State Water Project Incidental Take Permit Risk Assessment for Delta Smelt and Longfin Smelt

Section 1: Overview

Date: February 9, 2021

Life Stages Present:

Delta Smelt: Adult, Juvenile (EDSM has collected two Delta Smelt in the juvenile size bin)
Longfin Smelt: Adult, Larvae

Advice to WOMT:

No advice to WOMT was provided. Condition of Approval 8.4.2, Larval and Juvenile Longfin Smelt Entrainment Protection, was triggered on 1/26/2021 when Smelt Larva Survey 2 (SLS 2) reported the detection of Longfin Smelt larvae at five of the 12 relevant stations in the south and central Delta. This Condition of Approval limits Old and Middle River (OMR) Index flows to -5,000 cfs on a running 7-day average for seven consecutive days and tasks the Smelt Monitoring Team (SMT) with recommending an OMR Index level between -1,250 cfs and -5,000 cfs that is sufficiently protective. The SMT determined that an OMR Index more negative than -3,500 cfs would result in high risk of entrainment into the OMR corridor and south Delta export facilities for larval Longfin Smelt in the lower San Joaquin River but did not recommend a specific OMR restriction based on projected operations.

Condition of Approval 8.12, Barker Slough Operations, is still in effect. No advice was warranted for Delta Smelt.

Risk Assessment:

Risk of entrainment into the central and south Delta or into the export facilities in the south Delta is low for Delta Smelt and moderate to high for Longfin Smelt across the range of expected OMR Index levels.

Delta Smelt: Based on distribution patterns over the past decade and four recent detections, Delta Smelt are unlikely to be prevalent in the South Delta. Limited detection data supports Delta Smelt being present in Suisun Marsh, west of the Sacramento-San Joaquin confluence, and within the Sacramento Deep Water Ship Channel. The distribution of Delta Smelt is expected to extend upstream of the confluence which is supported by historical Spring Kodiak Trawl (SKT) data analysis. The forecasted precipitation this week and in-stream flow conditions may influence turbidity at the Old River at Bacon Island (OBI) station, but is unlikely to reach 12 Formazin Nephelometric Units (FNU) in the next seven days. The likelihood of Delta Smelt adult entrainment is slightly elevated relative to the previous seven days due to seasonal timing and a previous turbidity event in the central Delta. The more negative limits of OMR Index create a greater probability of entrainment. However, the overall probability of Delta Smelt moving into the south Delta is low.

Longfin Smelt: Smelt Larva Survey 3 (SLS 3) is sampling this week and sample processing is underway. At the time of the call, SLS 3 reported data for six of the 12 south and central Delta stations listed in Condition of Approval 8.4.2 with larval detections at two of those stations. Eleven larvae were collected at station 809 and one was reported at station 812. No larvae were detected at stations 815, 906, 910 and 915. For data reported to date, larval LFS density in the lower San Joaquin River is lower compared to that observed in SLS 2. This may be due to the flushing effect attributed to a more positive Qwest and the OMR Index being less negative than observed in high salvage years. However, the mitigating effect of Qwest has diminished as Qwest flow decreased to zero yesterday and is expected to continue to become more negative over the next several days. A precipitation event is expected to reach the Delta area Thursday, however, the extent to which it will affect hydrology is unknown. Exports may increase enough to result in an OMRI of -5,000 cfs if this precipitation event produces sufficient rainfall and increases outflow.

EDSM detected a ripe female and another adult LFS in the lower San Joaquin River last week which suggests that spawning is ongoing in the area.

SLS 3 data for station 716, which informs Barker Slough operations, was not available at the time of the call. SLS 3 is scheduled to sample station 716 today (2/9/2021) and processing is expected to be complete by the end of the week. The SMT will review Barker Slough operations at the next scheduled meeting.

The SMT reviewed the results of a PTM run with a low export scenario (OMR = -2,500 cfs) and a high export scenario (OMR = -4,000 cfs) with particles injected at stations 809, 815 and 901 on 2/2/2021. No new PTM runs were requested.

Section 1-A: Sacramento River and Confluence

Risk of entrainment into central Delta and export facilities for Delta Smelt and Longfin Smelt in Sacramento River (8.1.5.2 C ii, iii, iv)

- Exposure Risk (Hydrology):
    - Delta Smelt: Low
    - Longfin Smelt: Low
- Routing Risk (Behavior and life history):
    - Delta Smelt: Low
    - Longfin Smelt: Moderate risk of adults moving from the confluence into the Central Delta of their own volition. Two LFS were detected in the lower San Joaquin River, downstream of Prisoners Point, during sampling conducted from 2/1/2021 through 2/4/2021. One was a ripe female which suggests that spawning is ongoing in the area.
- Overall Entrainment Risk
    - Delta Smelt: Low
    - Longfin Smelt: Low

Section 1-B: Central Delta

Risk of entrainment into the export facilities for Delta Smelt and Longfin Smelt in the central Delta

- Exposure Risk:
    - Delta Smelt: Low
    - Longfin Smelt: Moderate
- Change in exposure from previous week:
    - Delta Smelt: Slightly elevated due to seasonal timing and previously elevated turbidity in the central Delta.
    - Longfin Smelt: Risk has increased compared to last week due to Qwest decreasing and having a relatively low long-term average (Jan 1st through yesterday) compared to low salvage years examined at the previous meeting. Continued larval presence in the lower San Joaquin River exposes larvae to entrainment, however, anticipated OMR Index levels are sufficiently protective.
- Reporting Old and Middle River Index (OMRI) *(Number and range of OMRI bins will vary based on anticipated hydrology and operations)*
    - OMRI is projected to reach -3,500 cfs and may reach -5,000 cfs if the storm arriving Thursday produces sufficient precipitation.
    - OMRI (Export Scenario OMRI = -2,500 cfs)
        - Delta Smelt: Low Risk
        - Longfin Smelt: Moderate Risk
            - As Qwest approaches zero and becomes negative, risk increases for larval LFS.
    - OMRI (Export Scenario OMRI more negative than -3,500 cfs)
        - Delta Smelt: Low
        - Longfin Smelt: High
            - Risk is moderate up to an OMRI = -3,500 cfs, a more negative OMRI represents a high risk scenario. Operating to an OMRI more negative than -3,500 cfs could set up a salvage event by entraining larval LFS into the OMR corridor, in which larvae are unable to be flushed out of the zone of entrainment.
            - The flushing effect of a substantially positive Qwest appears to have reduced larval density in the lower San Joaquin River. However, Qwest is no longer positive. This change in hydrology reduces the likelihood of larvae in the lower San Joaquin River being transported downstream.
            - The presence of a ripe female in the lower San Joaquin indicates that spawning is on-going and that newly hatched larvae will not benefit from the flushing effect unless Qwest becomes substantially positive.
            - SMT discussed interpolating between PTM scenarios and determined that it was appropriate.

- SLS 3 sample collection and processing is ongoing. The SMT will have a better understanding of the extent of larval distribution and entrainment risk in the south and central Delta once all data is available.

Section 2: Basis for Advice

The 2020 Incidental Take Permit for Long-Term Operation of the State Water Project in the Sacramento-San Joaquin Delta 2081-2019-066-00 (ITP) states that advice to Water Operations Management Team (WOMT) shall be based the following Conditions of Approval:

List relevant Condition of Approval number and title based on species/life stage, time of year, etc.

8.1.5.2 Smelt Monitoring Team Risk Assessment

8.3.3 Adult Longfin Smelt Entrainment Protection.

After December 1, if an Integrated Early Winter Pulse Protection (Condition of Approval 8.3.1) has not yet been initiated, Permittee shall reduce south Delta exports to maintain a 14-day average OMR index no more negative than -5,000 cfs and initiate OMR Management (Condition of Approval 8.3) if:

- Cumulative combined LFS expanded salvage (total estimated LFS counts at the CVP and SWP salvage facilities beginning December 1 through February 28 exceeds the most recent Fall Midwater Trawl (FMWT) LFS index[1] divided by 10, OR
- Real-time monitoring of abiotic and biotic factors indicates a high risk of LFS movement into areas at high risk of future entrainment, as determined by DWR and CDFW Smelt Monitoring Team staff.

When evaluating the possibility of LFS movement into areas that may be subject to an elevated risk of entrainment, the Smelt Monitoring Team shall evaluate catch of LFS with fork length ≥ 60 mm by the Chipps Island Trawl (conducted by USFWS) as an early warning indicator for LFS migration movement into the Delta, in addition to other available survey and abiotic data. The Smelt Monitoring Team shall communicate the results of these risk assessments and advice to the WOMT (Condition of Approval 8.1.3), and operational decisions shall be made as described in Condition of Approval 8.1.4 (Collaborative Approach to Real-Time Risk Assessment).

8.4.2 Larval and Juvenile Longfin Smelt Entrainment Protection.

From January 1 through June 30, when a single Smelt Larva Survey (SLS) or 20 mm Survey (20 mm) sampling period exceeds one of the following thresholds:

- LFS larvae or juveniles found in four or more of the 12 SLS or 20 mm stations in the central Delta and south Delta (Stations 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919), or
- LFS catch per tow exceeds five LFS larvae or juveniles in two or more of the 12 stations in the central Delta and south Delta (Stations 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919).

Permittee shall restrict south Delta exports for seven consecutive days to maintain a seven-day average OMR index no more negative than -5,000 cfs. Permittee shall also immediately convene the Smelt Monitoring Team to conduct a risk assessment (see Condition of Approval 8.5.1.2) to assess the risk of larval and juvenile LFS entrainment into the South Delta Export Facilities, determine if an OMR flow restriction is warranted, and recommend an OMR flow limit between -1,250 and -5,000 cfs. The Smelt Monitoring Team risk assessment and operational advice shall be reviewed by the WOMT (Condition of Approval 8.1.3) via the Collaborative Real-time Decision-making process (Condition of Approval 8.1.4). Permittee shall operate to the export restriction and OMR flow target approved through Conditions of Approval 8.1.3 and 8.1.4. Each week the Smelt Monitoring Team shall convene to conduct a new risk assessment and determine whether to maintain, or off ramp from, export restrictions based on the risk to LFS, or until the DS and LFS off-ramp has been met as described in Condition of Approval 8.8 (End of OMR Management).

From January 1 through June 30, DWR and CDFW Smelt Monitoring Team staff shall conduct weekly, or more often as needed, risk assessments (see Condition of Approval 8.5.1.2) to assess the risk of larval and juvenile LFS entrainment into the South Delta Export Facilities. As a part of the risk assessment the Smelt Monitoring Team shall provide advice on the appropriate OMR flow targets to minimize LFS entrainment or entrainment risk, or both. The Smelt Monitoring Team shall provide its advice to WOMT (Condition of Approval 8.1.3) and use the Collaborative Approach to Real-time Risk Assessment process described in Condition of Approval 8.1.4 to determine if an OMR flow restriction is warranted and determine OMR flow limit between -1,250 and -5,000 cfs. The OMR flow limit shall be in place until the next risk assessment conducted by the Smelt Monitoring Team determines that it is no longer necessary to minimize take or related impacts to LFS, or until the DS and LFS off-ramp has been met as described in Condition of Approval 8.8 (End of OMR Management).

8.5.1 Turbidity Bridge Avoidance.

The purpose of this Condition is to minimize the risk of entrainment of adult DS in the corridors of the Old and Middle rivers into the south Delta export facilities. This Condition is intended to avoid the formation of a turbidity bridge from the San Joaquin River shipping channel to the south Delta export facilities, which historically has been associated with elevated salvage of pre-spawning adult DS.

After the Integrated Early Winter Pulse Protection (Condition of Approval 8.1.3) or February 1 (whichever comes first), until April 1, Permittee shall manage exports to maintain daily average turbidity in Old River at Bacon Island (OBI) at a level of less than 12 NTU. If the daily average

turbidity at OBI is greater than 12 NTU, Permittee shall restrict south Delta exports to achieve an OMR flow that is no more negative than -2,000 cfs until the daily average turbidity at OBI is less than 12 NTU.

If, after five consecutive days of OMR flow that is less negative than -2,000 cfs, the daily average turbidity at OBI is not less than 12 NTU the Smelt Monitoring Team may convene to assess the risk of entrainment of DS (Condition of Approval 8.1.5.2). The Smelt Monitoring Team may provide advice to WOMT regarding changes in operations that could be conducted to minimize the risk of entrainment of DS (Condition of Approval 8.1.3). The Smelt Monitoring Team may also determine that OMR restrictions to manage turbidity are infeasible and may instead provide advice for a different OMR flow target that is between -2,000 and -5,000 cfs and is protective based on turbidity and adult DS distribution and salvage to the WOMT for consideration (Condition of Approval 8.1.3). Operational decisions shall be made following the process described in Condition of Approval 8.1.4 (Collaborative Real Time Risk Assessment).

Turbidity readings at individual sensors can generate spurious results in real time. Spurious results could be incorrectly interpreted as a turbidity bridge, when in fact the cause is a result of local conditions or sensor error. To assess whether turbidity readings at OBI are attributable to a sensor error or a localized turbidity spike, Permittee, in coordination with Reclamation, may consider and review data from other nearby locations and sources. Additional information that will be reviewed include regional visualizations of turbidity, alternative sensors, and boat-based turbidity mapping, particularly if there was evidence of a local sensor error. Permittee may bring data from these additional sources to the Smelt Monitoring Team for consideration during the development of a risk assessment to be provided to the WOMT for evaluation (Condition of Approval 8.1.3).

Permittee shall use the decision-making process described Condition of Approval 8.1.4 (Collaborative Real-time Risk Assessment) to determine if south Delta exports may increase after five-days of OMR no more negative than -2,000 cfs, or to determine that this action is not warranted due to a sensor error or localized turbidity event. Permittee shall implement this action until CDFW is in agreement that the action may be ended or modified.

8.5.2 Larval and Juvenile Delta Smelt Protection.

If the five-day cumulative salvage of juvenile DS at the CVP and SWP facilities is greater than or equal to one plus the average prior three years' FMWT index (rounded down), Permittee shall restrict south Delta exports for seven consecutive days to maintain a seven-day average OMR index no more negative than -5,000 cfs. Additionally, if the five-day cumulative salvage threshold is met or exceeded, Permittee shall immediately convene the Smelt Monitoring Team to conduct a risk assessment (Condition of Approval 8.1.5.2) and determine the future risk of entrainment and take of larval and juvenile DS. The Smelt Monitoring Team may provide advice to further restrict south Delta exports to maintain a more positive OMR than -5,000 cfs. The Smelt Monitoring Team may provide advice for further restrictions within three risk categories:

- Low risk: Limit OMR between -4,000 cfs to -5,000 cfs

- Medium risk: Limit OMR between -2,500 cfs to -4,000 cfs
- High risk: Limit OMR between -1,250 cfs to -2,500 cfs

The duration and magnitude of operational advice shall be provided to the WOMT (Condition of Approval 8.1.3) and decisions shall be made following the process described in Condition of Approval 8.1.4 (Collaborative Real Time Risk Assessment). When conducting risk assessments to evaluate the risk of entrainment and take of juvenile DS the Smelt Monitoring Team shall evaluate the following information sources, in addition to any other models or surveys they deem appropriate and those listed in Condition of Approval 8.1.5.2:

- Results from a CDFW approved DS life cycle model.
- DS recruitment levels identified by the Smelt Monitoring Team using the CDFW-approved life cycle model that links environmental conditions to recruitment, including factors related to loss as a result of entrainment such as OMR flows. In this context, recruitment is defined as the estimated number of post-larval DS in June per number of spawning adults in the prior February-March period.
- Hydrodynamic models and forecasts of entrainment informed by the EDSM or other relevant survey data to estimate the percentage of larval and juvenile DS that could be entrained.

If expanded salvage at the CVP and SWP facilities of juvenile DS exceeds 11 within a three-day period under this condition, Permittee shall restrict south Delta exports for seven consecutive days to maintain a seven-day average OMR index no more negative than -3,500 cfs. If juvenile DS continue to be salvaged at the CVP and SWP facilities during the seven days of OMR restrictions, then Permittee shall continue restrictions and request a risk assessment by the Smelt Monitoring Team to determine if additional advice and subsequent restrictions are warranted and provide advice to WOMT (see Condition of Approval 8.1.3) and follow the decision-making process described in Condition of Approval 8.1.4.

8.12 Barker Slough Pumping Plant Longfin and Delta Smelt Protection.

Permittee shall operate the Barker Slough Pumping Plant (BSPP) to protect larval LFS from January 15 through March 31 of dry and critical water years. Permittee shall operate to protect larval DS from March 1 through June 30 of dry and critical years. If the water year type changes after January 1 to below normal, above normal or wet, this action will be suspended. If the water year type changes after January to dry or critical, Permittee shall operate according to this Condition of Approval.

From January 15 through March 31 of dry and critical water years, Permittee shall reduce the maximum seven-day average diversion rate at BSPP to less than 60 cfs when larval LFS are detected at station 716. In addition, in its weekly meetings from January 15 through March 31, the Smelt Monitoring Team shall review LFS abundance and distribution survey data and other pertinent abiotic and biotic factors that influence the entrainment risk of larval LFS at the BSPP. When recommended by the Smelt Monitoring Team, and as approved through the decision-making processes described in Conditions of Approval 8.1.3 and 8.1.4, Permittee shall reduce

the maximum seven-day average diversion rate at BSPP according to the advice provided by the Smelt Monitoring Team.

From March 1 through June 30 of dry and critical water years, Permittee shall reduce the maximum seven-day average diversion rate at BSPP to less than 60 cfs when larval DS are detected at station 716. In addition, in its weekly meetings from March 1 through June 30, the Smelt Monitoring Team shall review DS abundance and distribution survey data and other pertinent abiotic and biotic factors that influence the entrainment risk of larval DS at the BSPP (including temperature and turbidity). When recommended by the Smelt Monitoring Team, and as approved through the decision-making processes described in Conditions of Approval 8.1.3 and 8.1.4, Permittee shall reduce the maximum seven-day average diversion rate at BSPP to less than 60 cfs. The DS requirements described in this condition may be adjusted to align with USFWS requirements to minimize take of DS through an amendment to this ITP.

8.13 Water Year Type Definition.

All references to water year type in this ITP shall be defined based on the Sacramento Valley Index unless otherwise noted.

Discussion of Conditions of Approval

Provide sentence or two addressing criteria for each Condition of Approval listed in "Basis for Advice" section. Refer to data below where appropriate.

SMT will conduct weekly risk assessments as described in Condition of Approval 8.1.5.2.

8.3.1 Environmental conditions did not exceed the thresholds identified in this condition during Water Year 2021. This Condition of Approval terminated on 1/31/2021.

8.3.3 No LFS have been salvaged this water year. The cumulative expanded salvage threshold is 3 based on the most recently available FMWT Index. The annual index for 2020 is 28 and was reported to the SMT via email on 1/4/2020. The SMT examined abiotic conditions and determined that risk is low to moderate for adult Longfin Smelt. See section 4-B for the discussion of the FMWT Index.

8.4.1 This Condition of Approval begins with the onset of OMR management and terminates when spawning is detected in the system. The second December SLS detected larval LFS in the lower San Joaquin River on 12/28/2020 which terminated this Condition of Approval.

8.4.2 This Condition of Approval was triggered by the detection of larval LFS at 5 of the criteria stations listed in Condition of Approval 8.4.2 during SLS 2. At the time of today's call, data for six of the 12 criteria stations had been reported. Larvae were detected at two of the six stations reported on and catch per tow exceeded 5 at one of these stations. See Attachments for SLS catch data.

8.5.1 This Condition of Approval has not been triggered. Turbidity at OBI was below 12 FNU on 2/1/2021 and remains low. Turbidity exceeded 14 FNU on 1/27/2021 before decreasing.

8.5.2 The three-year average FMWT Index for Delta Smelt is zero, resulting in a salvage threshold of one for juvenile Delta Smelt. Young of year Delta Smelt are not expected to be present at this time of year.

8.12 This condition was triggered by the detection of one LFS larva at station 716 which was collected during SLS 1 and continues due to the detection of two LFS larvae at station 716 during SLS 2. Data from station 716 from SLS 3 was not yet available at the time of the call. The SMT will evaluate updated catch data at the next regularly scheduled meeting. This Condition of Approval is in effect during dry and critically dry years, as defined by the Sacramento River Valley Water Year Type Index. LFS are exposed to greater risk of entrainment at Barker Slough during dry and critical years due to the proximity to low salinity habitat at multiple life stages.

Section 3: Hydrology and Operations

Assessment of hydrologic, operational, and meteorological information. 8.1.5.2 A.

Section 3-A: Water operations conditions. 8.1.5.2.A. i

- Antecedent Actions: *(e.g. DCC gate closure and actions such as integrated early winter pulse protection, etc.)*
    - ITP Condition of Approval 8.3.2 Salmonid Presence limits exports to maintain a 14-day running OMRI average no more negative than -5,000 cfs as of 1/1/2021.
    - DCC gates will remain closed for the remainder of the season (through May 20, 2021 per the PA description for DCC gate operations) but may be opened to maintain water quality during drought conditions for up to 5 days and for up to 2 events as per the PA in December and January. If DCC gates are opened between December 1 and January 31, the CVP and SWP will divert at Health and Safety pumping levels.
    - Grantline Canal agricultural barrier was breached on 11/11/2020. The OMRI equation was adjusted accordingly to accommodate the change in barrier status.
- Controlling Factors: Delta Outflow
- Water Temperature:
    - CCF = Not discussed (*Condition of Approval 8.8: Daily average temperature at CCF exceeds 25°C for 3 consecutive days*)
    - 3 Station Average = 11.25°C
- Tidal Cycle: Not discussed
- Turbidity:
    - 8.3.1 Freeport 3-day average = Not reported. 8.3.1 terminated without being triggered.
    - 8.5.1 OBI Turbidity = 5.10 FNU
        - Reached a peak of 14.19 FNU on 1/27/2021 before decreasing below the 12 FNU threshold before 2/1/2021
- Salinity: X2 is upstream of Collinsville and was estimated to be 84.5 km on the Sacramento River and 85.0 km on the San Joaquin River.
- Hydrologic Footprint:
    - No new PTM run was requested
    - The SMT reviewed the results of a PTM run with two hydrologic scenarios simulating projected hydrology and an OMR Index of -4,000 cfs, with particles injected at stations 809, 815, and 901. SLS 2 detected larvae at each of these stations.

Section 3-B: Water operations outlook. 8.1.5.2.A. ii

- Outages
    - SWP: No export or salvage outages reported for the period of 2/2/2021 to 2/7/2021
    - CVP: No export or salvage outages reported for the period of 2/2/2021 to 2/7/2021
- Exports
    - CCF: 3,700 cfs, decreasing to 2,000 cfs. May increase if conditions allow
    - CVP: 1,900 cfs. May increase if conditions allow
- Meteorological Forecast: 60% chance of rain Thursday decreasing through the weekend.
- Storm Event Projection: Storm in forecast is not expected to be as substantial as previous one.

Section 3-C: Projected conditions. 8.1.5.2.A. iii

- DCC Gates position: Closed for season (through May 20, 2021)
- Sacramento River flow at Freeport: 11,000 cfs and is expected to decrease
- San Joaquin River flow at Vernalis: Decreasing from 1,400 cfs.
- Qwest: Reached zero cfs today and is projected to reach -1,000 cfs. Exceeded 11,000 cfs for four days, from 1/29/2021 to 2/1/2021, and remained above 1,000 cfs through 2/7/2021.
- Old River at Bacon Island Turbidity: 3.32 FNU.
- Expected changes in South Delta Exports: Exports are projected to remain stable and result in an OMRI of -3,500 cfs until precipitation arrives Thursday. Exports may increase after Thursday depending on the amount of precipitation that falls.
- NDOI: 7,000 to 10,000 cfs
- OMRI is projected to remain near -3,500 cfs unless hydrology changes.

Table 1: Comparison of OMR and OMR Index (5-day and 14-day averages OMR Index and USGS gauge reported on SacPAS website, accessed 2/9/2021)

Date	Averaging Period	USGS gauges (cfs)	Index (cfs)
2/9/2021	Daily	Not Reported	-4,600 cfs
2/6/2021	5-day	-2,270 cfs	-2,510 cfs
2/6/2021	14-day	-2,240 cfs	-2,420 cfs

Section 4: Distribution and Biology.

8.1.5.2.B. Assessment of biological information for Delta Smelt and Longfin Smelt

Section 4-A: Delta Smelt population status 8.1.5.2.B. i

- EDSM did not collected any Delta Smelt during sampling conducted from 2/1/2021 through 2/4/2021. No abundance estimate was calculated
- The 2020 Annual FMWT Index for Delta Smelt is zero for the third consecutive year.
- Delta Smelt LCM discussion. Not Discussed.
- Biological Conditions: Not Discussed
- % of population in Delta zones: SMT did not discuss distribution in terms of percentage in Delta zones.
- Other Surveys: The last Delta Smelt detection was on 1/21/2021 by FCCL broodstock collections.
- Salvage: No Delta Smelt have been detected at either salvage facility this season.

Section 4-B: Longfin Smelt population status 8.1.5.2.B. ii.

- FMWT Index: The FMWT Annual Index for Longfin Smelt is 28. Monthly indices for September and October are zero, the index for November is 22 and index for December is 6.
- Bay Study: Bay Study has resumed sampling and is scheduled to complete the February survey on 2/15/2021.
- Other Surveys:
    - Chipps Island Survey collected 6 LFS during sampling conducted from 2/2/2021 through 2/8/2021
    - EDSM collected 34 LFS during sampling conducted from 2/1/2021 through 2/4/2021. Seven were collected in Suisun Marsh (FL = 57 – 83 mm), 25 were collected in Suisun Bay (FL = 61 – 107 mm, one was expressing eggs), 2 were collected in the lower San Joaquin River (FL = 80 mm, one was expressing eggs),
- SLS 3 sample collection and processing is ongoing. At the time of the call six of the 12 south and central Delta stations listed in Condition of Approval 8.4.2 had been processed. Larvae were detected at two of the six stations reported on and catch per tow exceeded 5 at one of these stations. See Attachments for SLS catch data. During SLS 2 sample collection was disrupted due to inclement weather. As a result, 12 stations downstream of the confluence were not sampled. See Attachment 1 for full catch details.
- February Spring Kodak Trawl sampled from 2/1/2021 through 2/5/2021 and collected 1 LFS at station 501. January Spring Kodiak Trawl (SKT) collected 11 Longfin Smelt in Suisun Bay and Marsh and the Sacramento Deep Water Ship Channel. See previous week's Risk Assessment for catch details.
- Salvage: No Longfin Smelt have been detected at either salvage facility.

Section 4-C: Additional data sources to assess sensitivity to entrainment Delta. 8.1.5.2.C & D. i

- SMT estimated X2 using a tool developed by DWR staff that applies the same methodology used to calculate X2 reported on CDEC. There is interest in validating the results of this tool.

Notes: The SMT ITP Risk Assessments can be accessed on the CDFW Water Branch website.

Survey update:

- SLS 3 is scheduled to complete sampling 2/10/2021.
- February Spring Kodiak Trawl sampled from 2/1/2021 through 2/5/2021. One LFS was detected at station 501. No Delta Smelt were detected.
- Bay Study is back on the water and scheduled to sample 2/4/2021 through 2/15/2021. No data has been reported to date.
- In EDSM sampling conducted 2/1/2021 through 2/4/2021, no Delta Smelt were detected. Seven LFS (FL = 57 – 83 mm) were collected in Suisun Marsh, 25 (FL = 61-107 mm) were collected in Suisun Bay, and two (FL = 80 mm) were collected in the lower San Joaquin River. One of the fish collected in the Lower San Joaquin River and one collected in Suisun Bay expressed eggs.
- Chipps Island trawl collected 6 LFS in recent sampling.

During the PTM discussion, the SMT determined that is was appropriate to extrapolate between the scenarios in the PTM run and that the PTM run reflected observed Qwest, to a reasonable extent.

Bulletin 120 was released and forecasts a critically dry water year. DWR requested that the Water Board waive the Collinsville EC requirement for February.

Attachments: