

Memorandum

Date: October 23, 2013

To: Scott Wilson
Acting Regional Manager
Region 3, Bay-Delta

From: Julio Adib-Samii
Environmental Scientist
Region 3, Bay-Delta

Subject: 2013 USFWS Delta Smelt Recovery Index

As defined in the 1995 USFWS Sacramento-San Joaquin Delta Native Fishes Recovery Plan, recovery of Delta Smelt requires the satisfaction of both distributional and abundance criteria. Information from the Department's September and October Fall Midwater Trawl surveys is used to determine if these criteria have been met. **Neither the abundance nor the distributional recovery criteria, as described below, were achieved in 2013; a 5-year recovery period will start again.**

Distributional Criteria

To meet the distributional criteria, 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).

Criteria for distributional recovery are as follows:

- 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.

A failure in all zones in any year will result in the start of a new 5-year evaluation period for distributional criteria.

Abundance Criteria

In order for the species to achieve recovery based upon abundance criteria, the Delta Smelt relative abundance index must meet 2 criteria: (1) 2-year average must not fall below 84 and (2) must meet or exceed 239 in 2 out of 5 years. If either condition is not met, the 5-year recovery period will start again.

Length of Restoration and Recovery Period

Delta Smelt will be considered for delisting when abundance and distributional criteria have been met consecutively over a 5-year period that includes 2 sequential years of extreme outflows. However, delisting may not take place until there is reasonable assurance that long term solutions to Delta problems are in place.

2013 Delta Smelt Recovery Metrics

Full distributional criteria were not met and neither abundance criterion was met (Table 1). Thus, a 5-year recovery period will start again.

Table 1. Distribution and abundance of delta smelt collected from the September and October Fall Midwater Trawl surveys during 2009 through 2013.

Year	Number of stations where delta smelt were captured in each zone.			Delta smelt relative abundance		Water-Year Type
	North Central Delta	Sacramento River and Montezuma Slough	Suisun Bay	Index	2 Year Average	
2009	0	1	0	1	1.5	Dry
2010	0	2	3	11	6	Below Normal
2011	1	1	10	55	33	Wet
2012	0	2	2	13	34	Below Normal
2013	0	2	1	4	8.5	Dry *

* Water year type for 2013 obtained from Dave Rizzardo, CA DWR.

CC: Region 3 Bay-Delta
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 Marty Gingras
 Robert Fujimura
 Randall Baxter
 Gregg Erickson
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Attachment: USFWS Delta Smelt Recovery Index (Period of Record)

