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

Section 1: Overview

Date: 12/05/2023

## **Life Stages Present:**

Delta Smelt (DS): Sub-Adults and Adults Longfin Smelt (LFS): Sub-Adults and Adults

### **Advice to Water Operations Management Team (WOMT):**

No Advice.

#### Risk Assessment:

Delta Smelt: Based on distribution patterns over the past decade and low detections in this water year, Delta Smelt are unlikely to be prevalent in the Central and South Delta. Limited detection data from the past month supports Delta Smelt presence in the lower Sacramento River. The last Delta Smelt observations were on 10/24/23 and 11/15/23 in the lower Sacramento River. The likelihood of Delta Smelt entrainment is low due to seasonal timing. The Integrated Early Winter Pulse Protection (IEWPP) period began on 12/1/23. "First Flush" conditions that would trigger IEWPP regulations are not anticipated this week.

Longfin Smelt: Based on increased survey detections, time of the season, and low water temperature that is conducive of spawning (< 14°C), LFS have likely started their population scale migration into the Delta. Adult and sub-adult LFS have been detected by Enhanced Delta Smelt Monitoring Program (EDSM) in Suisun Marsh and Suisun Bay. One adult LFS has been detected by Chipps Island Trawl on 10/20/23. Fall Midwater Trawl (FMWT) November survey detected two adult LFS in San Pablo Bay and 79 sub-adult LFS ranging from the Lower Sacramento River to San Pablo Bay. San Francisco Bay Study (SFBS) November survey detected three adult LFS west of Suisun Bay, and 86 sub-adult LFS in the Bay-Delta including six sub-adult LFS in the Lower Sacramento River. X2 is relatively high (~90.5 km). Based on distribution data and life history, adults and sub-adults are not expected to be present in the Central or South Delta and therefore are not expected to be at risk of entrainment.

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

Risk of entrainment into the Central Delta and export facilities for Delta Smelt in the Sacramento River and Confluence:

Species and life stage	Risk type	Risk level	Rationale (turbidity, exports, OMR level, X2, Q west, temperature, distribution etc.)
DS subadults and	Exposure Risk	Low	Water temperature is not conducive for
adults	(Hydrology)		spawning. Turbidity and flow are not
			conducive of population scale migration.
DS subadults and	Routing Risk	Low	One sub-adult DS was detected in the Lower
adults	(Behavior and life		Sacramento River by EDSM on 11/15/23.
	history)		
DS	Overall	Low	As above
	<b>Entrainment Risk</b>		

Risk of entrainment into the Central Delta and export facilities for Longfin Smelt in the Sacramento River and Confluence:

Species and life stage	Risk type	Risk level	Rationale (turbidity, exports, OMR level, X2, Q west, temperature, distribution etc.)
LFS sub-adults and adults	Routing Risk (Behavior and life history)	Low	Migration has likely started and several subadults and adults have been detected near or east of Chipps Island. X2 is relatively high (~90.5 km) and water temperature is conducive for spawning (< 14°C). Detection in this region remains relatively low, thus entrainment risk remains low.
LFS	Overall Entrainment Risk	Low	As above

#### Section 1-B: Central Delta

Risk of entrainment into the export facilities for Delta Smelt in the Central Delta:

Species and life stage	Risk type	Risk level	Rationale (turbidity, exports, OMR level, X2, Q west, temperature, distribution etc.)
DS subadults and	Exposure	Low	No survey detections and unlikely to be present in this
adults	Risk		region.
	(Hydrology)		

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

Species and life stage	Risk type	Risk level	Rationale (turbidity, exports, OMR level, X2, Q west, temperature, distribution etc.)
LFS sub-adults and	Exposure	Low	No survey detections and unlikely to be present in this
adults	Risk (Hydrology)		region.

- Change in exposure from previous week: (Note: The change in risk compared to previous weeks is not required by the Incidental Take Permit [ITP]).
  - DS: No changes
  - LFS: No changes
- Reporting Old and Middle River Index (OMRI) (Number and range of OMRI bins will vary based on anticipated hydrology and operations)
  - Relevant Conditions of Approval (COAs) are not active.
  - O Expected daily OMRI range this week: -3,000 to -7,000 cfs

## Section 2: Basis for Advice

The 2020 ITP (Incidental Take Permit for Long-Term Operation of the State Water Project in the Sacramento-San Joaquin Delta 2081-2019-066-00) states that advice to 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.

- 8.3.1 Integrated Early Winter Pulse Protection. Between December 1 and January 31 each year Permittee shall reduce south Delta exports for 14 consecutive days to maintain a 14-day average OMRI no more negative than -2,000 cfs, and convene the SMT within one day of triggering the following criteria:
  - Three-day running average daily flows at Freeport greater than, or equal to, 25,000 cfs, AND
  - Three-day running average of daily turbidity at Freeport greater than, or equal to, 50
    Nephelometric Turbidity Units (NTU), OR
  - The SMT determines that real-time monitoring of abiotic and biotic factors indicates a high risk of DS migration and dispersal into areas at high risk of future entrainment.

After maintaining a 14-day average OMRI no more negative than -2,000 cfs for 14 days, Permittee shall maintain a 14-day average OMRI no more negative than -5,000 cfs, initiating the OMR Management season, until the OMR Management Season ends (Condition of Approval 8.8).

The Integrated Early Winter Pulse Protection Action may only be initiated once during the December 1 through January 31 time period each year.

- 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 initiated, Permittee shall reduce south Delta exports to maintain a 14-day average OMRI no more negative than -5,000 cfs and initiate OMR Management (Condition of Approval 8.3) if:
  - Cumulative combined LFS 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<sup>1</sup> divided by 10, OR

<sup>&</sup>lt;sup>1</sup> The Fall Midwater Trawl (FMWT) Survey annual abundance index for LFS is calculated as the sum of September through December monthly abundance indices and is typically reported at about the same date as adult salvage begins in December. The FMWT Index available beginning on December 1 each year shall be used to establish this threshold.

• 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 SMT staff.

When evaluating the possibility of LFS movement into areas that may be subject to an elevated risk of entrainment, the SMT 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 SMT 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).

8.4.1 OMR Management for Adult Longfin Smelt. From the onset of OMR Management (Condition of Approval 8.3) through February 28, the SMT shall conduct weekly, or more often as needed, risk assessments (see Condition of Approval 8.1.5.2) and decide whether to recommend an OMR flow requirement between - 5,000 cfs and -1,250 cfs to minimize entrainment and take of adult LFS. The SMT may provide advice to restrict south Delta exports for seven consecutive days to achieve a seven-day average OMRI within three risk categories:

- Low risk: OMR between -4,000 cfs to -5,000 cfs
- Medium risk: OMR between -2,500 cfs to -4,000 cfs
- High risk: OMR between -1,250 cfs to -2,500 cfs

If a risk assessment conducted by the SMT determines that a more restrictive OMR flow requirement is needed to minimize take of adult LFS, the SMT shall provide its advice to WOMT (Condition of Approval 8.1.3) and operational decisions shall be made following the process described in Condition of Approval 8.1.4 (Collaborative Approach to Real-time Risk Assessment).

This Condition will terminate when a high-flow off-ramp occurs (Condition of Approval 8.4.3), or when LFS spawning has been detected in the system, as determined by the SMT, or, if there is disagreement and resolution is not reached within WOMT, as determined by CDFW. The SMT shall consider results from Additional LFS Larval Sampling (Condition of Approval 7.6.1) to inform its assessment of the start of LFS spawning. After LFS spawning has been observed, Permittee shall implement Condition of Approval 8.4.2 to minimize take of larval and juvenile LFS.

### **Discussion of Conditions of Approval**

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

COAs relevant to OMR management went into effect December 1<sup>st</sup>. The Smelt Monitoring Team (SMT) conducted a Risk Assessment based on COA 8.1.5.2.

- 8.3.1: Conditions are not likely to exceed the thresholds described in this COA in the next seven days.
- 8.3.3: No adult LFS have been salvaged. The FMWT LFS index for September through November is 288, therefore the salvage threshold to trigger this COA is 8 LFS (assuming standard expansion factor) until it is updated to include the December index.

### 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. Delta Cross Channel [DCC] gate closure and actions such as integrated early winter pulse protection, etc.)
  - o DCC: Closed on 11/27/23. Expected to remain closed for the season.
  - OMR management has not been initiated.
- Controlling Factors: Delta outflow
- Water Temperature:
  - Clifton Court Forebay (CCF) Daily Average Water Temperature = NA
  - 3 Station Average = 12.04°C
- Tidal Cycle: Transitioning from Neap to Spring tide; New moon on 12/12/23.
- Turbidity:
  - 8.3.1 Freeport 3-day average = 3.75 formazin nephelometric units (FNU)
  - o 8.5.1 Old River at Bacon Island (OBI) Turbidity = 2.21 FNU
- Salinity: X2 = ~90.5 km
- Hydrologic Footprint: No Particle Tracking Models were requested.

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

- Outages
  - State Water Project (SWP):
    - 11/28/23 (0110-0135): No salvage due to power outage.
  - Central Valley Project (CVP): None
- Exports:
  - o CCF: 3,000 cfs. Anticipated range: 1,500 to 4,500 cfs
  - o Jones: 1,800 cfs. Anticipated range: 1,800 to 2,700 cfs
- Meteorological Forecast: Warm and dry with fog at start of week; chances of showers and mountain snow on Wednesday and Thursday; a return to dry conditions with a ridge building on Friday through the weekend.
- Six-day Storm Event Projection: NA

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

- DCC Gates position: Expected to remain closed for the season.
- Sacramento River flow at Freeport: 9,610 cfs as of 12/04/23.
  - o Anticipated range: 8,000 to 10,000 cfs

- San Joaquin River flow at Vernalis: 1,260 cfs as of 12/04/23.
  - o Anticipated range: 1,000 to 1,500 cfs
- Qwest: -1,390 cfs as of 12/03/23. Anticipated range: -800 to -3,000 cfs
- OBI Turbidity: No anticipated changes.
- NDOI: 5,410 cfs as of 12/03/23. Anticipated range: 4,000 to 5,500 cfs.
- Upstream releases:
  - Keswick = 5,000 cfs. No anticipated changes.
  - O Nimbus = 2,000 cfs. No anticipated changes.
  - o Goodwin = 200 cfs. No anticipated changes.
  - Oroville = 1,750 cfs. No anticipated changes.

Table 1: Comparison of OMR and OMR Index (5-day and 14-day averages for OMR Index and USGS gauge were reported on SacPAS website, accessed 05 December 2023.

Date	Averaging Period	USGS gauges (cfs)	Index (cfs)
12/01/23	Daily	-3,130	-3,340
12/01/23	5-day	-4,010	-3,990
12/01/23	14-day	-4,100	-3,740

## 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: The last detection was one subadult (Fork length (FL): 57mm) DS in the Lower Sacramento River on 11/15/23. One adult (FL: 60mm) and one sub-adult (FL: 53mm) DS were detected in Lower Sacramento River in October.
- FMWT September to November Index for Delta Smelt: 0
- Delta Smelt life cycle model (LCM) discussion: NA
- Biological Conditions: NA
- % of population in Delta zones: NA
- Smelt Larva Survey (SLS) or 20mm Survey: SLS sampling will begin 12/11/23.
- Experimental release: 14,104 cultured DS marked with green VIE on the left anterior dorsal side were released at Sacramento River near Rio Vista on 11/15/23.
- Salvage: No DS have been salvaged at either facility this water year.

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

• FMWT September to November Index: 288

 In November, two adult (FL: 92-100mm) and 79 sub-adult (FL: 48-75mm) LFS were detected, with the majority in the San Pablo Bay and smaller amounts detected in Suisun Bay, Montezuma Slough, Confluence, and the Lower Sacramento River.

#### Other Surveys:

- EDSM: 36 adult (FL: > 84-111mm) and 191 sub-adult (FL: 52-84mm) LFS were detected in Suisun Bay and Suisun Marsh during the week of 11/27/23 (Table 1).
  Some of the adult sized LFS were not measured in order to reduce handling stress for the broodstock collection (indicated as FL: > 84mm).
- Chipps Island Trawl: The last detection was one adult (FL: 95mm) LFS on 10/20/23.
  - USFWS experienced boat issues last week and was only able to sample on Friday 12/01/23.
- Bay Study: The last detections included three adult (FL: 97-103mm) and 86 subadult (FL: 44-75mm) LFS between the Lower Sacramento River and the South Bay in November.
- SLS: Sampling will begin 12/11/23.
- Salvage: No LFS have been salvaged at either facility this water year.

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

#### Notes:

Attachments: Table 1: EDSM Catch Table

Table 1. Delta Smelt (DSM) and Longfin Smelt (LFS) catch for EDSM 2023 Phase 3 Kodiak trawls on the week of 11/27/23. Only stations with DSM or LFS catch are reported here. These data are preliminary and subject to change.

Date	Stratum	Subregion	Station Code	Species	Mark Type	Fork Length (mm)	Total Catch	Disposition
11/27/2023	Suisun Bay	West Suisun Bay	24-18-SB01	LFS	None	98	1	Broodstock
11/27/2023	Suisun Bay	West Suisun Bay	24-18-SB01	LFS	None	102	1	Broodstock
11/27/2023	Suisun Bay	West Suisun Bay	24-18-SB01	LFS	None	111	1	Broodstock
11/29/2023	Suisun Marsh	Grizzly Bay	24-18-SM02	LFS	None	70	1	UC Davis/DOP
11/29/2023	Suisun Marsh	Grizzly Bay	24-18-SM02	LFS	None	98	1	Broodstock
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	55	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	58	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	60	5	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	61	2	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	62	3	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	63	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	64	3	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	65	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	66	3	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	67	1	UC Davis/DOP

Date	Stratum	Subregion	Station Code	Species	Mark Type	Fork Length (mm)	Total Catch	Disposition
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	68	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	69	4	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	71	2	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	72	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	74	2	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	75	1	UC Davis/DOP
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	75	3	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	76	1	UC Davis/DOP
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	76	1	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	78	2	Released
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	80	1	UC Davis/DOP
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	80	1	Released
11/29/2023	Suisun Marsh Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	83 84	1	Released
11/29/2023 11/29/2023	Suisun Marsh	Suisun Marsh Suisun Marsh	24-18-SM03 24-18-SM03	LFS LFS	None None	90	1	Released Broodstock
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	110	1	Broodstock
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	>84	1	Broodstock
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM03	LFS	None	>84	1	Broodstock
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM06	LFS	None	62	1	UC Davis/DOP
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM06	LFS	None	67	1	UC Davis/DOP
11/29/2023	Suisun Marsh	Suisun Marsh	24-18-SM06	LFS	None	67	1	UC Davis/DOP
11/30/2023	Suisun Marsh	Grizzly Bay	24-18-SM01	LFS	None	67	1	UC Davis/DOP
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	52	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	54	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	55	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	56	4	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	57	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	58	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	59	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	60	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	61	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	62	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	63	6	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	64	10	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	65	7	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	66	5	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	67	1	UC Davis/DOP
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	67	2	USFWS Lab (dead)
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	67	16	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	68	7	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	69	4	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	70	7	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	71	6	Released

Date	Stratum	Subregion	Station Code	Species	Mark Type	Fork Length (mm)	Total Catch	Disposition
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	72	6	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	73	1	UC Davis/DOP
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	73	1	UC Davis/DOP
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	73	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	73	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	74	5	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	75	1	UC Davis/DOP
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	75	6	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	76	6	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	77	5	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	78	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	80	1	USFWS Lab (dead)
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	80	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	82	4	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	83	3	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	85	1	Broodstock
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	85	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	86	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	87	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	92	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	95	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	98	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	101	1	Released
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	>84	1	Broodstock
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	>84	1	Broodstock
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	>84	1	Broodstock
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	>84	1	Broodstock
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	>84	1	Broodstock
11/30/2023	Suisun Marsh	Suisun Marsh	24-18-SM04	LFS	None	>84	15	Released