landing The catch of fry/smolt Chinook is decreasing and ranged from 1 to 8 per trap-day. DFG also caught 4 adclipped Chinook. Water temperatures are between 68 and 70F.

# **Delta Monitoring**

Sacramento Mid-water Trawl – 2 sample days, 47 samples. FWS caught 182 fry/smolts and 330 adclipped Chinook. They also caught 2 adclipped steelhead.

Lower Sacramento River seine – 1 sample day, 7 samples. FWS caught 41 splittail and no other species of concern.

North Delta seine – 1 sample day, 7 samples. FWS caught 1 delta smelt (Rio Vista) and 3 splittail.

Central Delta seine – 1 sample days, 10 samples. FWS caught 21 fry/smolt Chinook, 3 adclipped Chinook, and 22 splittail.

South Delta seine – 1 sample day, 7 samples. No species of interest.

Mossdale Kodiak Trawl – 2 sample days, 15 samples. DFG, Region 4 is now sampling 7 days per week. For two days of reporting (5/13-5/14) they caught 138 fry/smolt Chinook, 6 adclipped Chinook, 3 in-river steelhead, and 2 splittail. For the period of 5/15 to 5/19 the catch of fry/smolt Chinook ranged from 18 to 83 per day. DFG also caught 1 adclipped Chinook and 2 in-river steelhead. After the DAT call, Jim White (DFG) reported DFG will continue sampling until June 15<sup>th</sup> and at that point FWS will resume sampling 3 days per week.

San Joaquin River seine – 1 sample days, 8 samples.

No species of interest.

Chipps Island Midwater Trawl – 7 sample days, 70 samples. FWS caught 103 fry/smolt and 12 adclipped Chinook. They also caught 3 in-river steelhead, 1 adclipped steelhead, 1 delta smelt (not checked) and 8 splittail.

Bay seine – 1 sample day, 5 samples. No species of interest.

# **Delta Smelt Monitoring**

20mm Survey Update – DFG started Survey 6 yesterday, 5/20. DFG has processed the first tow of the south Delta stations and no delta smelt were caught. Sampling in the central delta may have to be postponed due to the presence of the two whales near Rio Vista which are affecting boat traffic. So far this season DFG has caught a total of 25 larval delta smelt. This the lowest total on record for this time period. The results from the 20mm surveys are posted at http://www.delta.dfg.ca.gov/data/20mm/.

Delta Smelt Working Group Update – The DSWG met yesterday, 5/21, to review survey results and water temperature data. The DSWG decided to use the average of three stations for the water temperature criteria. The stations are Holland Tract, Prisoner's Point, and Victoria Canal. Currently, water temperatures at those three stations range from 66 to 68F (~19C). The group will recommend continuing the action to keep the combined 5-day average flows in Old River and Middle River no more negative than 0 cfs until south Delta water temperatures reach 25C at WOMT today, 5/22. The science upon which the recommendation is based will be posted in the 5/14/2007 DSWG meeting summary at <a href="http://www.fws.gov/sacramento/es/delta\_smelt.htm">http://www.fws.gov/sacramento/es/delta\_smelt.htm</a>.

The group also requested PTM runs to look at whether it would be beneficial to open the DCC gates. The PTM runs were not available before the meeting so the DSWG will meet again on Thursday, 5/24 to review the results.

#### Salvage Facilities -

Chinook – No winter-run length Chinook were lost at either Facility in the last week. To date, the season

total at the CVP is 1555 and the season total is 1742 at the SWP.

Steelhead – SWP salvaged 5 in-river steelhead last week. CVP salvaged 1 in-river and 4 hatchery steelhead. The combined salvage of in-river steelhead is 2748 for the season. The incidental take level is 3000. Salvage has dropped since the start of VAMP but biologists will continue to monitor salvage data, Mossdale trawl data, and water temperatures.

Delta smelt – None.

Splittail – SWP salvaged 4 splittail for a season total of 302. CVP salvaged 12 splittail for a season total of 132.

Longfin smelt – None.

Sturgeon – None.

The DFG Salvage Database can be accessed at this ftp site: <a href="ftp://ftp.delta.dfg.ca.gov/salvage/">ftp://ftp.delta.dfg.ca.gov/salvage/</a>.

Turbidity data for Clifton Court forebay is available at: http://cdec2.water.ca.gov/cgi-progs/queryFx?CLC.

#### VAMP Update

VAMP ends today, Tuesday 5/22. VAMP started on Saturday 4/22 with a flow target of 3200cfs on the San Joaquin River at Vernalis and a combined export rate of 1500cfs. High mortalities of the acoustically tagged fish were observed in a small area on the lower San Joaquin River near the Highway 4 Bridge. A crew from the RWQCB will conduct water testing in the area this week.

#### **Agricultural Barriers**

HORB – Due to concerns for delta smelt WOMT requested that all culverts be opened on May 16<sup>th</sup>. DWR opened all the culverts and notified the contractor to remove the barrier. The HORB was expected to be breeched yesterday, 5/21.

Old & Middle River – The barriers are closed and the culverts are operating tidally.

Grantline –The barrier was closed on May 10<sup>th</sup>.

The weekly updates on barrier operations are now available at: http://baydeltaoffice.water.ca.gov/sdb/tbp/index\_tbp.cfm.

# Operations

SWP -

CCFB - 350 cfs.

Oroville – 1,750 cfs.

 $X2 - \sim 74 \text{ km}$ .

E/I - 14-day = 8.5%.

San Luis - ~690 taf. SWP share of San Luis capacity is 1,062 taf.

EWA - The current debt in San Luis is approximately 210taf. The DWSG action to moderate combined Old and Middle flow no more negative than Ocfs started last Wednesday (5/16). EWA was accruing debt at about 2taf per day this past week during the end of VAMP. With the DWSG action in place after VAMP till the end of May, the EWA cost is projected to be ~10taf per day for both Projects combined. The preliminary estimated cost of this post-VAMP action from May 23<sup>rd</sup> to May 31<sup>st</sup> is approximately 80 to 90taf bringing the total debt in San Luis to ~300taf by the end of May.

#### CVP -

Tracy PP - 850 cfs.

DCC - Closed.

Trinity –

Clear Creek - 200 cfs.

Keswick - 9,800 cfs.

Nimbus – 1,500 cfs.

Goodwin – 1,500 cfs. The MA's will discuss maintaining flows on the Stanislaus to help meet Old and Middle River flows and to support emigrating SJR fall Chinook and steelhead.

San Luis – 530 taf. CVP share of San Luis capacity is 966 taf.

#### Flows

Sacramento River at Freeport ~ 9,300 cfs and decreasing slowly.

Fremont Weir ~ 0.

San Joaquin River at Vernalis ~ 3,300 cfs.

Delta Outflow ~ 10,000 cfs. The 3-day average is 9,800 cfs.

Old and Middle Rivers ~ combined -1226 cfs as of 5/19/07; 5-day average is -1765 cfs.

# **Delta Water Quality**

Salinity levels are good in the western Delta and have been improving in the south Delta except at the Old River near Tracy Road Bridge station which remains out of compliance. The SWRCB has requested that the Projects look at: recirculation through Delta-Mendota canal; evaluation of additional releases on the San Joaquin; and additional water purchases on the San Joaquin.

# May Water Quality Standards

Collinsville X2 standard – The standard must be met for the full 31 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3-day outflow of 7,100cfs.

Chipps Island X2 standard –The standard must be met for 1 day by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3-day outflow of 11,400cfs. This standard has been met.

Port Chicago was not triggered for May.

E/I Ratio – <= 35%.

Contra Costa Canal – Cl <= 250 mg/L. In addition, Cl <= 150 mg/L for 165 days per year. This portion of the standard has been met for 123 days so far.

Western Delta – EC <= 0.45 at Emmaton, Jersey Point, Terminous, and San Andreas stations.

South Delta – 30-day average EC <= 0.7

Suisun Marsh = EC <= 11

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Case 1:05-cv-01207-OWW-NEW Document 421-4 Filed 07/23/2007

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# EXHIBIT F TO SWANSON DECLARATION

# Summary of DAT Conference Call 5/30/2007

Participants: EChappell (DWR), PJohnsen (FWS), RGartz(DFG), KFleming(DFG), MWhite(DWR), NHindman(FWS), JSnow(WWD), THinojosa(DWR), MGuerin(CCWD), JSpeegle(FWS), AChu(DWR), TSwanson(BI), MFord(DWR), BHerbold(EPA), VPoage(FWS), BPoytress(FWS)

#### Conclusions and Recommendations

There were no new operational recommendations today.

Salvage of juvenile delta smelt at SWP has been increasing over the past several days. Delta smelt are also being salvaged at CVP.

20mm Survey Update – DFG completed Survey 6 last week. DFG has processed most of the samples from tow 1 and caught 3 delta smelt near the confluence. So far this season DFG has caught a total of 28 larval delta smelt. This the lowest total on record for this time period. Survey 7 will begin next week. The results from the 20mm surveys are posted at http://www.delta.dfg.ca.gov/data/20mm/.

DSWG Update – The DSWG met on Thursday, 5/24, to review the results from the PTM runs for the DCC gate operations and the water temperature criteria for the south Delta. The PTM runs were done under current flow and export conditions for the DCC gates opened 7 days per week and with the DCC gates opened on the weekends (base case). There was only a slight difference in particle entrainment between the two runs but the particle did have a lower residence time in the central delta with the gates open 7 days per week. The DSWG recommended opening the DCC gates at WOMT yesterday, 5/29 but recognized that concerns about salmonids may outweigh the possible benefits to delta smelt.

The group also reviewed the water temperature criteria currently being used in the Old and Middle River flow recommendation. The group decided that additional stations were not necessary and kept the original water temperature stations used in the recommendation. The current recommendation is to keep the combined 5-day average flows in Old River and Middle River greater than or equal to 0 cfs until south Delta water temperatures reach 25C. The water temperature is calculated using the average

temperature at three stations: Prisoner's Point, Victoria Canal, and Holland Tract. DSWG meeting summaries are posted at

http://www.fws.gov/sacramento/es/delta\_smelt.htm.

General Discussion(s) – Tina Swanson (BI) expressed her concern that WOMT has not met the DSWG action to moderate Old and Middle River Flows and that they did not implement the recent recommendation to keep the DCC gates open and asked how FWS planned to address it. Victoria Poage (FWS) responded that FWS is currently reviewing the decisions and looking at possible alternatives.

Several stakeholders expressed concerns that the DCC gate recommendation was rejected when water quality does not appear to be a problem at this time and while there is such heightened concern for delta smelt. The operators responded that the modeling indicated that with the DCC gates open 7 days per week the daily values at Emmaton were expected to increase enough to cause the 14-day standard to be exceeded in June. The Emmaton salinity standard must be met under D-1641 through June 15<sup>th</sup>. The stakeholders questioned why they were not trying to meet the standard by increasing releases. The operators responded that increased releases would have to be covered by b2 or EWA. The stakeholders requested that the PA's determine how much b2 and/or EWA would be needed to meet the standard by increasing releases.

Next DAT Conference Call Tuesday, 6/5/2007, 9:00 am - 11:00 am. Phone number – 916/657-4111.

# **Chinook Monitoring**

Upper Sacramento River

Red Bluff Diversion Dam – The RBDD gates were lowered for the season on May 15<sup>th</sup>. Fall-run passage remains steady averaging 46,000 per day, late fall passage decreased averaging 509 per day, spring-run passage also decreased averaging 15 per day. No winter-run length Chinook have been recovered since April 20<sup>th</sup> and adclipped Chinook catch was about 3 per day. Steelhead passage has decreased averaging 182 per day.

FWS posts biweekly reports on the Bay-Delta and Tributaries Project website, at <a href="http://baydelta.ca.gov/Php/Special\_Reports/red\_bluff.php">http://baydelta.ca.gov/Php/Special\_Reports/red\_bluff.php</a>

- Mill Creek The catch of both Chinook and steelhead decreased last week. DFG caught 248 fry/smolt Chinook and 6 steelhead. Water temperature has remained below 65F but flows have decreased due to water diversions.
- Deer Creek DFG pulled the trap for the season on May 18<sup>th</sup> due to low flows and high water temperatures.
- Butte Creek DFG pulled the traps on May 3<sup>rd</sup> for major repairs. They are done sampling for this season.
- GCID The catch of fry/smolt Chinook increased last week ranging from 187 to 330 per day. The catch was similar to the catch prior to the dredging operations. DFG did not catch any adclipped Chinook or steelhead.
- Knights Landing The catch of fry/smolt Chinook remains low ranging from 1 to 2 per trap-day. DFG also caught 1 adclipped steelhead. DFG did not sample over the weekend and drop to checking only twice a week in June. Water temperatures are holding between 68 and 70F.

#### **Delta Monitoring**

Summary - No Chinook were caught in the beach seining and the catch is decreasing in both the Mossdale and Chipps Island trawls. The catch of splittail remains high in the Lower Sacramento River beach seine and splittail are still be caught in low numbers in the north and central Delta seines. One adult delta smelt was caught in the Chipps Island trawl this week.

Sacramento Mid-water Trawl – 0 sample days, 0 samples. The boat was needed for whale monitoring so FWS did not sample.

Lower Sacramento River seine – 1 sample day, 6 samples. FWS caught 107 splittail and no other species of concern.

North Delta seine – 1 sample day, 4 samples. FWS caught 1 splittail and no other species of interest.

Central Delta seine – 2 sample days, 13 samples. FWS caught 4 splittail and no other species of interest.

South Delta seine – 1 sample day, 4 samples. No species of interest.

Mossdale Kodiak Trawl – 4 sample days, 40 samples. DFG, Region 4 sampled 7 days per week. For four days of reporting they caught 208 fry/smolt Chinook, 1 in-river steelhead, and 1 splittail. DFG will continue sampling until June 15<sup>th</sup> and at that point FWS will resume sampling 3 days per week.

San Joaquin River seine – 1 sample days, 2 samples. No species of interest.

Chipps Island Midwater Trawl – 6 sample days, 60 samples. FWS caught 55 fry/smolts and 14 adclipped Chinook. They also caught 1 delta smelt (not checked) and 3 splittail.

Bay seine – 1 sample day, 4 samples. No species of interest.

# **Delta Smelt Monitoring**

20mm Survey Update – DFG completed Survey 6 last week. DFG has processed most of the samples from tow 1 and caught 3 delta smelt near the confluence. So far this season DFG has caught a total of 28 larval delta smelt. This the lowest total on record for this time period. Survey 7 will begin next week. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

Delta Smelt Working Group Update – The DSWG met on Thursday, 5/24, to review the results from the PTM runs for the DCC gate operations and the water temperature criteria for the south Delta. The PTM runs were done under current flow and export conditions for the DCC gates opened 7 days per week and with the DCC gates opened on the weekends (base case). There was only a slight difference in particle entrainment between the two runs but the particle did have a

lower residence time in the central delta with the gates open 7 days per week. The DSWG recommended opening the DCC gates at WOMT yesterday, 5/29 but recognized that concerns about salmonids may outweigh the possible benefits to delta smelt.

The group also reviewed the water temperature criteria currently being used in the Old and Middle River flow recommendation. The group decided that additional stations were not necessary and kept the original water temperature stations used in the recommendation. The current recommendation is to keep the combined 5-day average flows in Old River and Middle River greater than or equal to 0 cfs until south Delta water temperatures reach 25C. The water temperature is calculated using the average temperature at three stations: Prisoner's Point, Victoria Canal, and Holland Tract. DSWG meeting summaries are posted at

http://www.fws.gov/sacramento/es/delta\_smelt.htm.

#### Salvage Facilities -

Summary - Fall-run Chinook loss remained low last week. The salvage of in-river steelhead increased at CVP but decreased at SWP. The salvage of larval delta smelt increased at both Facilities and longfin smelt were salvaged at the SWP for the first time this season. Finally, the salvage of splittail remains low at the SWP but increased at the CVP.

Chinook – No winter-run length Chinook were lost at either Facility in the last week. To date, the season total at the CVP is 1555 and the season total is 1742 at the SWP.

Steelhead – CVP salvaged 13 in-river and 2 hatchery steelhead. The combined salvage of in-river steelhead is 2761 for the season. The incidental take level is 3000. Salvage has dropped since the start of VAMP but biologists will continue to monitor salvage data, Mossdale trawl data, and water temperatures.

Delta smelt – SWP salvaged 64 delta smelt (26-34mm) for a season total of 64 through May 28<sup>th</sup>. CVP salvaged 96 delta smelt (22-36mm) for a season total of 240 through May 28<sup>th</sup>. The salvage has increased at SWP over the last several days. The

CCFB gates are being opened daily for several hours starting around midnight. SWP is currently conducting 30 minute counts. After the call Russ Gartz (DFG) provided an updated summary of larval delta smelt salvage through May 31st. The attached file, Delta smelt salvage graphs 2007a.xls, has the daily counts, expanded salvage, and cumulative salvage for the season to date.

Splittail – SWP salvaged 6 splittail for a season total of 308. CVP salvaged 108 splittail for a season total of 240.

Longfin smelt – SWP salvaged 8 longfin smelt for a season total of 8.

Sturgeon – None.

Case 1:05-cv-01207-OWW-NEW

The DFG Salvage Database can be accessed at this ftp site: ftp://ftp.delta.dfg.ca.gov/salvage/.

Turbidity data for Clifton Court forebay is available at: http://cdec2.water.ca.gov/cgi-progs/queryFx?CLC.

# **Agricultural Barriers**

HORB - Due to concerns for delta smelt WOMT requested that the barrier be removed. The HORB was partially breeched on May 21st and fully breached on May 22nd. Work continues to finish removal and clean up.

Ag barriers – USFWS directed that the culvert flap gates be tied open to improve net downstream flows and to facilitate the movement of delta smelt out of the south and central Delta. This action is provided for in the biological opinion for delta smelt. DWR tied open all but two flap gates on May 23<sup>rd</sup>. The two flap gates on the Middle River barrier had broken cables that are currently being repaired.

The weekly updates on barrier operations are now available at: http://baydeltaoffice.water.ca.gov/sdb/tbp/index\_tbp.cfm.

#### Operations

SWP -

CCFB - 400 cfs.

Oroville – 1,750 cfs.

X2 – between Chipps Island and Collinsville.

E/I - 14-day = 9.2%.

San Luis - ~617 taf. SWP share of San Luis capacity is 1,062 taf.

EWA - The current debt in San Luis for SWP is approximately 240 to 250taf. The current debt in San Luis for CVP is approximately 25 to 30taf. EWA is accruing debt at about 10taf per day for both Projects combined. EWA is currently being used to implement the DSWG action to moderate combined Old and Middle flow greater than or equal to 0cfs which started on May 16<sup>th</sup>.

#### CVP -

Tracy PP - 850 cfs.

DCC – Open. The gates will be closed today until Saturday morning to help meet the Emmaton standard. The DCC gates must also be closed for 14 days between May 20<sup>th</sup> and June 15<sup>th</sup> under D-1641. Trinity – 1500 cfs.

Clear Creek – 200 cfs.

Keswick – 10,500 cfs. Releases will be increased to 11,000 cfs on 6/1 to help meet the outflow standard. Nimbus – 1,500 cfs.

Goodwin – 1,500 cfs. The BR plans to ramp down releases to 400 cfs this weekend. All of the acquired assets have been used but the MA's are looking for additional assets.

San Luis – 447 taf. CVP share of San Luis capacity is 966 taf. The maximum drawdown for San Luis is 2 feet per day. The operators noted that the daily drawdown could start bumping up against that maximum.

#### Flows

Sacramento River at Freeport ~ 7,705 cfs.

Fremont Weir ~ 0.

San Joaquin River at Vernalis ~ 2,542 cfs.

Delta Outflow ~ 7,328 cfs. The 3-day average is 7,180 cfs.

Old and Middle Rivers ~ combined -943 cfs as of 5/27/07; 5-day average is -743 cfs.

#### **Delta Water Quality**

Salinity levels are increasing but remain below the standards. Salinity is improving at the Old River near Tracy

Road Bridge station and is expected to be back in compliance this week (30-day < 0.7).

# May Water Quality Standards

Case 1:05-cv-01207-OWW-NEW

Collinsville X2 standard – The standard must be met for the full 31 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3-day outflow of 7,100cfs.

Chipps Island X2 standard –The standard must be met for 1 day by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3-day outflow of 11,400cfs. This standard has been met.

Port Chicago was not triggered for May.

E/I Ratio – <= 35%.

Contra Costa Canal – Cl <= 250 mg/L. In addition, Cl <= 150 mg/L for 165 days per year. This portion of the standard has been met for 130 days so far.

Western Delta – EC <= 0.45 at Emmaton, Jersey Point, Terminous, and San Andreas stations.

South Delta – 30-day average EC <= 0.7

Suisun Marsh = EC <= 11

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# EXHIBIT G TO SWANSON DECLARATION

# Summary of DAT Conference Call 6/5/2007

Participants: EChappell (DWR), VPoage (FWS), RGartz(DFG), KFleming(DFG), JWhite(DFG), BOppenheim(NOAA), NHindman(FWS), JSnow(WWD), THinoiosa(DWR), MGuerin(CCWD), JSpeegle(FWS), AChu(DWR), TSwanson(BI), BPoytress(FWS), SGreene(DWR), TBoardman(SLDMWA), DFullerton(MWD), CKao(SCVWA), RSitts(MWD),

#### Conclusions and Recommendations

There were no new operational recommendations today.

20mm Survey Update – DFG started Survey 7 this week. They are currently processing the samples from the south delta. So far, they have caught 1 delta smelt at station 809. DFG completed Survey 6 and caught 5 delta smelt. This season DFG has caught a total of 30 larval delta smelt. This the lowest total on record for this time period. The summer Tow Net Survey will begin next week. The results from the 20mm surveys are posted at http://www.delta.dfg.ca.gov/data/20mm/.

DSWG Update – The DSWG met yesterday, 6/4 to review the water temperature criterion and the DCC gates operations. They have formed a subgroup to review the historical temperature data and address three questions related to the current temperature criterion: 1 Does the Working Group think the particulars of this criterion useful based upon recent historical patterns?; 2 Does the criterion need to be reached over consecutive days? (There have been occasions when the criterion was reached for one day but subsequently fell below 25 degrees C); and 3 There has been at least one year when the criterion was not reached even in July; in such a case, what would be the cue to resume export pumping?

Regarding DCC gate operations the DSWG determined that with the reduced exports that re-operation of the DCC gates would have no detectable difference in particle entrainment. However, the DSWG will not pull the current recommendation at the WOMT meeting today, 6/5.

The current recommendations are to keep the combined 5day average flows in Old River and Middle River greater than or equal to 0 cfs until south Delta water temperatures reach 25C and to open the DCC gates 7 days per week. DSWG meeting summaries are posted at http://www.fws.gov/sacramento/es/delta\_smelt.htm.

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The DWSG will meet again on Friday, 6/8 to continue discussions on the temperature criterion and DCC gate operations.

Tina Swanson (BI) recommended that the DSWG review PTM runs to determine the risk of entrainment for larval smelt in the cooler areas of the delta if the temperature criterion is met and pumping is increased. She also suggested that the DSWG compare the densities of the catch in the north delta (20mm) to the densities at the Facilities to get a rough estimate of the proportion of delta smelt that are located in the south delta. Kevin Fleming (DFG) responded that the two are not comparable given that the efficiency of both sampling gears is unknown. He also noted that the densities in the north delta have not been comparable to salvage in previous years.

General Discussion(s) – The stakeholders had three specific requests for consideration by WOMT this week:

- An update on the current status of Tier 3 with an explanation as to why it is not currently being invoked.
- More timely distribution of the WOMT notes. The stakeholders noted that they would also like to have a representative at the table to provide more timely feedback to all of the stakeholders.
- An explanation of how much more water would be needed to meet the DSWG recommended action of combined Old and Middle river flows greater than or equal to zero and a request to provide that additional water.

Rick Sitts (MWD) asked about other immediate options to increase flows near Tracy so Old and Middle rivers flow at Bacon Island would be positive, including options increasing the flow into Old River at the Old River-San Joaquin River split. Jim White (DFG) responded that south delta water diversions may be affecting the flow objective and the DFG has sent a notice to delta water diverters asking them to voluntarily cease or reduce water diversions. The notice that DFG sent to the delta water diverters and DFG's letter to DWR regarding delta smelt protective actions are posted at http://www.dfg.ca.gov/news/news07/07045.html. The SWRCB has also been looking into the issue and may make a recommendation as well. Nick Hindman (FWS) noted that additional water has been purchased so flows on the Stanislaus will remain at 1250cfs until that water runs out.

The MA's and PA's are also looking for willing sellers to purchase additional water. Tracy Hinojosa (DWR) noted that the daily tidal variations can be large under the current conditions and would affect the Projects ability to meet the objective.

Next DAT Conference Call Tuesday, 6/12/2007, 9:00 am - 11:00 am. Phone number – 916/657-4111.

# **Chinook Monitoring**

Upper Sacramento River

Red Bluff Diversion Dam –Fall-run passage increased slightly averaging 53,000 per day, late fall passage decreased averaging 326 per day, spring-run passage also decreased averaging 18 per day. No winter-run length Chinook have been recovered since April 20<sup>th</sup>. Steelhead passage averaged 174 per day.

FWS posts biweekly reports on the Bay-Delta and Tributaries Project website, at <a href="http://baydelta.ca.gov/Php/Special\_Reports/red\_bluff.php">http://baydelta.ca.gov/Php/Special\_Reports/red\_bluff.php</a>

- Mill Creek The catch of both Chinook and steelhead decreased last week. DFG caught 23 fry/smolt Chinook and 1 steelhead. Water temperatures are in the low 70's and trapping will continue for now.
- Deer Creek DFG pulled the trap for the season on May 18<sup>th</sup> due to low flows and high water temperatures.
- Butte Creek DFG pulled the traps on May 3<sup>rd</sup> for major repairs. They are done sampling for this season.
- GCID The catch of fry/smolt Chinook decreased last week ranging from 57 to 265 per day. DFG did not catch any adclipped Chinook or steelhead. Heavy debris is still affecting trap operations.

Knights Landing – No update.

#### **Delta Monitoring**

Summary – IEP has requested that agencies reduce monitoring efforts to protect delta smelt. Therefore there were only 2 days of sampling in the Mossdale

and Sacramento River trawls and no sampling was conducted at Chipps Island. Fry/smolt Chinook were caught in low numbers in the Sacramento River trawl and in the north and central delta beach seines. Fry/smolt Chinook and steelhead are still being caught in the Mossdale trawl as well. The beach seines are still primarily catching splittail. No adult delta smelt were caught in the monitoring this week.

Sacramento Mid-water Trawl – 2 sample days, 20 samples. FWS caught 26 fry/smolt Chinook and no other species of interest.

Lower Sacramento River seine – 1 sample day, 7 samples. FWS caught 5 splittail and no other species of concern.

North Delta seine – 1 sample day, 9 samples. FWS caught 2 fry/smolt Chinook and 32 splittail.

Central Delta seine – 1 sample days, 8 samples. FWS caught 4 fry/smolt Chinook, 1 adclipped Chinook, and 20 splittail.

South Delta seine – 1 sample day, 5 samples. No species of interest.

Mossdale Kodiak Trawl – 2 sample days, 20 samples. DFG, Region 4 sampled 5 days per week. For two days of reporting they caught 63 fry/smolt Chinook, 1 in-river steelhead, and 1 splittail. DFG will continue sampling until June 15<sup>th</sup> and at that point FWS will resume sampling 3 days per week.

San Joaquin River seine – 1 sample days, 9 samples. FWS caught 2 splittail and no other species of interest.

Chipps Island Midwater Trawl – 0 sample days, 0 samples. FWS did not sample due to concerns for delta smelt.

Bay seine – 1 sample day, 1 sample. No species of interest.

#### **Delta Smelt Monitoring**

20mm Survey Update – DFG started Survey 7 this week. They are currently processing the samples from the south delta. So far, they have caught 1 delta smelt at station 809. DFG completed Survey 6 and caught 5 delta smelt. This season DFG has caught a total of 30 larval delta smelt. This the lowest total on record for this time period. The summer Tow Net Survey will begin next week. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

Delta Smelt Working Group Update – The DSWG met yesterday, 6/4 to review the water temperature criterion and the DCC gates operations. They have formed a subgroup to review the historical temperature data and address three questions related to the current temperature criterion: 1 Does the Working Group think the particulars of this criterion useful based upon recent historical patterns?; 2 Does the criterion need to be reached over consecutive days? (There have been occasions when the criterion was reached for one day but subsequently fell below 25 degrees C); and 3 There has been at least one year when the criterion was not reached even in July; in such a case, what would be the cue to resume export pumping?

Regarding DCC gate operations the DSWG determined that with the reduced exports that re-operation of the DCC gates would have no detectable difference in particle entrainment. However, the DSWG will not pull the current recommendation at the WOMT meeting today, 6/5.

The current recommendations are to keep the combined 5-day average flows in Old River and Middle River greater than or equal to 0 cfs until south Delta water temperatures reach 25C and to open the DCC gates 7 days per week. DSWG meeting summaries are posted at <a href="http://www.fws.gov/sacramento/es/delta\_smelt.htm">http://www.fws.gov/sacramento/es/delta\_smelt.htm</a>.

The DWSG will meet again on Friday, 6/8 to continue discussions on the temperature criterion and DCC gate operations.

# Salvage Facilities -

Summary – SWP stopped pumping by the end of May 31<sup>st</sup> and pumping at CVP remains low (850cfs) for the protection of delta smelt. Fry/smolt Chinook loss remained low last week. The salvage of in-river steelhead decreased last week. The salvage of larval delta smelt increased at SWP last week and the

salvage of longfin smelt increased at both Facilities. Any salvage occurring at the SWP Facility after pumping stopped on June 1st, and before the CCF gates are re-opened in the future, will be fish that entered the Forebay prior to SWP shutdown.

Chinook – No winter-run length Chinook were lost at either Facility in the last week. To date, the season total at the CVP is 1555 and the season total is 1742 at the SWP.

Steelhead – CVP salvaged 12 hatchery steelhead. SWP salvaged 1 in-river steelhead. The combined salvage of in-river steelhead is 2762 for the season. The incidental take level is 3000. Salvage has remained low since the start of VAMP but biologists will continue to monitor salvage data, Mossdale trawl data, and water temperatures.

Delta smelt – SWP salvaged 144 delta smelt for a season total of 212. CVP salvaged 36 delta smelt for a season total of 276. In addition, there were 2 incidental observations of delta smelt at CVP on June 4<sup>th</sup>. Incidental observations are not included in the salvage estimate.

Splittail – CVP salvaged 12 splittail for a season total of 252.

Longfin smelt – SWP salvaged 40 longfin smelt for a season total of 48. CVP salvaged 12 longfin smelt for a season total of 36.

Sturgeon – None.

The DFG Salvage Database can be accessed at this ftp site: <a href="ftp://ftp.delta.dfg.ca.gov/salvage/">ftp://ftp.delta.dfg.ca.gov/salvage/</a>.

Turbidity data for Clifton Court forebay is available at: http://cdec2.water.ca.gov/cgi-progs/queryFx?CLC.

<u>VAMP Update</u> – Pat provided some information on the water quality sampling after the DAT call. The RWQCB did collected water samples on 5/22 at the site where the mortalities of the acoustically tagged fish occurred. They also noted that the treatment plant was adjusting their nitrification units during this time. The

samples are being processed but no results have been provided yet.

#### Agricultural Barriers

HORB – Minor clean up continued last week.

Ag barriers –The two flap gates on the Middle River barrier had broken cables that are currently being repaired.

The weekly updates on barrier operations are now available at: http://baydeltaoffice.water.ca.gov/sdb/tbp/index\_tbp.cfm.

#### **Operations**

SWP -

CCFB -0 cfs.

Oroville – 1,750 cfs.

X2 – west of Collinsville.

E/I - 3-day = 6.2%.

San Luis - ~562 taf. SWP share of San Luis capacity is 1,062 taf.

EWA - The current debt in San Luis for SWP is approximately 270 to 280taf. The current debt in San Luis for CVP is approximately 50 to 60taf. EWA is accruing debt at about 10taf per day for both Projects combined (of which about 4.3 TAF accruing rate per day in keeping Jones Pumping Plant at 850 cfs). EWA is currently being used to implement the DSWG action to moderate combined Old and Middle flow greater than or equal to 0cfs which started on May 16<sup>th</sup>.

CVP -

Tracy PP – 850 cfs.

DCC - Closed. The gates will be closed today until Saturday morning.

Trinity – ramping down to summer flows.

Clear Creek - 200 cfs.

Keswick – 11,000 cfs. Releases were increased on 6/1 to help meet the outflow standard.

Nimbus - 1,500 cfs.

Goodwin – 1,250 cfs. The MA's continue to look for additional assets.

San Luis – 384 taf. CVP share of San Luis capacity is 966 taf.

#### Docai

Flows
Sacramento River at Freeport ~ 9,817 cfs.

Fremont Weir ~ 0.

San Joaquin River at Vernalis ~ 2,367 cfs.

Delta Outflow ~ 9,163 cfs. The 3-day average is 8.621 cfs.

Old and Middle Rivers ~ combined -442 cfs as of 6/2/07; 5-day average is -760 cfs.

#### **Delta Water Quality**

Balanced conditions were declared on June 1<sup>st</sup>. Salinity levels are still a concern at Emmaton but other than that are doing okay.

#### June Water Quality Standards

Collinsville X2 standard – The standard must be met for the full 30 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3-day outflow of 7,100cfs.

Chipps Island X2 standard —The standard must be met for 0 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3-day outflow of 11,400cfs.

Port Chicago was not triggered for May.

E/I Ratio – <= 35%.

Contra Costa Canal – Cl <= 250 mg/L. In addition, Cl <= 150 mg/L for 165 days per year. This portion of the standard has been met for 137 days so far.

Western Delta – EC <= 0.45 at Emmaton until June 15<sup>th</sup>. San Andreas station will change from 0.45 to 0.58 on 6/25.

South Delta – 30-day average EC <= 0.7

Suisun Marsh = EC <= 11

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# EXHIBIT H TO SWANSON DECLARATION

#### Summary of DAT Conference Call 6/12/2007

Participants: EChappell (DWR), ROlah (FWS),
RGartz(DFG), KFleming(DFG), MWhite(DWR),
NHindman(FWS), JSnow(WWD), THinojosa(DWR),
MGuerin(CCWD), JSpeegle(FWS), AChu(DWR),
TSwanson(BI), TBoardman(SLDMWA),
JHannon(BR), CCreel(KCWA), MFord(DWR),
ADVorak(SWC)

#### Conclusions and Recommendations

There were no new operational recommendations today.

20mm Survey Update – DFG completed Survey 7 last week. They have processed all the samples from the first tows. So far, they have caught 3 delta smelt near the confluence. This season DFG has caught a total of 33 larval delta smelt. This the lowest total on record for this time period. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

DSWG Update – The DSWG met last week to review the results of the PTM runs and to discuss potential actions. DWR modeled three runs the first with combined exports of 1,250cfs (base case), the second with combined exports of 2,500cfs, and the third with combined exports of 5,000cfs. The DSWG used a 30% difference in particle fate as their criterion. The difference in particle fate between the base case and combined exports at 2,500cfs was less that 30%, with the highest entrainment of particles occurring at station 902 (Holland Tract).

The DSWG prepared a flow chart for evaluating potential actions. The flow chart has a water temperature criterion, size of the youngest cohort, smelt distribution, and smelt salvage (see attached file dswg-tree07.ppt). The current distribution of delta smelt is outside of the entrainment zone and no smelt have been salvaged in the last 5 days at CVP. The recent salvage at SWP was of smelt that were entrained into Clifton Court Forebay before pumping was ceased not from the delta. Therefore, the DSWG will recommend 5 days of provisional pumping of a combined 2,500cfs at WOMT today, 6/12. If any delta smelt are salvaged during this 5 day period the current recommendation to moderate Old and Middle River flows would be reinstated. If no delta smelt are salvaged during the 5 day period then normal operations would resume. Normal operations are projected

to be combined exports of 5,000cfs with the barriers operating tidally. The DWSG will meet again on Monday, May 18<sup>th</sup> to continue discussions of potential actions but will meet sooner if necessary.

Tina Swanson (BI) asked if incidental observations would be considered as salvage during the 5 days. Ryan Olah (FWS) responded that that issue was not discussed at the last meeting but if an incidental observation was made the DSWG would meet to discuss potential actions. Tina also raised a concern that the current counts at CVP are not long enough. Kevin Fleming (DFG) responded that it was also a concern for the group and they will continue to discuss it. Jim Snow (WWD) asked what would trigger a change in operations if delta smelt were salvaged after the 5-day provisional period. Ryan responded that the DSWG had not discussed that scenario but that it would be discussed in future meetings.

General Discussion(s) – Tina Swanson again asked for an update on the current status of Tier 3 with an explanation as to why it is not currently being invoked to provide additional assets to continue the protective actions. Ryan Olah responded that the decision on whether to implement Tier 3 or not is still being discussed.

Next DAT Conference Call Tuesday, 6/19/2007, 9:00 am - 11:00 am. Phone number – 916/657-4111.

#### **Delta Smelt Monitoring**

Summer Tow Net Survey Update – DFG started the first tow net survey this week. Yesterday, 6/11, they sampled in the south delta but did not catch any delta smelt. Sampling in other areas will continue this week.

20mm Survey Update – DFG completed Survey 7 last week. They have processed all the samples from the first tows. So far, they have caught 3 delta smelt near the confluence. This season DFG has caught a total of 33 larval delta smelt. This the lowest total on record for this time period. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

DSWG Update – The DSWG met last week to review the results of the PTM runs and to discuss potential actions. DWR modeled three runs the first with combined exports of 1,250cfs (base case), the second with combined exports of

2,500cfs, and the third with combined exports of 5,000cfs. The DSWG used a 30% difference in particle fate as their criterion. The difference in particle fate between the base case and combined exports at 2,500cfs was less that 30%, with the highest entrainment of particles occurring at station 902 (Holland Tract).

The DSWG prepared a flow chart for evaluating potential actions. The flow chart has a water temperature criterion, size of the youngest cohort, smelt distribution, and smelt salvage (see attached file dswg-tree07.ppt). The current distribution of delta smelt is outside of the entrainment zone and no smelt have been salvaged in the last 5 days at CVP. The recent salvage at SWP was of smelt that were entrained into Clifton Court Forebay before pumping was ceased not from the delta. Therefore, the DSWG will recommend 5 days of provisional pumping of a combined 2,500cfs at WOMT today, 6/12. If any delta smelt are salvaged during this 5 day period the current recommendation to moderate Old and Middle River flows would be reinstated. If no delta smelt are salvaged during the 5 day period then normal operations would resume. Normal operations are projected to be combined exports of 5,000cfs with the barriers operating tidally. The DWSG will meet again on Monday, May 18<sup>th</sup> to continue discussions of potential actions but will meet sooner if necessary.

#### Chinook Monitoring

Upper Sacramento River Summary – fry/smolt Chinook are still being caught in Mill Creek, GCID, and in very low numbers in the Knight Landing rotary screw traps. Steelhead are also being caught in low numbers in the Mill Creek and Knight Landing traps.

Delta Monitoring Summary - Sampling was suspended at most locations to protect delta smelt last week. Therefore, data is only available for the lower Sacramento River seine, the San Joaquin River seine, and the Bay seine. No Chinook were caught at those sites. Sampling, in the Sacramento mid-water trawl and in the Mossdale trawl, resumed this week.

# Salvage Facilities -

Summary – SWP resumed limited pumping on June 10th of water from Clifton Court Forebay and pumping

at CVP remained low (850cfs) for the protection of delta smelt. Fry/smolt Chinook loss and in-river steelhead salvaged remained low last week. Delta smelt were only salvaged at SWP. Since the Forebay gates were not opened the salvage was of smelt that were brought into the Forebay before pumping ceased at the end of May. The Forebay gates will be opened for 8 hours a day starting today and pumping will occur during daylight hours.

Chinook – No winter-run length Chinook were lost at either Facility in the last week. To date, the season total at the CVP is 1555 and the season total is 1742 at the SWP.

Steelhead – CVP salvaged 12 in-river steelhead last week. The combined salvage of in-river steelhead is 2774 for the season. The incidental take level is 3000. Salvage has remained low since the start of VAMP but biologists will continue to monitor salvage data, Mossdale trawl data, and water temperatures.

Delta smelt – SWP salvaged 27 delta smelt for a season total of 239.

Splittail – CVP salvaged 36 splittail for a season total of 288.

Longfin smelt - None.

Sturgeon – None.

The DFG Salvage Database can be accessed at this ftp site: <a href="ftp://ftp.delta.dfg.ca.gov/salvage/">ftp://ftp.delta.dfg.ca.gov/salvage/</a>.

Turbidity data for Clifton Court forebay is available at: http://cdec2.water.ca.gov/cgi-progs/queryFx?CLC.

#### **Agricultural Barriers**

HORB – The barrier has been completely removed.

Ag barriers –The two flap gates on the Middle River barrier had broken cables that were repaired on 6/6. Based on recent modeling water level may be a concern on Middle River. DWR will monitor water levels this week.

The weekly updates on barrier operations are now available at: http://baydeltaoffice.water.ca.gov/sdb/tbp/index\_tbp.cfm.

# **Operations**

#### SWP -

CCFB - 400 cfs.

Oroville – 1,750 cfs.

X2 - < 81km

E/I - 3-day = 6.3%.

San Luis - ~554 taf. SWP share of San Luis capacity is 1.062 taf.

EWA - The current debt in San Luis for SWP is approximately 310 to 320taf. The current debt in San Luis for CVP is approximately 85 to 90taf. EWA is accruing debt at about 10taf per day for both Projects combined (of which about 4.3 TAF accruing rate per day in keeping Jones Pumping Plant at 850 cfs). The projected carryover debt at the end of year will be more than 100taf. With the existing action continuing, the projected EWA assets will run out around mid June.

# CVP -

Tracy PP – 850 cfs.

DCC – Closed. The gates will be closed today and will be reopened on June 15<sup>th</sup>.

Trinity – 850 cfs.

Clear Creek – 150 cfs.

Keswick – 11,000 cfs.

Nimbus – 1,500 cfs.

Goodwin – 400 cfs.

San Luis – 309 taf. CVP share of San Luis capacity is 966 taf.

#### Flows

Sacramento River at Freeport ~ 11,000 cfs and decreasing slowly.

Fremont Weir ~ 0.

San Joaquin River at Vernalis ~ 2,100 cfs.

Delta Outflow ~ 9,100 cfs. The 3-day average is 9.650 cfs.

Old and Middle Rivers ~ combined -293 cfs as of 6/8/07; 5-day average is -10 cfs.

#### **Delta Water Quality**

Balanced conditions were declared on June 1st. Water

quality is okay and salinity standards are below concern levels.

# June Water Quality Standards

Collinsville X2 standard – The standard must be met for the full 30 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3day outflow of 7,100cfs.

Chipps Island X2 standard –The standard must be met for 0 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3day outflow of 11,400cfs.

Port Chicago was not triggered for May.

E/I Ratio – <= 35%.

Contra Costa Canal – Cl <= 250 mg/L. In addition, Cl <= 150 mg/L for 165 days per year. This portion of the standard has been met for 137 days so far.

Western Delta - EC <= 0.45 at Emmaton until June 15<sup>th</sup>. San Andreas station will change from 0.45 to 0.58 on 6/25.

South Delta – 30-day average EC <= 0.7

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# EXHIBIT I TO SWANSON DECLARATION

# Summary of DAT Conference Call 6/19/2007

Participants: EChappell (DWR), RGartz(DFG), JSnow(WWD), THinojosa(DWR), MGuerin(CCWD), JSpeegle(FWS), ASandhu(DWR), TSwanson(BI), TBoardman(SLDMWA), CKao(SCVWA), BOppenheim(NOAA), MFord(DWR), JLeighigh(DWR), PManza(BR)

# Conclusions and Recommendations

There were no new operational recommendations today.

20mm Survey Update – DFG started Survey 8 this week. DFG caught approximately 6 delta smelt in Survey 7 for a total number of 39 larval delta smelt so far this season. This the lowest total on record for this time period. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

DSWG Update – The DSWG met yesterday, 6/18, and reviewed the latest delta conditions and salvage data. In accordance with the delta smelt decision chart the DSWG will recommend that the Projects operate to as close to zero net Old and Middle river flow as possible.

General Discussion(s) – There was some confusion regarding the calculation of the DSWG temperature criterion being used in the delta smelt decision chart. During the call, members of the DAT group gave conflicting values ranging from 24.3 to 25.3C. The DAT group requests a clarification on how the temperature criterion is calculated by the DSWG, especially in regards to station codes and time period.

After the DAT call Victoria Poage provided the list of stations and the equation used by the DSWG. The stations are Holland Tract (HLL), Prisoner's Point (PPT) and Victoria Island (VIC). Originally the DSWG was going to use Victoria Canal but the gauge was not operating so they switched to Victoria Island. The 3-station average is calculated by calculating the six-hour average from 1300-1800 at each of the three stations, then "averaging the average". The equation used to calculate the 3-station average is:

Avg[Avg(HLL1300:1800)Avg(PPT1300:1800)Avg(VIC1300:1800)].

Next DAT Conference Call Tuesday, 6/26/2007, 9:00 am - 11:00 am. Phone number – 916/657-4111.

# **Delta Smelt Monitoring**

Summer Tow Net Survey Update – DFG completed the first tow net survey last week. Survey 2 will begin next week.

20mm Survey Update – DFG started Survey 8 this week. DFG caught approximately 6 delta smelt in Survey 7 for a total number of 39 larval delta smelt so far this season. This the lowest total on record for this time period. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

DSWG Update – The DSWG met yesterday, 6/18, and reviewed the latest delta conditions and salvage data. In accordance with the delta smelt decision chart the DSWG will recommend that the Projects operate to as close to zero net Old and Middle river flow as possible.

# **Chinook Monitoring**

Upper Sacramento River Summary – the Mill Creek trap was pulled on June 15<sup>th</sup> due to concerns about post-release mortalities. Water temperature has increased to the mid-70's last week. Fry/smolt Chinook were still being caught at Red Bluff Diversion Dam (RBDD), Mill Creek, GCID, and in very low numbers in the Knight Landing rotary screw traps. Steelhead were caught in both the RBDD and Mill Creek traps. One winter-run length Chinook was caught in the RBDD rotary screw traps which is rare for June.

Delta Monitoring Summary - Sampling was suspended at Chipps Island and was restricted in the North Delta beach seine to protect delta smelt last week. Fry/smolt Chinook were caught in both the Sacramento River and Mossdale trawls. One steelhead was also caught in the Sacramento River trawl. No Chinook were caught in the beach seining. DFG Region 4 finishing at Mossdale this week. FWS will resume sampling 3 days per week.

# Salvage Facilities -

Summary – SWP increased exports starting on June 17th. Delta smelt salvage increased at both Facilities. Fry/smolt Chinook loss remained low last week and no in-river steelhead were salvaged.

Chinook – No winter-run length Chinook were lost at

either Facility in the last week. To date, the season total at the CVP is 1555 and the season total is 1742 at the SWP.

Steelhead – No steelhead were salvaged at either Facility in the last week. The combined salvage of inriver steelhead is 2774 for the season. The incidental take level is 3000.

Delta smelt – SWP salvaged 252 delta smelt for a season total of 491. CVP salvaged 60 delta smelt for a season total of 336.

Splittail – CVP salvaged 96 splittail for a season total of 384.

Longfin smelt – SWP salvaged 3 longfin for a season total of 51.

Sturgeon – None.

The DFG Salvage Database can be accessed at this ftp site: <a href="ftp://ftp.delta.dfg.ca.gov/salvage/">ftp://ftp.delta.dfg.ca.gov/salvage/</a>.

Turbidity data for Clifton Court forebay is available at: http://cdec2.water.ca.gov/cgi-progs/queryFx?CLC.

# **Agricultural Barriers**

HORB – The barrier has been completely removed.

Ag barriers –The flap gates were untied on all the ag barriers on June 15<sup>th</sup> and are operating tidally.

The weekly updates on barrier operations are now available at: http://baydeltaoffice.water.ca.gov/sdb/tbp/index\_tbp.cfm.

### **Operations**

SWP -

CCFB – 1,000 cfs.

Oroville -4,500 cfs. Releases were increased to support export and delta outflow.

X2 – 14-day ~ 81km

E/I - 3-day = 25.3%.

San Luis - ~445 taf. SWP share of San Luis capacity

is 1,062 taf. EWA - No update.

#### CVP -

Tracy PP – 3500 cfs.

DCC - Open.

Trinity – 650 cfs. Releases will ramp down to 450 cfs by June 25<sup>th</sup>.

Clear Creek – 150 cfs.

Keswick – 13,000 cfs. Releases were increased to support exports and delta outflow.

Nimbus – 4,000 cfs. Releases were increased to support exports and delta outflow.

Goodwin – 400 cfs.

Merced – 295 cfs. Releases were increased by 1,000cfs from June 9<sup>th</sup> to June 17<sup>th</sup> to support San Joaquin River flows at Vernalis.

San Luis – 246 taf. CVP share of San Luis capacity is 966 taf.

#### Flows

Sacramento River at Freeport ~ 12,880 cfs and increasing.

Fremont Weir ~ 0.

San Joaquin River at Vernalis ~ 1,960 cfs and decreasing.

Delta Outflow ~ 7,500 cfs. The 3-day average is 6,785 cfs.

Old and Middle Rivers ~ combined -2,420 cfs as of 6/16/07; 5-day average is -2,165 cfs.

# **Delta Water Quality**

Water quality is okay and salinity is below concern levels. The Collinsville X2 standard is currently being met by the 14day EC.

# June Water Quality Standards

Collinsville X2 standard – The standard must be met for the full 30 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3day outflow of 7,100cfs.

Chipps Island X2 standard –The standard must be met for 0 days by a maximum daily EC of 2.64, a maximum 14-day running average EC of 2.64 or 3day outflow of 11,400cfs.

Port Chicago was not triggered for May.

E/I Ratio – <= 35%.

Contra Costa Canal – Cl <= 250 mg/L. In addition, Cl <= 150 mg/L for 165 days per year. This portion of the standard has been met for 151 days so far.

Western Delta – EC <= 0.45 at Emmaton and Jersey Point until June 15<sup>th</sup>. This standard has been met. After June 15, Emmaton EC must be less than or equal to 1.67 and Jersey Point EC must be less than or equal to 1.35. The San Andreas station will change from 0.45 to 0.58 on 6/25. The objective at Mokelumne River at Terminous remains 0.45 EC or less through August 15.\*

South Delta – 30-day average EC <= 0.7

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# EXHIBIT J TO SWANSON DECLARATION

# Summary of DAT Conference Call 7/3/2007

Participants: EChappell (DWR), RGartz(DFG),
JSnow(WWD), THinojosa(DWR), MGuerin(CCWD),
EVolkman(FWS), TSwanson(BI), CKao(SCVWA),
TBoardman(SLDMWA), MFord(DWR), PManza(BR),
EGleason(DFG), RDenton(CCWD), PJohnsen(FWS),
BOppenheim(NOAA), CCreel(KCWA),
PBrandes(FWS)

# Conclusions and Recommendations

There were no new operational recommendations today.

20mm Survey Update – DFG completed Survey 8 last week. DFG is still processing samples but have caught 60 delta smelt. DFG has caught a total of approximately 98 larval delta smelt so far this season. Survey 9 started this week. The results from the 20mm surveys are posted at http://www.delta.dfg.ca.gov/data/20mm/.

DSWG Update – The DSWG met yesterday, 7/2, and reviewed the latest monitoring data, delta conditions and salvage data. The water temperature for the 3-station average is 23.7C and the salvaged delta smelt ranged from 25 to 59mm. The DSWG is concerned about the continuing salvage and will recommend that the Projects operate to a net upstream Old and Middle flows not to exceed 5000cfs unless/until (1) the Working Group has a chance to review the PTM or (2) there is no salvage at either facility for three days. The group requested some PTM runs to assess the risk of entrainment for fish near the confluence. The DSWG will meet on Friday, 7/6 to review the PTM results.

General Discussion(s) – Curtis Creel (KCWA) noted that the salvage pattern at SWP is not atypical given the recent low pumping and that the increasing water temperature in the Forebay is likely pushing the fish that were residing in the Forebay toward the intake. He noted that the DSWG is making a very conservative recommendation based on the salvage of one delta smelt at CVP. Tina Swanson (BI) noted it was possible that not all of the smelt being salvaged were from the Forebay and that protection was warranted. She also asked if you assumed all the smelt were from the Forebay, how long it would take to salvage all of them. Russ Gartz (DFG) responded that based on analysis by DFG that it would take 2 to 3 days at the current export levels to turn over the water in the Forebay.

Water temperature in the south Delta, based on the three stations used in the DSWG temperature criterion, remains below 25C at 23.7C. Jim Snow (WWD) asked if the temperatures would exceed 25C with the expected heat wave later this week. Peter Johnsen (FWS) noted that the water temperature could exceed 25C but that the DSWG will continue to monitor other factors such as salvage. He explained that while 25C was considered the "lethal" temperature, delta smelt could still remain in the south Delta using temperature refugias, areas with lower temperatures than what is measured at the stations, or tolerate high day temperatures if water temperatures cool off during the night. In addition, Tina Swanson noted that smelt that are acclimated to warm temperatures, as the fish in the south Delta are, can survive temperatures greater than 25C.

After the call, Tina provided two links for more information on the delta smelt temperature tolerance studies. Results from her study can be found in an article published in *Oecologia* (2000), Volume 123, # 3. The abstract is posted at http://www.springerlink.com/content/t1440mrxbhn2cwua/. The results were also summarized by IEP and are posted at http://wwwiep.water.ca.gov/suisun\_eco\_workgroup/workplan/report/aquatic/aqtolr.html.

Next DAT Conference Call Tuesday, 7/10/2007, 9:00 am - 11:00 am. Phone number – 916/657-4111.

# **Delta Smelt Monitoring**

Summer Tow Net Survey Update – DFG caught 10 delta smelt in Survey 1. DFG is still processing samples from Survey 2 but have caught 10 more delta smelt. One fish was caught in Grizzly Bay and the others were caught in the lower Sacramento River. For comparison, in 2006 no delta smelt were caught in the first two surveys.

20mm Survey Update – DFG completed Survey 8 last week. DFG is still processing samples but have caught 60 delta smelt. DFG has caught a total of approximately 98 larval delta smelt so far this season. Survey 9 started this week. The results from the 20mm surveys are posted at <a href="http://www.delta.dfg.ca.gov/data/20mm/">http://www.delta.dfg.ca.gov/data/20mm/</a>.

DSWG Update – The DSWG met yesterday, 7/2, and reviewed the latest monitoring data, delta conditions and

salvage data. The water temperature for the 3-station average is 23.7C and the salvaged delta smelt ranged from 25 to 59mm. The DSWG is concerned about the continuing salvage and will recommend that the Projects operate to a net upstream Old and Middle flows not to exceed 5000cfs unless/until (1) the Working Group has a chance to review the PTM or (2) there is no salvage at either facility for three days. The group requested some PTM runs to assess the risk of entrainment for fish near the confluence. The DSWG will meet on Friday, 7/6 to review the PTM results.

# **Chinook Monitoring**

Upper Sacramento River Summary – Fry/smolt Chinook and in-river steelhead are still being caught in the RBDD rotary screw traps. Fry/smolt Chinook were caught in low numbers in the GCID rotary screw trap and 2 were caught in the Knights Landing traps. DFG removed the traps at Knights Landing for the season on June 28<sup>th</sup>. They will resume sampling on October 1<sup>st</sup>.

Delta Monitoring Summary - Sampling was suspended at Chipps Island and was restricted in the North Delta beach seine to protect delta smelt last week. Fry/smolt Chinook were only caught in the Sacramento River trawl. No steelhead were caught in the last week.

# Salvage Facilities -

Summary – Delta smelt and splittail were salvaged at both Facilities in the last week. No fry/smolt Chinook or in-river steelhead were salvaged.

Chinook - None.

Steelhead - None.

Delta smelt – CVP salvaged 12 delta smelt on July 1<sup>st</sup> for a season total of 348. Last week, SWP salvaged 1,101 delta smelt for a season total of 1,907. SWP salvaged 311 smelt yesterday, 7/2.

Splittail – SWP salvaged 2 splittail for a season total of 312. CVP salvaged 84 splittail for a season total of 504.

Longfin smelt – None.

Sturgeon – None.

The DFG Salvage Database can be accessed at this ftp site: <a href="ftp://ftp.delta.dfg.ca.gov/salvage/">ftp://ftp.delta.dfg.ca.gov/salvage/</a>.

Turbidity data for Clifton Court forebay is available at: http://cdec2.water.ca.gov/cgi-progs/queryFx?CLC.

# **VAMP**

The CVRWQCB inspection report stated that there was no evidence of a link between a specific event at the Stockton Wastewater Treatment Plant and the fish mortality event. However, the matter is still under investigation. Dave Vogel has presented the preliminary results from the acoustic tagging to the technical group.

# **Agricultural Barriers**

HORB – The barrier has been completely removed.

Ag barriers –The barriers are operating tidally. One flap gate on the Middle River barrier is broken so the culvert is open. DWR is in the process of scheduling the repair.

The weekly updates on barrier operations are now available at: http://baydeltaoffice.water.ca.gov/sdb/tbp/index\_tbp.cfm.

# **Operations**

#### SWP -

CCFB - 6,100 cfs.

Oroville – 8,000 cfs.

E/I - 3-day = 49.7%.

San Luis - ~332 taf. SWP share of San Luis capacity is 1,062 taf.

EWA - The current debt for SWP is approximately 320 to 330taf. The current debt in San Luis for CVP is approximately 90 to 100taf. EWA assets have not been used since June 15<sup>th</sup>.

### CVP -

Tracy  $PP - 4{,}300 \text{ cfs.}$ 

DCC - Open.

Trinity – 450 cfs.

Clear Creek – 150 cfs.

Keswick – 15,000 cfs.

Nimbus – 3,500 cfs.

Goodwin – 350 cfs.
San Luis – 163 taf. CVP share of San Luis capacity is 966 taf.

#### Flows

Sacramento River at Freeport ~ 19,960 cfs and increasing.

Fremont Weir ~ 0.

San Joaquin River at Vernalis ~ 1,300 cfs and decreasing.

Delta Outflow ~ 6,747 cfs. The 3-day average is 7.148 cfs.

Old and Middle Rivers ~ combined -5,860 cfs as of 6/30/07; 5-day average is -5,374 cfs.

# **Delta Water Quality**

Water quality is okay but the Projects are watching salinity at the Old River near Tracy station in the south Delta.

### July Water Quality Standards

Delta Outflow – monthly average >= 5,000cfs and 7-day average >= 4,000cfs.

E/I Ratio – <= 65%.

Contra Costa Canal – Cl <= 250 mg/L. In addition, Cl <= 150 mg/L for 165 days per year. This portion of the standard has been met for the year.

Western Delta – EC at Emmaton must be less than or equal to 1.67 and at Jersey Point it must be less than or equal to 1.35. The San Andreas station is 0.58. The objective at Mokelumne River at Terminous remains 0.45 EC or less through August 15.

South Delta - 30-day average EC  $\leq$  0.7 until the end of August.

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# EXHIBIT K TO SWANSON DECLARATION

# CENTRAL VALLEY OPERATIONS OFFICE DELTA SMELT AND SPLITTAIL

May-07

Note: Bold numbers are not verified by DFG.

|           |     | Delta      | a Smelt |         |     | Sp         | littail  |         | Pumping |             |              |        |             |               | Delta Smelt |      |
|-----------|-----|------------|---------|---------|-----|------------|----------|---------|---------|-------------|--------------|--------|-------------|---------------|-------------|------|
|           |     |            |         |         |     |            |          |         |         | Daily Total |              |        | Daily Total |               |             |      |
|           | Da  | ily        | Combi   | ined    | Da  | ily        | Combined |         | In CFS  |             | In Acre Feet |        |             | Daily Density |             |      |
| DATE      | To  | tal<br>CVP | Daily   | 14-Day  | To  | tal<br>CVP | Daily    | 14-Day  | Banks   | Tracy       | Combined     | Banks  | Tracy       | Combined      | SWP         | CVP  |
| 1 3 5 0 5 | SWP |            | Total   | Average | SWP |            | Total    | Average | 704     | 0.10        | 4.000        | 4.074  |             |               |             |      |
| 1-May-07  | 0   | 12         | 12      |         | 4   | 0          | 4        | 2       | 531     | 849         | 1,380        | 1,054  | 1,684       | 2,738         | 0.0         | 7.1  |
| 2-May-07  | 0   | 0          | 0       | 2       | 0   | 0          | 0        | 1       | 872     | 560         | 1,432        | 1,730  | 1,110       |               |             | 0.0  |
| 3-May-07  | 0   | 0          | 0       | 1       | 4   | 0          | 4        | 1       | 677     | 848         | 1,525        | 1,342  | 1,682       | 3,024         |             | 0.0  |
| 4-May-07  | 0   | 0          | 0       | 1       | 0   | 0          | 0        | 1       | 676     | 846         |              | 1,340  | 1,679       |               |             | 0.0  |
| 5-May-07  | 0   | 0          | 0       | 1       | 0   | 0          | 0        | 1       | 675     | 844         | 1,519        | 1,339  | 1,674       | 3,013         | 0.0         | 0.0  |
| 6-May-07  | 0   | 0          | 0       | 1       | 0   | 0          | 0        | 1       | 673     | 855         | 1,528        | 1,335  | 1,695       |               | 0.0         | 0.0  |
| 7-May-07  | 0   | 0          | 0       | 1       | 0   | 0          | 0        | 1       | 679     | 693         | 1,372        | 1,347  | 1,375       | 2,722         | 0.0         | 0.0  |
| 8-May-07  | 0   | 0          | 0       | 1       | 0   | 0          | 0        | 1       | 578     | 852         | 1,429        | 1,146  | 1,689       | 2,835         | 0.0         | 0.0  |
| 9-May-07  | 0   | 0          | 0       | 1       | 0   | 0          | 0        | 1       | 652     | 853         | 1,504        | 1,293  | 1,691       | 2,984         | 0.0         | 0.0  |
| 10-May-07 | 0   | 12         | 12      | 2       | 0   | 0          | 0        | 1       | 532     | 853         | 1,385        | 1,056  | 1,691       | 2,747         | 0.0         | 7.1  |
| 11-May-07 | 0   | 48         | 48      | 5       | 0   | 0          | 0        | 1       | 538     | 849         | 1,387        | 1,067  | 1,684       | 2,751         | 0.0         | 28.5 |
| 12-May-07 | 0   | 0          | 0       | 5       | 0   | 0          | 0        | 1       | 530     | 849         | 1,379        | 1,052  | 1,683       | 2,735         | 0.0         | 0.0  |
| 13-May-07 | 0   | 12         | 12      | 6       | 0   | 0          | 0        | 1       | 786     | 850         | 1,637        | 1,560  | 1,686       | 3,246         | 0.0         | 7.1  |
| 14-May-07 | 0   | 0          | 0       | 6       | 0   | 0          | 0        | 1       | 661     | 844         | 1,505        | 1,312  | 1,674       | 2,986         | 0.0         | 0.0  |
| 15-May-07 | 0   | 0          | 0       | 5       | 0   | 0          | 0        | 0       | 521     | 853         | 1,374        | 1,034  | 1,692       | 2,726         | 0.0         | 0.0  |
| 16-May-07 | 0   | 0          | 0       | 5       | 0   | 12         | 12       | 1       | 302     | 852         | 1,154        | 600    | 1,689       | 2,289         | 0.0         | 0.0  |
| 17-May-07 | 0   | 0          | 0       | 5       | 0   | 0          | 0        | 1       | 275     | 855         | 1,130        | 545    | 1,696       | 2,241         | 0.0         | 0.0  |
| 18-May-07 | 0   | 0          | 0       | 5       | 4   | 0          | 4        | 1       | 317     | 852         | 1,169        | 629    | 1,689       | 2,318         | 0.0         | 0.0  |
| 19-May-07 | 0   | 0          | 0       | 5       | 0   | 0          | 0        | 1       | 273     | 855         | 1,127        | 541    | 1,695       | 2,236         | 0.0         | 0.0  |
| 20-May-07 | 0   | 0          | 0       | 5       | 0   | 0          | 0        | 1       | 272     | 850         | 1,122        | 540    | 1,686       | 2,226         | 0.0         | 0.0  |
| 21-May-07 | 0   | 0          | 0       | 5       | 0   | 0          | 0        | 1       | 271     | 856         |              | 538    | 1,698       | 2,236         | 0.0         | 0.0  |
| 22-May-07 | 0   | 0          | 0       | 5       | 4   | 0          | 4        | 1       | 273     | 852         | 1,125        | 541    | 1,690       | 2,231         | 0.0         | 0.0  |
| 23-May-07 | 0   | 24         | 24      | 7       | 2   | 24         | 26       | 3       | 798     | 848         | 1,646        | 1,583  | 1,682       | 3,265         | 0.0         | 14.3 |
| 24-May-07 | 0   | 24         | 24      | 8       | 0   | 0          | 0        |         | 359     | 849         | 1,208        | 713    | 1,683       | 2,396         | 0.0         | 14.3 |
| 25-May-07 | 2   | 0          | 2       | 4       | 0   | 0          | 0        | 3       | 358     | 851         | 1,209        | 710    | 1,688       | 2,398         | 2.8         | 0.0  |
| 26-May-07 | 22  | 24         | 46      | 8       | 0   | 12         | 12       | 4       | 358     | 845         | 1,203        | 711    | 1,676       | 2,387         | 30.9        | 14.3 |
| 27-May-07 | 24  | 24         | 48      | 10      | 0   | 48         | 48       | 8       | 260     | 854         | 1,114        | 516    | 1,693       | 2,209         | 46.5        | 14.2 |
| 28-May-07 | 20  | 0          | 20      |         | 0   | 24         | 24       |         | 321     | 853         | 1,173        | 636    | 1,691       | 2,327         | 31.4        | 0.0  |
| 29-May-07 | 58  | 12         | 70      |         | 0   |            | 0        |         | 315     | 853         |              | 624    | 1,691       | 2,315         |             | 7.1  |
| 30-May-07 | 46  | 24         | 70      |         | 0   | 12         | 12       | 9       | 315     | 854         | 1,169        | 624    | 1,694       | 2,318         | 73.7        | 14.2 |
| 31-May-07 | 40  | 0          | 40      | 25      | 0   |            | 0        |         | 261     | 856         | 1,116        | 517    | 1,697       | 2,214         | 77.4        | 0.0  |
| Total     | 212 | 216        | 428     | XXXX    | 18  | 132        | 150      | XXXX    | 14,911  | 25,927      | 40,838       | 29,575 | 51,427      |               |             | XXXX |

Delta Smelt Incidental Take Levels

Below Normal Water Year Type

Delta smelt risk assessment matrix (DSRM) Adult level of concern = 892

Re-consultation level for May = 30,500

# EXHIBIT L TO SWANSON DECLARATION

# CENTRAL VALLEY OPERATIONS OFFICE DELTA SMELT AND SPLITTAIL

June-07

Note: Bold numbers are not verified by DFG.

|           |       | Delta | a Smelt |         |     | Sp    | littail |         | Pumping |             |          |        |              |          | Delta Smelt |                  |
|-----------|-------|-------|---------|---------|-----|-------|---------|---------|---------|-------------|----------|--------|--------------|----------|-------------|------------------|
|           |       |       |         |         |     |       |         |         |         | Daily Total |          |        | Daily Total  |          |             | Smelt<br>Density |
|           | Da    | ily   | Combi   |         | Da  | Daily |         | ined    |         | In CFS      |          | ]      | In Acre Feet |          |             | Jensity          |
| DATE      | То    |       | Daily   | 14-Day  | То  |       | Daily   | 14-Day  | Banks   | Tracy       | Combined | Banks  | Tracy        | Combined | SWP         | CVP              |
|           | SWP   | CVP   | Total   | Average | SWP | CVP   | Total   | Average | Dunks   |             |          | Dunks  |              |          |             |                  |
| 1-Jun-07  | 0     | 0     | 0       | 25      | 0   | 0     | 0       | 9       | 0       | 852         | 852      | 0      | 1,689        | ,        | #DIV/0!     | 0.0              |
| 2-Jun-07  | 0     | 0     | 0       | 25      | 0   | 0     | 0       | 9       | 0       | 853         | 853      | 0      | 1,692        | ,        | #DIV/0!     | 0.0              |
| 3-Jun-07  | 0     | 0     | 0       | 25      | 0   | 0     | 0       | 9       | 0       | 854         | 854      | 0      | 1,694        | ,        | #DIV/0!     | 0.0              |
| 4-Jun-07  | 0     | 0     | 0       | 25      | 0   | 0     | 0       |         | 0       | 858         | 858      | 0      | 1,702        | , , ,    | #DIV/0!     | 0.0              |
| 5-Jun-07  | 0     | 0     | 0       | 25      | 0   | 24    | 24      | 10      | 0       | 851         | 851      | 0      | 1,687        |          | #DIV/0!     | 0.0              |
| 6-Jun-07  | 0     | 0     | 0       | 23      | 0   | 12    | 12      |         | 0       | 850         | 850      | 0      | 1,685        | ,        | #DIV/0!     | 0.0              |
| 7-Jun-07  | 0     | 0     | 0       | 21      | 0   | 0     | 0       | 9       | 0       | 847         | 847      | 0      | 1,680        | ,        | #DIV/0!     | 0.0              |
| 8-Jun-07  | 0     | 0     | 0       | 21      | 0   | 0     | 0       | 9       | 0       | 845         | 845      | 0      | 1,677        | ,        | #DIV/0!     | 0.0              |
| 9-Jun-07  | 0     | 0     | 0       | 18      | 0   | 0     | 0       | 9       | 0       | 849         | 849      | 0      | 1,683        | 1,683    | #DIV/0!     | 0.0              |
| 10-Jun-07 | 27    | 0     | 27      | 16      | 0   | 0     | 0       | 5       | 90      | 845         | 935      | 178    | 1,677        | 1,855    | 151.7       | 0.0              |
| 11-Jun-07 | 9     | 0     | 9       | 15      | 0   | 0     | 0       | 3       | 90      | 846         | 937      | 179    | 1,679        | 1,858    | 50.3        | 0.0              |
| 12-Jun-07 | 30    | 0     | 30      | 13      | 0   | 0     | 0       | 3       | 89      | 853         | 941      | 176    | 1,691        | 1,867    | 170.5       | 0.0              |
| 13-Jun-07 | 9     | 48    | 57      | 12      | 0   | 0     | 0       | 3       | 89      | 2,009       | 2,098    | 177    | 3,984        | 4,161    | 50.8        | 12.0             |
| 14-Jun-07 | 9     | 0     | 9       | 9       | 0   | 12    | 12      | 3       | 90      | 2,526       | 2,616    | 178    | 5,010        | 5,188    | 50.6        | 0.0              |
| 15-Jun-07 | 18    | 0     | 18      | 11      | 0   | 0     | 0       | 3       | 96      | 2,575       | 2,671    | 191    | 5,107        | 5,298    | 94.2        | 0.0              |
| 16-Jun-07 | 9     | 0     | 9       | 11      | 0   | 24    | 24      | 5       | 97      | 2,575       | 2,672    | 192    | 5,108        | 5,300    | 46.9        | 0.0              |
| 17-Jun-07 | 168   | 12    | 180     | 24      | 0   | 60    | 60      | 9       | 495     | 2,697       | 3,191    | 981    | 5,349        | 6,330    | 171.3       | 2.2              |
| 18-Jun-07 | 90    | 0     | 90      | 31      | 0   | 0     | 0       | 9       | 400     | 2,689       | 3,088    | 793    | 5,333        | 6,126    | 113.5       | 0.0              |
| 19-Jun-07 | 90    | 0     | 90      | 37      | 2   | 0     | 2       | 8       | 840     | 3,363       | 4,203    | 1,666  | 6,671        | 8,337    | 54.0        | 0.0              |
| 20-Jun-07 | 9     | 0     | 9       | 38      | 0   | 24    | 24      | 9       | 717     | 3,754       | 4,471    | 1,422  | 7,447        | 8,869    | 6.3         | 0.0              |
| 21-Jun-07 | 30    | 0     | 30      | 40      | 0   | 12    | 12      | 10      | 932     | 3,525       | 4,456    | 1,848  | 6,991        | 8,839    | 16.2        | 0.0              |
| 22-Jun-07 | 57    | 0     | 57      | 44      | 0   | 0     | 0       | 10      | 934     | 4,017       | 4,950    | 1,852  | 7,967        | 9,819    | 0.0         | 0.0              |
| 23-Jun-07 | 15    | 0     | 15      | 45      | 0   | 0     | 0       | 10      | 945     | 4,278       | 5,223    | 1,874  | 8,486        | 10,360   | 8.0         | 0.0              |
| 24-Jun-07 | 24    | 0     | 24      | 45      | 0   | 0     | 0       | 10      | 587     | 4,211       | 4,798    | 1,164  | 8,352        | 9,516    | 20.6        | 0.0              |
| 25-Jun-07 | 0     | 0     | 0       | 44      | 0   | 12    | 12      | 10      | 192     | 4,279       | 4,471    | 381    | 8,488        | 8,869    | 0.0         | 0.0              |
| 26-Jun-07 | 30    | 0     | 30      | 44      | 0   | 12    | 12      | 11      | 324     | 4,268       | 4,592    | 642    | 8,466        | 9,108    | 46.7        | 0.0              |
| 27-Jun-07 | 327   | 0     | 327     | 63      | 0   | 0     | 0       | 11      | 847     | 4,254       | 5,101    | 1,681  | 8,437        | 10,118   | 194.5       | 0.0              |
| 28-Jun-07 | 30    | 0     | 30      | 65      | 0   | 0     | 0       | 10      | 856     | 4,270       | 5,125    | 1,697  | 8,469        | 10,166   | 17.7        | 0.0              |
| 29-Jun-07 | 78    | 0     | 78      | 69      | 0   | 0     | 0       | 10      | 878     | 4,277       | 5,156    | 1,742  | 8,484        | 10,226   | 44.8        | 0.0              |
| 30-Jun-07 | 390   | 0     | 390     | 96      | 0   | 0     | 0       | 9       | 1,360   | 4,431       | 5,791    | 2,698  | 8,789        | 11,487   | 144.6       | 0.0              |
|           |       |       |         |         |     |       |         |         |         |             |          |        | •            |          |             |                  |
| Total     | 1,449 | 60    | 1,509   | XXXX    | 2   | 192   | 194     | XXXX    | 10,946  | 74,199      | 85,145   | 21,712 | 147,174      | 168,886  | XXXX        | XXXX             |

Delta Smelt Incidental Take Levels

Below Normal Water Year Type

Delta smelt risk assessment matrix (DSRM) Adult level of concern = 892

Re-consultation level for June = 33,200

# EXHIBIT M TO SWANSON DECLARATION

# CENTRAL VALLEY OPERATIONS OFFICE DELTA SMELT AND SPLITTAIL

July-07

Note: Bold numbers are not verified by DFG.

|           |     | Delt                 | a Smelt |          |     | Spl | littail |         | Pumping      |             |          |         |             |          | Delta Smelt      |         |
|-----------|-----|----------------------|---------|----------|-----|-----|---------|---------|--------------|-------------|----------|---------|-------------|----------|------------------|---------|
|           |     |                      |         |          |     |     |         |         |              | Daily Total |          |         | Daily Total |          | Deita<br>Daily I |         |
|           |     | Daily Combined Daily |         | Combined |     |     | In CFS  |         | In Acre Feet |             |          | Daily   | Jensity     |          |                  |         |
| DATE      | То  |                      | Daily   | 14-Day   | Tot |     | Daily   | 14-Day  | Banks        | Tracy       | Combined | Banks   | Tracy       | Combined | SWP              | CVP     |
|           | SWP | CVP                  | Total   | Average  |     | CVP | Total   | Average |              | ·           |          |         | •           |          |                  |         |
| 1-Jul-07  | 246 | 12                   | 258     | 102      | 2   | 60  | 62      |         | 5,301        | 3,926       | 9,228    | 10,515  | 7,788       | 18,303   | 23.4             | 1.5     |
| 2-Jul-07  | 311 | 0                    | 311     | 118      | 7   | 12  | 19      | -       | 6,032        | 4,452       | 10,484   | 11,965  | 8,830       | · ·      |                  | 0.0     |
| 3-Jul-07  | 13  | 0                    | 13      | 112      | 1   | 0   | 1       | 10      | 5,485        | 4,442       | 9,926    | 10,879  | 8,810       |          |                  | 0.0     |
| 4-Jul-07  | 18  | 0                    | 18      | 113      | 11  | 48  | 59      | -       | 5,833        | 4,385       | 10,218   | 11,570  | 8,698       | 20,268   | 1.6              | 0.0     |
| 5-Jul-07  | 21  | 0                    | 21      | 112      | 0   | 48  | 48      |         | 5,301        | 4,440       | 9,741    | 10,514  | 8,807       | 19,321   | 2.0              | 0.0     |
| 6-Jul-07  | 9   | 0                    | 9       | 109      | 0   | 24  | 24      |         | 5,755        | 4,358       | 10,113   | 11,415  | 8,644       | 20,059   | 0.8              | 0.0     |
| 7-Jul-07  | 12  | 0                    | 12      | 109      | 36  | 0   | 36      |         | 5,562        | 4,346       | 9,909    | 11,033  | 8,621       | 19,654   |                  | 0.0     |
| 8-Jul-07  | 6   | 0                    | 6       | 107      | 3   | 0   | 3       | 20      | 5,459        | 4,344       | 9,803    | 10,828  | 8,617       | 19,445   |                  | 0.0     |
| 9-Jul-07  | 6   | 0                    | 6       | 108      | 21  | 0   | 21      | 20      | 5,807        | 4,354       | 10,161   | 11,518  | 8,636       | · ·      |                  | 0.0     |
| 10-Jul-07 | 6   | 0                    | 6       | 106      | 0   | 24  | 24      |         | 5,624        | 4,406       | 10,031   | 11,156  | 8,740       | 19,896   | 0.5              | 0.0     |
| 11-Jul-07 | 0   | 0                    | 0       | 83       | 24  | 12  | 36      | 24      | 6,200        | 4,385       | 10,585   | 12,298  | 8,697       | 20,995   | 0.0              | 0.0     |
| 12-Jul-07 | 6   | 0                    | 6       | 81       | 9   | 0   | 9       | 24      | 6,258        | 4,386       | 10,644   | 12,413  | 8,699       | 21,112   |                  | 0.0     |
| 13-Jul-07 | 0   | 0                    | 0       | 75       | 6   | 0   | 6       | 25      | 6,423        | 4,391       | 10,815   | 12,741  | 8,710       | ,        | 0.0              | 0.0     |
| 14-Jul-07 | 6   | 0                    | 6       | 48       | 36  | 0   | 36      | 27      | 6,985        | 4,365       | 11,350   | 13,855  | 8,657       | 22,512   | 0.4              | 0.0     |
| 15-Jul-07 | 6   | 0                    | 6       | 30       | 36  | 12  | 48      | 26      | 7,986        | 4,354       | 12,340   | 15,840  | 8,636       | 24,476   | 0.4              | 0.0     |
| 16-Jul-07 | 24  | 0                    | 24      | 10       | 6   | 0   | 6       | 26      | 6,441        | 4,353       | 10,794   | 12,775  | 8,635       | 21,410   | 1.9              | 0.0     |
| 17-Jul-07 | 6   | 0                    | 6       | 9        | 12  | 0   | 12      | 26      | 6,878        | 4,376       | 11,254   | 13,642  | 8,680       | 22,322   | 0.4              | 0.0     |
| 18-Jul-07 | 3   | 0                    | 3       | 8        | 15  | 12  | 27      | 24      | 7,055        | 4,382       | 11,437   | 13,993  | 8,692       | 22,685   | 0.2              | 0.0     |
| 19-Jul-07 | 0   | 0                    | 0       | 6        | 36  | 12  | 48      | 24      | 7,317        | 4,367       | 11,684   | 14,514  | 8,662       | 23,176   | 0.0              | 0.0     |
| 20-Jul-07 | 0   | 0                    | 0       | 6        | 0   | 0   | 0       | 22      | 6,930        | 4,363       | 11,293   | 13,746  | 8,654       | 22,400   | 0.0              | 0.0     |
| 21-Jul-07 | 0   | 0                    | 0       | 5        | 0   | 12  | 12      | 21      | 6,993        | 4,391       | 11,384   | 13,871  | 8,710       | 22,581   | 0.0              | 0.0     |
| 22-Jul-07 | 0   | 0                    | 0       | 5        | 0   | 0   | 0       | 20      | 6,893        | 4,379       | 11,271   | 13,672  | 8,685       | 22,357   | 0.0              | 0.0     |
| 23-Jul-07 |     |                      | 0       | 4        |     |     | 0       | 19      | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 24-Jul-07 |     |                      | 0       | 4        |     |     | 0       | 17      | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 25-Jul-07 |     |                      | 0       | 4        |     |     | 0       | 15      | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 26-Jul-07 |     |                      | 0       | 3        |     | ĺ   | 0       | 14      | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 27-Jul-07 |     |                      | 0       | 3        |     |     | 0       | 14      | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 28-Jul-07 |     |                      | 0       | 3        |     |     | 0       | 11      | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 29-Jul-07 |     |                      | 0       | 2        |     |     | 0       | 8       | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 30-Jul-07 |     |                      | 0       | 1        |     |     | 0       | 7       | 0            | 0           | 0        |         |             | 0        | #DIV/0!          | #DIV/0! |
| 31-Jul-07 |     |                      | 0       | 0        |     |     | 0       | 6       | 0            | 0           | 0        |         |             | 0        |                  |         |
| Total     | 699 | 12                   | 711     | XXXX     | 261 | 276 | 537     | XXXX    | 138,519      | 95,946      | 234,465  | 274,753 | 190,308     | 465,061  | XXXX             | XXXX    |

Delta Smelt Incidental Take Levels

Below Normal Water Year Type

Delta smelt risk assessment matrix (DSRM) Adult level of concern = 892

Re-consultation level for July = 2,500

# EXHIBIT N TO SWANSON DECLARATION

Delta Smelt Working Group Meeting Notes

June 8, 2007

Participating: Gonzalo Castillo (USFWS), Mike Chotkowski (USBR), Kevin Fleming (CDFG), Erin Gleason (CDFG), Lenny Grimaldo (CDWR), Bruce Herbold (USEPA), Tracy Hinojosa (CDWR), Ann Lubas-Williams (USBR), Ron Milligan (USBR, guest), Ryan Olah (USFWS), Ted Sommer (CDWR), Jim White (CDFG) and Victoria Poage (USFWS, convener and scribe)

#### For Discussion:

- 1. Review of water temperature criteria for May 15 recommendation
- 2. Assessment of entrainment risk following the current action

<u>Recommendation for WOMT</u>: Further work and discussion is needed before any recommendation can be made regarding appropriate criteria to end the current action.

Handout: Draft June action integrated decision criteria

### Notes:

The two items for discussion encompass essentially the same issues, and so were discussed simultaneously.

At the June 4 meeting, the Delta Smelt Working Group commissioned a subgroup to investigate the potential to integrate a constellation of factors, which could include temperature but also include the calendar day, fish distributions in surveys, and salvage at the state and federal export facilities, to define an endpoint for the current fish action, which is presently temperature-dependent. The subgroup distributed a draft decision process via e-mail. Discussion of the draft June decision criteria centered on the technical basis for defining whether "most fish [would be] outside the risk zone," as indicated in the draft criteria. Specifically, the Working Group defined the term "most" to mean "virtually all" but did not have enough information available to define "risk" specifically for entrainment. The Working Group generally agreed that what was needed was an estimate of delta smelt distribution, which could be applied to particle tracking modeling results to estimate the risk of entrainment. The Working Group requested that DWR provide additional PTM runs, using the same injection points as in the May 22 model runs, using the following hydrology:

- 1. current conditions (e.g., with the present action in effect)
- 2. expected conditions if Projects increase export rates to their proposed operation (e.g., 2500 cfs combined pumping)
- 3. conditions which would apply if the Projects went to maximum operations allowed under the 1995 Water Quality Control Plan

The third set of run conditions was evaluated not because the Projects have proposed going to Water Quality Control Plan conditions, but to assess the sensitivity with which the model is able to discriminate between sets of input data. The Working Group decided

to use a 30% difference in particle fates as a threshold criterion of significance, as it has in evaluating previous PTM runs.

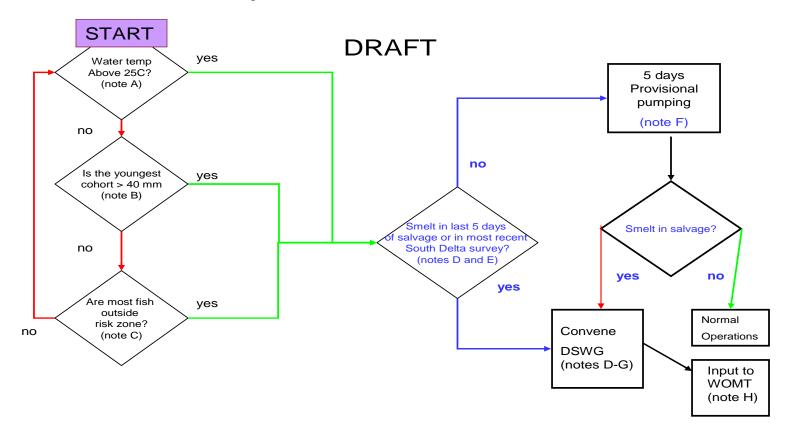
Next Scheduled Meeting: Monday, June 11 at 3:00 pm. at the Sacramento Fish and Wildlife Office

Attachment: draft June action integrated decision criteria

Submitted,

VLP

Attachment 1. Draft June action integrated decision criteria



**DRAFT** 

See notes on next page

#### **Notes**

- A. Temperature criterion is based upon historic patterns of in delta temperatures and delta smelt distribution. Historically, smelt were not found in the south delta at surface temperatures above 25 C.
- B. Salvage of delta smelt typically drops off after mean size ~40mm FL (20 mm and/or TNS survey). This year the average size of the smallest cohort on May 8th was 7.5mm. Using an average growth rate of 0.45mm/day, we anticipate that that cohort would reach 40mm FL on or about July 21st.
- C. The "risk zone" will need to be determined in near real time by the DSWG using PTM with proposed export rates.
- D. Using data from the surveys and any salvage, the DSWG will examine the potential of a smaller cohort, this would require changing the date from July 21st to some future date.
- E. Delta smelt occurrence in the salvage or at any south delta sampling stations for the most recent 20 mm or Townet surveys.
- F. Increased exports would be provisional and export level subject to continuing re-evaluation of the data at hand.
- G. DSWG will reassess conditions using the data generated in the processes outlined in the above notes.
- H. Follow WOMT and Service decision process consistent with Service letter to WOMT:
  - DSWG provides technical and operational information and analysis of condition of delta smelt to WOMT
  - WOMT crafts operational response and provides it to the Service, with a copy to CDFG
  - The Service concurs or requests a modification of proposed operations to WOMT
  - WOMT implements the Service's recommendation or provides additional information their constraints to the Service
  - The Service concurs with original WOMT proposal or insists on the Service-proposed modification of operations to Reclamation and DWR

# EXHIBIT O TO SWANSON DECLARATION

Table 2 The Delta Smelt Decision Tree

| Life stage                                    | Adults   |
|---|--|
| Timing  | Pre-VAMP (February 1 through April 15)   |
| Concerns                                      | <ol> <li>High relative densities of adults in the south Delta are a concern due to the potential for increase entrainment at the SWP<br/>and CVP.</li> </ol>   |
|   | <ol> <li>High relative densities of delta smelt in the south Delta also suggest spawning may occur in the south Delta, increasing the<br/>chances for exceeding the red light level<sup>a</sup> of incidental take in the late spring and early summer.</li> </ol> |
| Data of interest                              | Before pre-VAMP, consider fall midwater trawl indices  |
|   | Spring midwater trawl  |
|   | Salvage  |
|   | Beach seine  |
|   | Chipps Island trawl  |
|   | Hydrology (wet or dry year; placement of X2)   |
|   | Water quality conditions and water temperature   |
|   | Condition of the fish  |
| Assessment of conditions                      | Adult distribution in Delta and downstream of the Delta  |
|   | Salvage levels/densities, yellow light   |
|   | Potential high numbers in juvenile salvage if high numbers of adults are concentrated in the south Delta   |
| Tools for change                              | Reduction in exports, either concurrently at both facilities or at the facility that is salvaging the most fish  |
| Biological questions using the available data | 1) Is the adult distribution broad or not?   |
| • ,   | 2) Is salvage elevated or not?   |
|   | 3) Is previous FMWT index high or low?   |
|   | 4) Are water quality conditions (e.g. water temperatures) conducive to spawning?   |
|   | 5) Are fish ripe for spawning? (Both of above may help determine if there will be a protracted spawn.)   |
| Questions concerning operations               | 1) Is there a need to reduce exports at either or both facilities based on either the distribution of adults and/or an increase in the salvage of adult delta smell?   |
|   | 2) Is it likely to be a difficult spring or summer? That is, do we expect high levels of delta smelt salvage in the spring or summer?  |
| Assessment of concern                         | I. If the stated recovery criteria index is lower than 239, then concern is high.  |
|   | II. If distribution information shows adults delta smelt are concentrated in the south and central Delta, then concern is high.  |
|   | III. If the observed or predicted salvage of adults increases sharply, then concern is high.   |
|   | IV. If fish at the salvage facilities are on the verge of spawning and temperatures are conducive to spawning, then concern is<br>high.  |
| Recommendations                               | A) If concern is high and salvage increases abruptly, then recommendations for action is likely.   |
|   | B) If the observed or predicted salvage is at or approaching the red light or at the yellow light, then a recommendation for actio is likely.  |
|   | C) If assessments II and I are true, then we expect a difficult spring or summer (June and July).  |
| Life stage                                    | Larvae .   |
| Timing  | VAMP (April 15 through May 15)   |
| Concerns                                      | High numbers of larvae in the south Delta will likely result in higher numbers of fish rearing to juvenile stages and higher levels of entrainment.  |
| Data of interest                              | Light traps surveys  |
|   | 20-mm survey <sup>b</sup>  |
|   | Water temperatures   |
|   | Salvage <sup>c</sup>   |
|   | Hydrology (wet or dry year; placement of X2)   |
| Assessment of conditions                      | Spawning distribution  |
|   | Percent distribution   |

<sup>&</sup>lt;sup>a</sup> Yellow light and red light as defined in the 1995 OCAP opinion.

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b If fortnightly 20-mm survey is occurring and red light occurs, then effort will increase to weekly sampling.

Salvage levels at this time will likely not reflect the number of delta smelt in the south Delta, since smelt begin to be counted at the salvage facilities at about 25 mm.
 The barriers shall be operated as stated in the USFWS biological opinion (1-1-96-F-53), April 26, 1996.

Changes considered under "a" and "b" would aim to increase net positive flows in Old and Middle rivers downstream of the export facilities.

# Table 2 The Delta Smelt Decision Tree (Continued)

| Assessment of conditions (continued)          | Timing: start and duration of spawning   |
|---|--|
|   | Implement model to predict future salvage (end of VAMP)  |
|   | Water quality conditions, water temperature  |
| Tools for change                              | Change in San Joaquin River flows  |
|   | Change in export reductions (1–3 = net flow)   |
|   | Change in barrier operations   |
| Biological questions using the available data | 1) Is distribution of spawning broad or restricted?  |
|   | 2) Is larval distribution broad or restricted?   |
|   | 3) When does spawning start?   |
|   | Do we expect punctuated or protracted spawning?  |
|   | 5) Do we expect SWP and CVP to reach red light salvage levels?   |
| Questions concerning operations               | Do we consider changing net flows in Old and Middle rivers?  |
| Assessment of concern                         | I. If light trap results demonstrates that spawning has occurred in the south Delta, then concern is high  |
|   | II. If the 20-mm survey shows 50% of the delta smelt are in the zone of influence (e.g., east of the confluence), then concern is high.  |
|   | III. If abundance in the 20-mm survey is low relative to other years, then concern is high.  |
|   | IV. If substantial larval recruitment is expected to occur in the south and central Delta post-VAMP, then concern is high  |
| Recommendation                                | If concern is high and salvage is at or approaching red light or at yellow light, then recommendations to improve net flow in Old and Middle Rivers are likely. (This recommendation applies during VAMP and post-VAMP, although the tool used will vary.) |
| Life stage                                    | Juveniles  |
| Timing  | Post-VAMP (May 15 through July 1)  |
| Concerns                                      | High numbers of delta smelt juveniles in the south and central Delta will likely result in increased entrainment when export levels increase at the end of VAMP  |
| Data of interest                              | 20-mm survey <sup>b</sup>  |
|   | Salvage  |
|   | Summer townet  |
|   | Hydrology (wet or dry year; placement of X2)   |
|   | Export rates   |
| Assessment of conditions                      | Percent of the distribution outside the zone of influence (e.g., east and west of the confluence)  |
|   | Salvage level (number)   |
|   | Salvage density  |
| Tools for change                              | Change in exports  |
|   | Change in agricultural barrier operations <sup>d</sup>   |
|   | Removal of HORB <sup>d</sup>   |
|   | Position of cross-channel gates  |
|   | Flow changes in San Joaquin, Old, and Middle rivers  |
| Biological questions using the available data | 1) What is the relative distribution in and outside the zone of influence (e.g. upstream and downstream of the confluence)?  |
|   | 2) Is abundance high?  |
|   | 3) Is salvage at or approaching red light or at yellow light?  |
|   | 4) Are fish migrating west from the Delta?   |
| Questions concerning operations               | 1) Do we consider changing exports? <sup>e</sup>   |
| ·   | 2) Do we consider changing agricultural barrier/HORB operations? <sup>e</sup>  |
|   | 3) Do we consider changing the position of the cross channel gates after May 20?   |
| Assessment of concern                         | I. If the 20-mm survey shows 50% of the delta smelt are in the zone of influence (e.g. east of the confluence), then concern is high.  |
|   | II. If abundance in the 20-mm survey is low, relative to other years, then concern is high.  |
| Recommendation                                | If concern is high and salvage is at or near red light, then recommendation for action is likely.  |

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<sup>&</sup>lt;sup>a</sup> Yellow light and red light as defined in the 1995 OCAP opinion.

b If fortnightly 20-mm survey is occurring and red light occurs, then effort will increase to weekly sampling.

c Salvage levels at this time will likely not reflect the number of delta smelt in the south Delta, since smelt begin to be counted at the salvage facilities at about 25 mm.

The barriers shall be operated as stated in the USFWS biological opinion (1-1-96-F-53), April 26, 1996.

Changes considered under "a" and "b" would aim to increase net positive flows in Old and Middle rivers downstream of the export facilities.