

Memorandum

Date: August 1, 2019

To: Gregg Erickson
Regional Manager
Bay Delta Region

From: Timothy D. Malinich, PhD
Environmental Scientist
Bay Delta Region

Subject: 2019 Summer Townet Survey Delta Smelt Abundance Index

The 2019 Summer Townet annual abundance index for age-0 Delta Smelt was 0.0. This is the fourth year in which the age-0 Delta Smelt Summer Townet index was zero. The previous 3 zero indices occurred in 2015, 2016 and 2018 (Figure 1).

Summer Townet conducts 6 Delta-wide surveys in which 31 index and 9 supplemental stations are sampled (Figure 2). The annual index is the average of the first 2 survey indices. Survey indices are calculated by multiplying age-0 Delta Smelt catch at each index station by a station-specific weighting factor. We sum these weighted catches for the 31 index stations and divide the sum by 1000. Catches from 9 supplemental, non-index stations in the Napa River, Cache Slough, and Sacramento Deep Water Ship Channel (SDWSC) are not included in the index.

The first two surveys of 2019 were conducted during the weeks of June 9 and June 23. During the first survey, no age-0 Delta Smelt were collected at index or non-index stations. During the second survey, no age-0 Delta Smelt were collected at index stations and no confirmed age-0 Delta Smelt were collected at non-index stations (data is preliminary).

The low Delta Smelt catch in Summer Townet appears consistent with concurrent June surveys within the Delta. The Delta Juvenile Fish Monitoring Program (U.S. Fish and Wildlife Service) reported catching 5 Delta Smelt (20.7-50mm fork length) in both the lower and upper SDWSC¹. The California Department of Fish and Wildlife 20mm Survey reported catching 2 Delta Smelt in June, 1 in the SDWSC (22mm) and 1 in Miner Slough (17mm; data is preliminary and processing is still ongoing²).

Cc: Jim Starr
Randy Baxter
Kathy Hieb
Lauren Damon

¹ U.S. Fish & Wildlife Service, Delta Juvenile Fish Monitoring Program. July 29, 2019
https://www.fws.gov/lodi/juvenile_fish_monitoring_program/jfmp_index.htm

² California Fish & Wildlife, 20-mm Survey. July 29, 2019. <https://www.wildlife.ca.gov/Conservation/Delta/20mm-Survey>

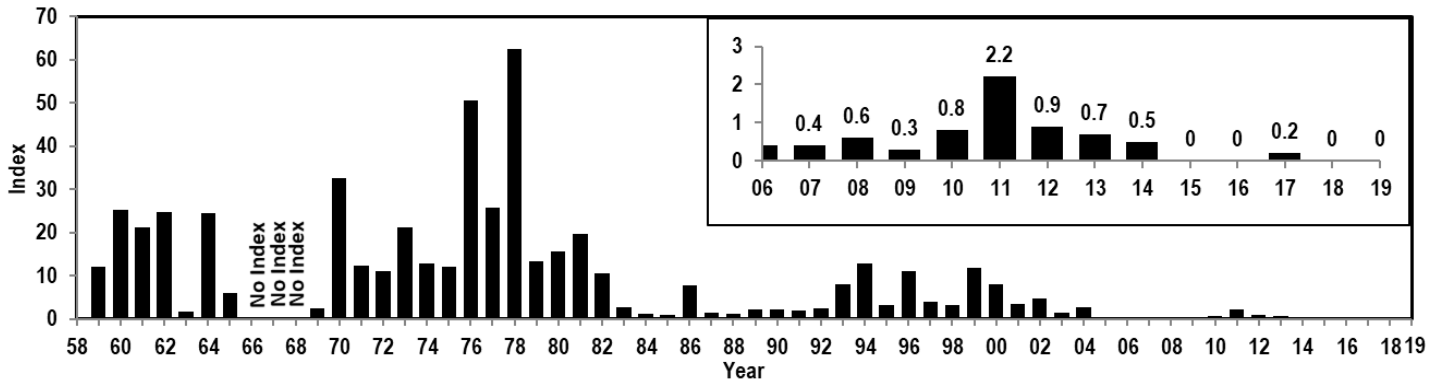


Figure 1. Summer Towner Survey Delta Smelt annual abundance indices from 1959 to 2019 with inset showing indices from 2006 to 2019.

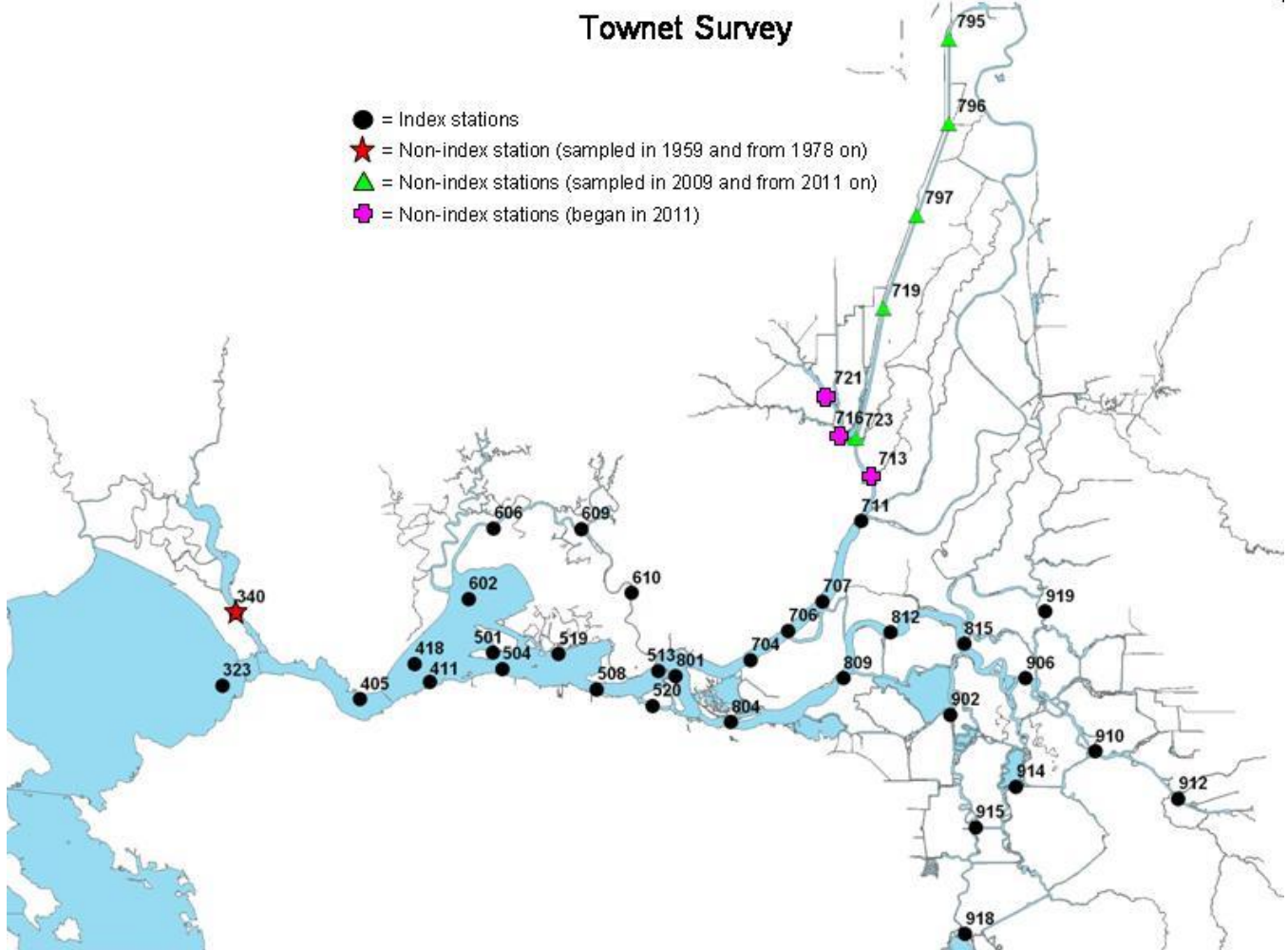


Figure 2. Map of Summer Towner Survey index and non-index station locations.