

## Memorandum

Date: October 5, 2011

To: Carl Wilcox  
Regional Manager, Region 3  
California Dept of Fish and Game

From: Randall Baxter  
Senior Biologist  
California Dept of Fish and Game

Subject: Fall Midwater Trawl September fish abundance and distribution

The 2011 September Fall Midwater Trawl (FMWT) survey was conducted from September 6 through September 20, 2011. We report total catch from index stations and September abundance index by species and plot September abundance indices for all years for comparison (Figures 1-5). Species distributions are reported as total monthly catch by region. The September indices reported represent the 1<sup>st</sup> of the 4 monthly indices that will contribute to the annual FMWT indices. The annual FMWT indices are used to monitor species abundance trends through time.

### **Delta Smelt**

Forty delta smelt were collected in September for a monthly index of 50, which represents a large increase from last year's index of 6 (Figure 1). The September index was already higher than the annual abundance indices since 2005, and higher than September indices for all the POD years (2002-2010).

Delta smelt were collected at index stations in Carquinez Strait (catch=5), Suisun Bay (16), Honker Bay (17), and the Confluence (2). Two delta smelt were collected at a non-index station in Cache Slough.

### **Age-0 Striped Bass**

One hundred two age-0 striped bass were collected in September for an index of 112, a large increase from last year's index of 16 (Figure 2). This monthly index was higher than September indices during all the POD years (2002-2010), except the wet-year 2006.

Age-0 striped bass were collected at index stations in Carquinez Strait (7), Suisun Bay (27), Grizzly Bay (34), Montezuma Slough (5), Honker Bay (10), the Confluence (17), and lower Sacramento River (2). Three additional age-0 striped bass were collected at 2 non-index stations in Cache Slough.

### **Longfin Smelt**

Twenty-eight longfin smelt were collected in September for an index of 68. The 2011 September index increased substantially from the past four years' September indices (Figure 3). Longfin smelt were collected in San Pablo Bay (9), Carquinez Strait (1), Suisun Bay (17), and Grizzly Bay (1).

### **Threadfin Shad**

Forty-eight threadfin shad were collected in September for an index of 67. The 2011 September index almost doubled from last year's index of 37 (Figure 4), but was the fourth lowest in FMWT history.

Threadfin shad were collected in Suisun Bay (1), Honker Bay (8), the Confluence (3), lower Sacramento River (4), and South Delta (32). Five-hundred-sixty-nine threadfin shad were collected at non-index stations in Cache Slough (174) and the Sacramento Deep Water Ship Channel (395).

### **American Shad**

American shad was the most abundant and broadly distributed pelagic fish in September. Three hundred six American shad were collected in September for an index of 413. The 2011 September index more than tripled last year's index of 130 and represents a substantial increase compared to indices since 2006 (Figure 5); however, it remains only half of the average September abundance index.

American shad were collected in every region sampled: San Pablo Bay (24), Napa River (1), Carquinez Strait (26), Suisun Bay (81), Grizzly Bay (6), Montezuma Slough (39), Honker Bay (77), the Confluence (31), lower Sacramento River (18), lower San Joaquin River (2), and the South Delta (1). Two-hundred-one American shad were also collected at non-index stations in the Napa River (1), Cache Slough (83), Sacramento Deep Water Ship Channel (116), and the Mokelumne River (1).

cc: DFG

Marty Gingras, Supervising Biologist  
Bob Fujimura, Senior Biologist  
Kathy Hieb, Senior Biologist

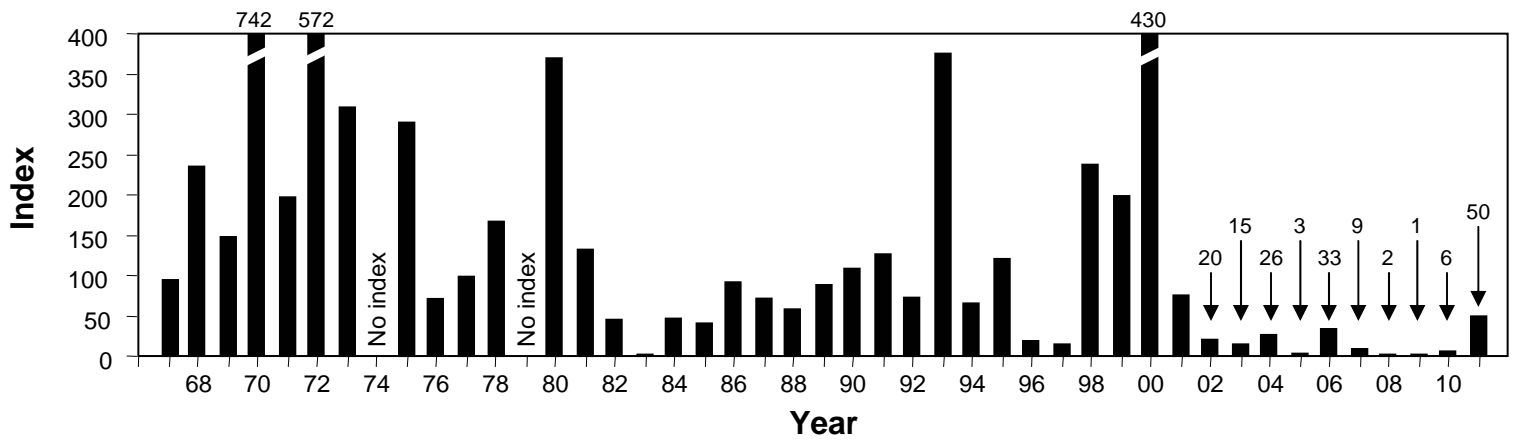


Figure 1 FMWT September abundance indices of delta smelt.

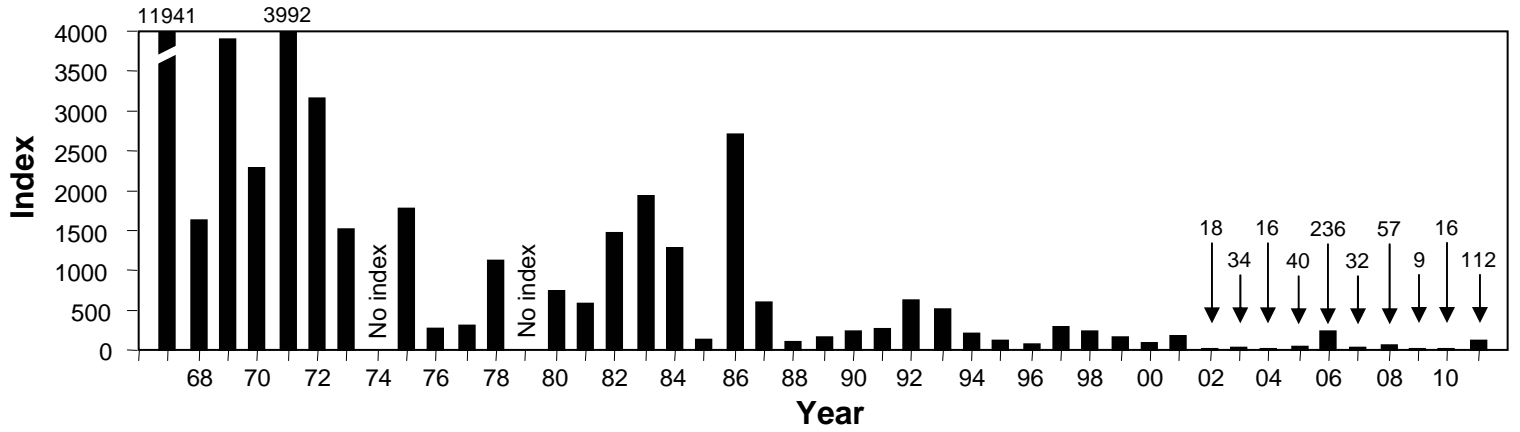


Figure 2 FMWT September abundance indices of age-0 striped bass.

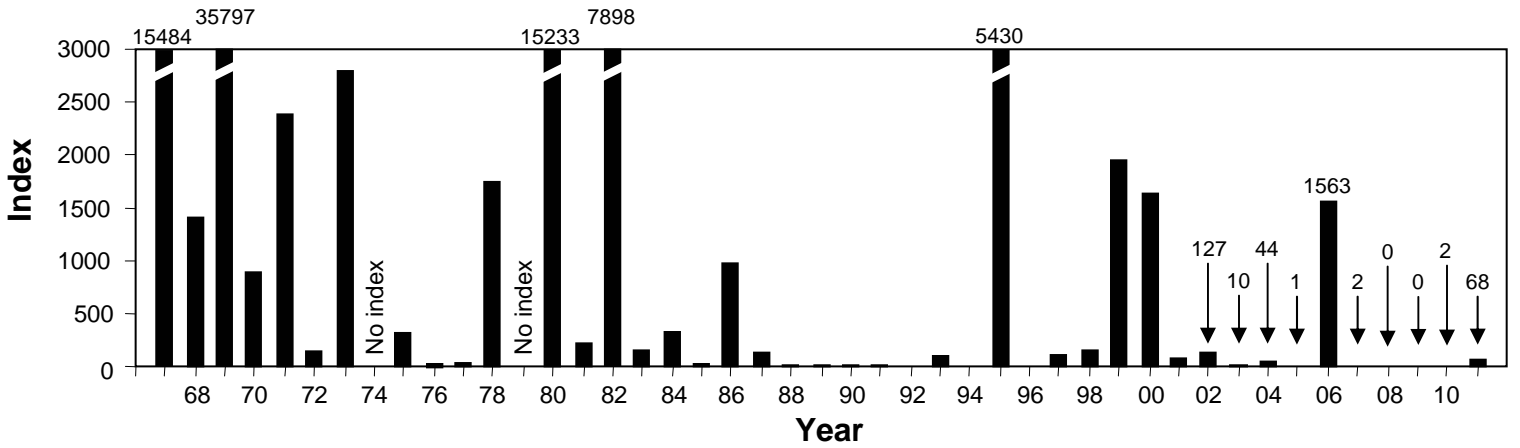


Figure 3 FMWT September abundance indices of longfin smelt.

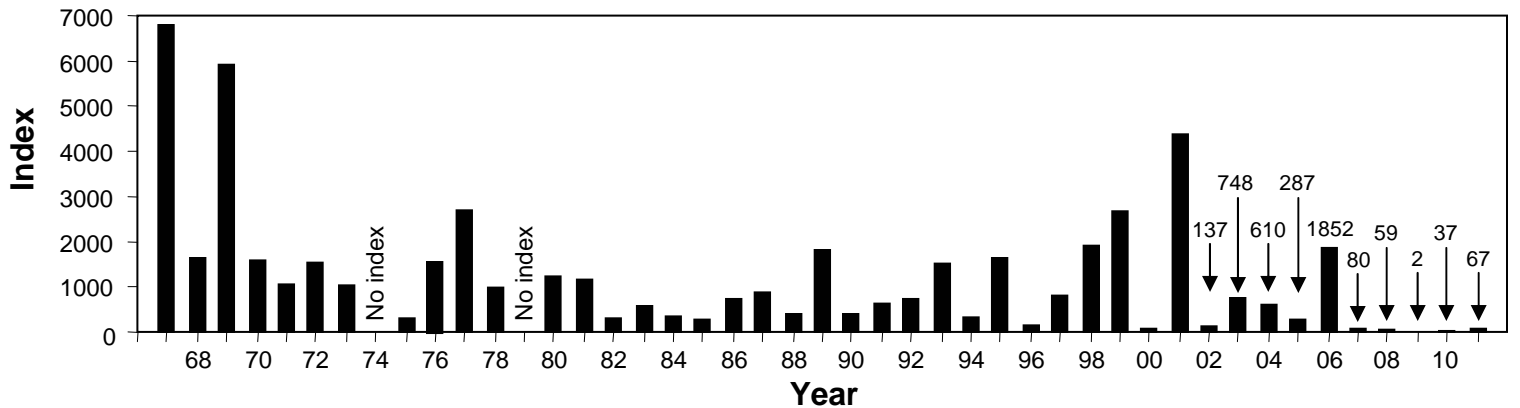


Figure 4 FMWT September abundance indices of threadfin shad.

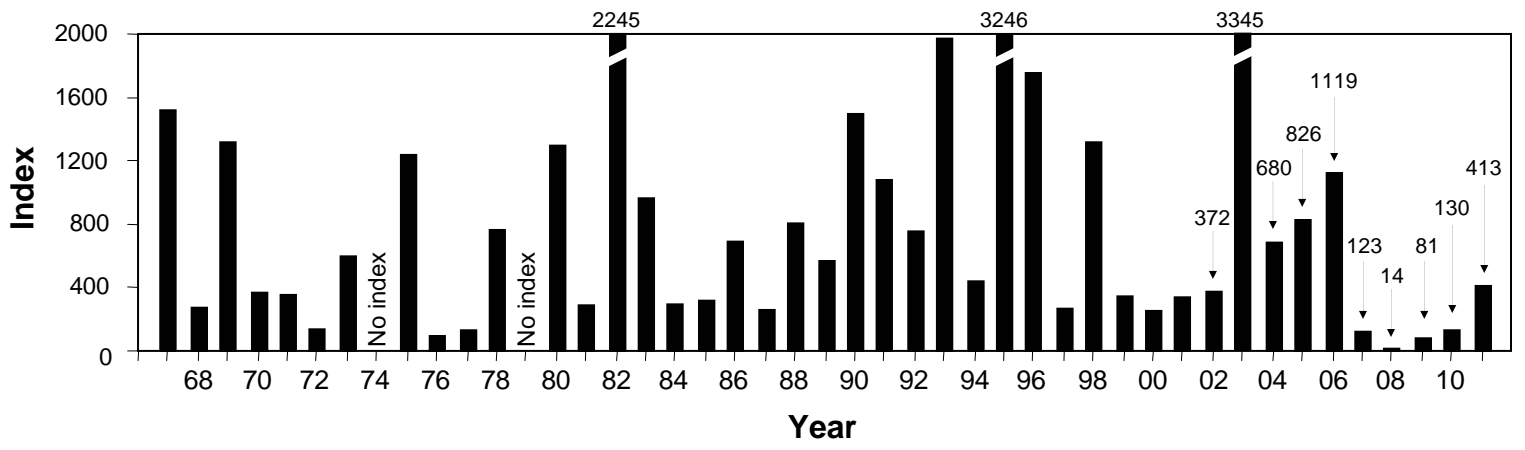


Figure 5 FMWT September abundance indices of American shad.