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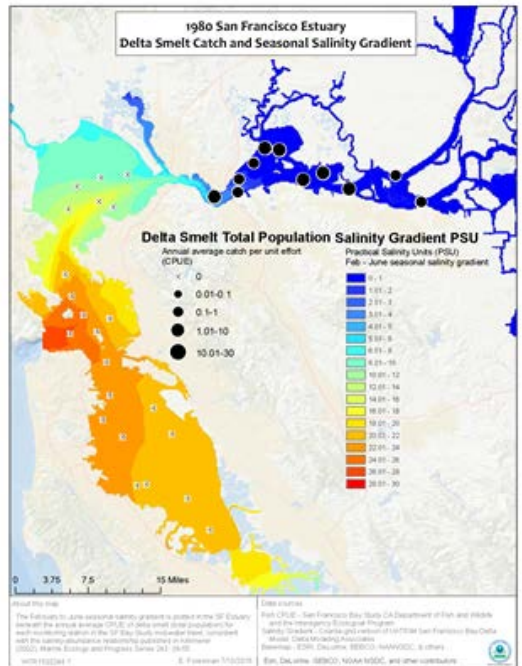
Fish and Salinity in the San Francisco Estuary

EPA created maps for six fish species that show changes in abundance and distribution as they relate to seasonal changes in the salinity gradient over a 33-year time period. The maps visualize established salinity-abundance relationships and show how distribution has changed over time in the San Francisco Bay Delta Estuary.

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The seasonal salinity gradient was simulated by the coarse-grid version of the [UnTRIM San Francisco Bay-Delta Model](#)  and fish monitoring data are from the [San Francisco Bay Study](#). 

The maps show that the abundance of a number of fish species is higher when the low salinity zone is within or westward



Restore

of Suisun Bay consistent with established science.

Community Successes

This work was published in the

SF Bay Water Quality Improvement Fund

journal *San Francisco Estuary and Watershed Science* (July 2016), "[3-D Simulations of the San Francisco Estuary with Subgrid Bathymetry to Explore Long-Term Trends in Salinity Distribution and Fish Abundance.](#)"

Tribal Projects

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Water Quality Improvement

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Seasonal salinity gradient and Delta smelt abundance and distribution from 1980-2012
- [Longfin Smelt juvenile.pdf \(PDF\)](#) (33 pp, 5 MB, July 2015)
Seasonal salinity gradient and juvenile Longfin smelt abundance and distribution from 1980-2012

- [Longfin Smelt.pdf \(PDF\)](#) (33 pp, 5 MB, July 2015)
Seasonal salinity gradient and longfin smelt abundance and distribution from 1980-2012
- [Pacific Herring.pdf \(PDF\)](#) (33 pp, 5 MB, July 2015)
Seasonal salinity gradient and Pacific herring abundance and distribution from 1980-2012
- [Sacramento Splittail.pdf \(PDF\)](#) (33 pp, 5 MB, July 2015)
Seasonal salinity gradient and Sacramento splittail abundance and distribution from 1980-2012
- [Starry Flounder.pdf \(PDF\)](#) (33 pp, 5 MB, July 2015)
Seasonal salinity gradient and starry flounder abundance and distribution from 1980-2012
- [Striped Bass.pdf \(PDF\)](#) (33 pp, 5 MB, July 2015)
Seasonal salinity gradient and striped bass abundance and distribution from 1980-2012

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