

Testimony on Causes of the Decline in Striped Bass

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1. There is no doubt that the striped bass population in the Bay-Delta has declined over the past 20 years. The Petersen estimates, the catch per effort index, and the young-of-the-year (YOY) index all show a decline.
2. The strongest statistical evidence for an effect of diversions and changes in flows on the striped bass population is the relationship between flows and YOY index, developed by CDF&G in the 1970s and subsequently modified include adult reproduction and additional months in ways that make intuitive sense.
3. It is reasonable to expect that removal of young affects subsequent adult abundance. This is demonstrated by the relationship between the YOY index and measures of adult bass. Adult abundance is further diminished by entrainment losses after the age of the YOY index. As numbers of adults have declined, egg production has declined, further reducing YOY.
4. The food explanation for the dependence of YOY on flows is discounted by the lack of starving larvae.

5. Evidence in support of the pesticide hypothesis is not compelling because: (a) numbers of young bass have not responded to recent reductions in pesticide discharge, and (b) the quantity of pesticides used is divided by flow in May, hence correlation results may depend on flows.

6. I therefore conclude that diversions and changes in flows in the Bay-Delta are primarily responsible for the decline in striped bass.