



# Memorandum

Date: November 1, 2017

To: Scott Wilson  
Regional Manager  
Bay Delta Region

From: James White  
Environmental Scientist  
Bay Delta Region

Subject: 2017 USFWS Delta Smelt Recovery Index – recovery criteria not met

Information from the Department’s September and October Fall Midwater Trawl surveys is used each year to determine if USFWS Delta Smelt Recovery Index abundance criteria and distribution criteria have been met. The 2017 September and October Fall Midwater Trawl surveys have been completed. *This memo briefly describes that the abundance criteria and distributional criteria have not been met.*

The 1995 USFWS Sacramento-San Joaquin Delta Native Fishes Recovery Plan (the Plan) states that recovery of Delta Smelt requires the satisfaction of these abundance criteria<sup>1</sup>: (1) the 2-year average abundance index must not fall below 84 and (2) the abundance index meets or exceeds 239 in 2 of 5 consecutive years. *The abundance criteria have not been met because the 2-year average abundance index is 0.5 and during the last five years the index has never exceeded 239 (Table 1).*

The Plan also states that recovery of Delta Smelt requires the satisfaction of these distributional criteria: (1) Delta Smelt must be present in 2 out of the 11 stations in the North Central Delta (Zone A), 5 of the 9 stations in Sacramento River and Montezuma Slough (Zones B1 and B2), and 6 of the 15 stations in Suisun Bay (Zone C) and (2) distributional criteria must be met in all zones 2 of 5 consecutive years, in at least 2 zones in 1 of the remaining 3 years, and in at least 1 zone in the remaining 2 years. *The distributional criteria have not been met because Delta Smelt were only found at a single station in the Sacramento River (Zone B1) in 2017 (Table 1).*

Lastly, the Plan states that Delta Smelt will be considered for delisting when abundance criteria and distributional criteria have been met consecutively over a 5-year period that includes 2 consecutive years of extreme outflows, one of which must be dry or critical (Sacramento River Indices  $\leq 6.0$ ), the other of which may be wet (Sacramento River Indices  $\geq 11.2$ ). For convenience, Table 1 includes Water Year classifications.

**Table 1. Distribution and abundance of Delta Smelt collected from the September and October Fall Midwater Trawl surveys from 2013 through 2017.**

Year	Number of stations where Delta Smelt were captured in each zone			Delta Smelt Abundance		Water-Year Type
	North Central Delta	Sacramento River and Montezuma Slough	Suisun Bay	Index	2-year Average	
2013	0	2	1	4	8.5	Dry
2014	0	3	0	5	4.5	Critical
2015	0	1	0	2	3.5	Critical
2016	0	0	0	0	1	Below Normal
<b>2017</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0.5</b>	<b>Wet</b>

<sup>1</sup> Plan abundance is summed catch calculated from a subset of Fall Midwater Trawl survey stations, thus it will not match the routine FMWT indices reported for the same months.