

# State Water Project Incidental Take Permit Risk Assessment for Delta Smelt and Longfin Smelt. Off cycle meeting for discussion of Condition of Approval 8.4.2 Larval and Juvenile Longfin Smelt Protection

## Section 1: Overview

(Note: This is a truncated Risk Assessment focusing on Condition of Approval 8.4.2 and 8.5.1. See the 1/26/2021 Risk Assessment for discussion of other Conditions of Approval)

**Date: January 29, 2021**

## Life Stages Present:

Longfin Smelt: Adult, Larvae

## Advice to WOMT:

Condition of Approval 8.4.2, Larval and Juvenile Longfin Smelt Entrainment Protection, has been triggered by the detection of Longfin Smelt larvae at five of the twelve relevant central and south Delta stations. This Condition of Approval limits OMR to -5,000 cfs on a running 7-day average and tasks the SMT with determining if an additional OMR flow restriction is warranted and, if so, recommending an OMR flow limit between -1,250 and -5,000 cfs. Projected Operations are expected to maintain an OMR Index of approximately -2,500 cfs through the weekend. The SMT determined that advice limiting OMR to a less negative level was not warranted but cautioned that operating to an OMR Index more negative than -2,500 cfs would result in a higher risk of entrainment of larval Longfin Smelt.

## Risk Assessment:

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

*Delta Smelt:* Delta Smelt were not discussed during this meeting. See previous Risk Assessment for Delta Smelt discussion.

## *Longfin Smelt:*

Smelt Larva Survey 2 (SLS 2) sample processing is ongoing. SLS 2 detected Longfin Smelt (LFS) larvae at 5 of the stations listed in Condition of Approval 8.4.2. Twenty-two were collected at station 809, 8 were collected at 812, 2 were collected at 815, 2 were collected at 901 and one was collected at 906. The sample collected at station 906 had not been processed at the time of the Tuesday SMT meeting and was reported to the SMT via email on 1/28/2021. This meets the criteria to trigger this Condition of Approval which limits the 7-day average OMR Index to be no more negative than -5,000 cfs and tasks the SMT with determining if an OMR

flow restriction is warranted and, if so, recommending an OMR flow limit between -1,250 and -5,000 cfs.

Enhanced Delta Smelt Monitoring (EDSM) detected a ripe LFS in the lower Sacramento River on 1/20/2021 and two more age-1+ LFS in Suisun Marsh on 1/21/2021. Chipps Island Trawl detected 10 LFS during sampling conducted from 1/20/2021 to 1/25/2021 with fork lengths ranging from 65 to 105 mm. The presence of adult fish, including a ripe female, indicates that spawning is ongoing.

The SMT used a comparative approach to inform this risk assessment. CDFW presented data summaries of SLS catch at the stations listed in ITP condition of approval 8.4.2, 7-day average OMR, 7-day average Qwest and daily average San Joaquin River flow at Vernalis (VNS) for four comparative years as well as the current year. The 7-day average OMR values presented were calculated from the tidally filtered USGS gauge data. Two of the years selected, 2009 and 2010, represented relatively low salvage years. The other two years, 2012 and 2020, represented relatively high salvage years. SLS data was presented as two heat maps showing catch at each station for each survey for the comparative years. The hydrological data was displayed as plots of data from January 1<sup>st</sup> through the end of May for each of the comparative years, and data from January 1<sup>st</sup> to January 25<sup>th</sup> (tidally filtered OMR) and 27<sup>th</sup> (QWEST and VNS) for the current year. Expanded Longfin Smelt salvage for both facilities was also displayed on each plot of hydrological data. The x and y axis were held constant across all plots to ease interpretation. A separate plot of X2 for all years examined was also presented.

For the years prior to the most recent drought, SLS distribution was similar among the two low years (2009, 2010) and the high salvage year (2012), with higher counts in the lower San Joaquin River and larvae present in the OMR corridor. Larval LFS catch was lower in the high salvage year, 2020, and in 2021 for stations sampled to date, when compared to years prior to the most recent drought. However larval catch is higher in the first two Smelt Larva Surveys of 2021 compared to the same time in 2020. SLS catch distribution in the current year also differed from 2020, in that early in 2020 some larvae were detected in the OMR corridor. Larvae in the OMR corridor are likely entrained into the salvage facilities before they reach 20mm, which is the size at which they begin to be counted in salvage.

Discussion of hydrology largely focused on 7-day average OMR and 7-day average Qwest during January and February, when larval LFS are most susceptible to hydrologic influence. Conceptually, a more negative OMR increases the risk of larval LFS entrainment into the OMR corridor and the export facilities, while a positive Qwest is theorized to provide a flushing effecting to volitionally move larval LFS downstream.

OMR was less negative than -5,000 cfs during this January and February in the low salvage years and was at -5,000 cfs during the high salvage years. OMR was more negative in the high salvage years, however, the mean of 7-day average OMR, from Jan 1<sup>st</sup> up to the date of first salvage, did not differ enough to entirely explain the difference in salvage. The largest difference in OMR appeared to be the minimum 7-day average from January 1<sup>st</sup> to the date of first salvage. Values calculated for the first days of January are influenced by hydrology at the end of December. As a result, the minimum 7-day average for the high salvage years were more negative than -5,000 cfs despite operating to an OMR no more negative than -5,000 cfs beginning January 1<sup>st</sup> of those years.

The difference in Qwest during the period examined was more pronounced. During low salvage years, the 7-day average Qwest tended to be more positive during January and February. During high salvage years, the 7-day average Qwest tended to be near and below zero during the January and February when Longfin Smelt larvae are hatching and at highest risk of entrainment into the OMR corridor. The mean of 7-day average Qwest was more than one order of magnitude greater in the low salvage years, when averaged over January 1<sup>st</sup> to the date of first salvage. This was interpreted as evidence that Qwest being substantially positive for a prolonged period could mitigate the effects of negative OMR. The SMT does not suggest attempting to manipulate Qwest as a management tool. Rather, the SMT should continue to consider the magnitude and direction of Qwest when assessing LFS risk.

X2 was less informative in predicting salvage in that it tended to be similar during January and February of the four comparative years. It was noted that X2 has been upstream of Collinsville for all of December and January of the current water year. USFWS analysis, previously referenced by the SMT, showed a statistically significant correlation between LFS catch in the Spring Kodiak Trawl and X2. This is consistent with our understanding of LFS life history and indicates that spawning likely occurred further upstream than in wetter years.

During the current water year, OMR has been consistently near -2,500 cfs on a 7-day running average, however, Qwest has been near zero up until the recent storm event. Qwest is projected to reach 10,000 cfs and remain high until the next SMT meeting. The SMT determined that formal advice is not warranted based on projected operations. OMR is not likely to become more negative prior to the next SMT meeting and Qwest is projected to remain positive. However, the SMT cautions against allowing OMR to become more negative than -2,500 cfs given that Qwest has been negative or close to zero for most of this water year.

## **Section 1-A: Sacramento River and Confluence**

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

- Exposure Risk (Hydrology):
  - Longfin Smelt: Low
- Routing Risk (Behavior and life history):
  - Longfin Smelt: Moderate risk of adults moving from the confluence into the Central Delta of their own volition. Adults have been detected in the Sacramento DWSC (SKT 1) which indicates that migration is well underway, and presence of larvae in the lower San Joaquin River indicates that adults have entered the Lower San Joaquin and successfully spawned. A ripe female was detected by EDSM in the Lower Sacramento River on 1/20/2021.
- Overall Entrainment Risk
  - Longfin Smelt: Low

## Section 1-B: Central Delta

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

- Exposure Risk:
  - Longfin Smelt: Low
- Change in exposure from previous week:
  - Longfin Smelt: Risk is similar to last week. Onset of hatching in the lower San Joaquin River exposes larvae to entrainment, however, a substantial increase in Qwest is expected to mitigate the effects on OMR.
- Reporting Old and Middle River Index (OMRI) (*Number and range of OMRI bins will vary based on anticipated hydrology and operations*)
  - OMRI is approximately -2,600 cfs and projected to remain stable through the weekend. Exports may increase depending on the amount of precipitation, water quality and other controlling factors.
  - OMRI (Export Scenario OMRI = -2,500 cfs)
    - Longfin Smelt: Low Risk
      - Qwest has turned positive and is projected to reach and maintain 10,000 cfs for the next several days.
  - OMRI (Export Scenario OMRI = -5,000 cfs)
    - Longfin Smelt: High

## Section 2: Basis for Advice

Note: Other Conditions of Approval not listed here are still in effect. See the 1/26/2021 Risk Assessment for discussion of other Conditions of Approval.

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

#### 8.4.2 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.

### **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.

8.4.2 This Condition of Approval was triggered by the detection of larval LFS at 4 of the criteria stations. Smelt Larva Survey 2 (SLS 2) detected Longfin Smelt (LFS) larvae at 5 of the stations listed in Condition of Approval 8.4.2. Twenty-two were collected at station 809, 8 were collected at 812, 2 were collected at 815, 2 were collected at 901 and 1 was collected at 906. See Risk Assessment above for detailed discussion.

8.5.1 This Condition of Approval goes into effect 1/2/2021.

### 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 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: Water quality
- 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 = Not reported
- Tidal Cycle: Not discussed
- Turbidity: Wind driven turbidity was reported in the vicinity of Franks Tract. OBI reached 14 FNU before decreasing slightly to 12.5 FNU. Turbidity at Freeport increased and may reach 50-60 FNU
- Salinity: X2 is upstream of Collinsville
- Hydrologic Footprint:
  - No new PTM runs were conducted. The SMT received PTM results via email on 1/8/2021 to inform risk of entrainment for larval Longfin Smelt present in the lower San Joaquin River near Jersey Point. Operations are not expected to result in a more negative OMR Index through the weekend The SMT will request a new PTM run at the next meeting once the effects of the recent storm are better understood.

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

- Outages
  - SWP: No export or salvage outages reported for the period of 1/20/2021 to 1/25/2021
  - CVP: No export or salvage outages reported for the period of 1/20/2021 to 1/25/2021
- Exports
  - CCF: 1,500 cfs, exports may increase if conditions allow
  - CVP: 1,650 cfs exports may increase if conditions allow
- Meteorological Forecast:
- Storm Event Projection: Another storm is predicted to arrive in the area at the beginning of next week.

### **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: 10,500 cfs and will likely increase by 3,000 cfs and peak around the 30<sup>th</sup>.
- San Joaquin River flow at Vernalis: 1,400 cfs, and is projected to peak around 2,500 cfs around the 30<sup>th</sup>.
- Qwest: Exceeded 5,000 cfs on 1/28/2021 and could be as high as 10,000 cfs for the next couple of days
- Old River at Bacon Island Turbidity: Reached 14 FNU before decreasing to 12.5 FNU.
- Freeport Turbidity (3-day average): Not Reported
- Expected changes in South Delta Exports: Exports may increase if conditions allow, however, there is a high degree of uncertainty regarding if exports will increase before the next SMT call.
- OMR Index is projected to become less negative as San Joaquin River flow increases. The projected value for 1/29/2021 is -2,400 cfs and may reach -1,800 to -1,900 cfs over the next several days. There is potential for it to reach -4,000 cfs to -5,000 cfs next week. Water quality and other requirements may prevent exports from increasing above current levels.
- NDOI: 14,000 cfs and is expected to peak around 28,000 cfs.



Table 1: Comparison of OMR and OMR Index (5-day and 14-day averages OMR Index reported on SacPAS website, accessed 1/26/2021. Values for USGS gauge data were calculated based data reported on CDEC Website, accessed on 1/26/2021. )

Date	Averaging Period	USGS gauges (cfs)	Index (cfs)
1/29/2021	Daily	-4,000 cfs (1/28/2021)	-2,400 cfs
NA	5-day	NA	NA
NA	14-day	NA	NA

## Section 4: Distribution and Biology.

### 8.1.5.2.B. Assessment of biological information for Longfin Smelt

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

Note: This is a truncated Risk Assessment focusing on Condition of Approval 8.4.2. See the 1/26/2021 Risk Assessment for discussion of other Conditions of Approval

#### **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 is off the water due to COVID restrictions. The most recent Bay Study data was collected in early November and is not likely to reflect current distribution. During November sampling, 42 Longfin Smelt were collected. One was collected in Carquinez Strait. The rest were collected in San Pablo and San Francisco Bays. December Bay Study began 12/01/2020 but was interrupted after two days of sampling. No Longfin Smelt were detected by Bay Study in December.
- Other Surveys: Chipps Island Survey collected 10 LFS (FL = 65 – 105 mm) during sampling conducted from 1/20/2021 to 1/25/2021. EDSM collected one LFS (FL = 71 mm) in the lower Sacramento River on 1/20/2021 that was expressing eggs, and two more LFS (FL = 77 – 88 mm) in Suisun Marsh on 1/21/2021.
- SLS 2 sample collection and processing is ongoing. At the time of the call, 11 samples collected at south and central Delta stations had been processed. SLS 2 reported 22 LFS at station 809, 8 at station 812, 2 at station 815, 2 at station 901 and 1 at 906. Data for station 919 was not yet available.
- 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 reviewed hydrologic data from 4 representative years. See Risk Assessment above for detailed discussion.
- SMT referenced an unpublished USFWS analysis of Delta Smelt and Longfin Smelt. The analysis showed that Delta Smelt catch in SKT was not correlated with X2 and distributed upstream of the confluence from January through May (2002 through 2014). Longfin Smelt SKT catch exhibited a statistically significant correlation with X2.

SMT reviewed larval distribution, salvage trends and hydrology for two high salvage years (2012, 2020) and two low salvage years (2009, 2010).

**Notes:** The SMT ITP Risk Assessments can be accessed on the CDFW [Water Branch website](#).

The SMT discussed the implementation of Condition of Approval 8.5.1 Turbidity Bridge Avoidance which goes into effect 2/1/2021. OBI has exceeded the 12 FNU threshold however, there is no regulatory mechanism to restrict exports prior to 2/1/2021. SMT will look at daily average turbidity at OBI as measured on 2/1/2021 to inform this condition of approval. The SMT discussed the difference between localized and widespread turbidity and determined that current conditions indicate that if the OBI threshold is exceeded it would be the result of widespread turbidity. A hydrologic drive increase in turbidity is possible in the near future due to runoff from the east side tributaries and San Joaquin River.

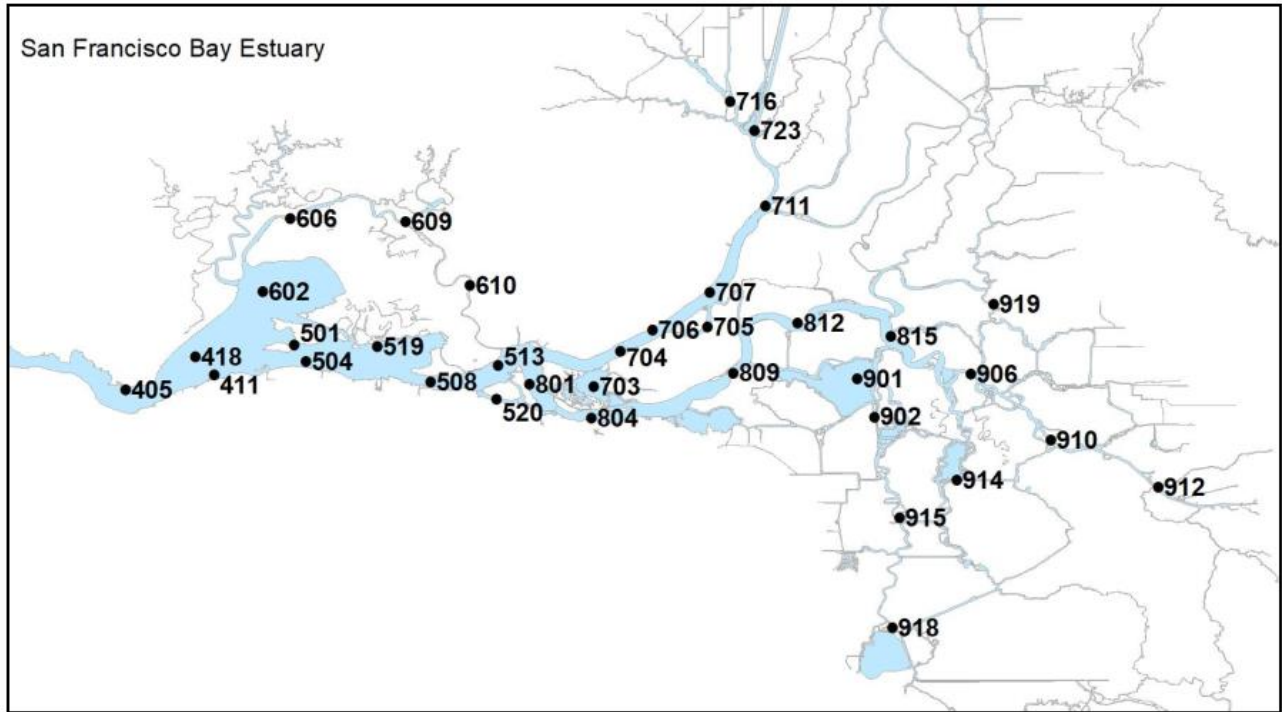
Attachments:

Attachment 1: Longfin Smelt catch per station from 2021 Smelt Larva Survey, Survey 2

Study Year	Survey #	SLS Station	Turbidity	Sample Status	Species	Smelt Catch	Minimum Length	Maximum Length	Average Length
2021	2	405	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	411	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	418	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	501	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	504	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	508	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	513	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	519	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	520	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	602	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	606	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	609	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	610	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	703	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	704	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	705	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	706	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	707	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	711	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	716	NA	Not yet processed	NA	NA	NA	NA	NA

Study Year	Survey #	SLS Station	Turbidity	Sample Status	Species	Smelt Catch	Minimum Length	Maximum Length	Average Length
2021	2	723	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	801	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	804	NA	Not yet processed	NA	NA	NA	NA	NA
2021	2	809	7.6	Processed	Longfin Smelt	22	6	8	7.4
2021	2	812	6.9	Processed	Longfin Smelt	8	7	8	7.4
2021	2	815	4.1	Processed	Longfin Smelt	2	7	8	7.5
2021	2	901	6.0	Processed	Longfin Smelt	2	7	7	7.0
2021	2	902*	7.1	Processed	NA	No Smelt Catch	NA	NA	NA
2021	2	906	3.3	Processed	Longfin Smelt	1	8	8	8.0
2021	2	910	2.6	Processed	NA	No Smelt Catch	NA	NA	NA
2021	2	912	2.4	Processed	NA	No Smelt Catch	NA	NA	NA
2021	2	914	2.0	Processed	NA	No Smelt Catch	NA	NA	NA
2021	2	915	3.2	Processed	NA	No Smelt Catch	NA	NA	NA
2021	2	918	2.0	Processed	NA	No Smelt Catch	NA	NA	NA
2021	NA	919	NA	Not yet processed	NA	NA	NA	NA	NA

Processing is complete through 1/28/2021.



Smelt Larva Survey station locations.