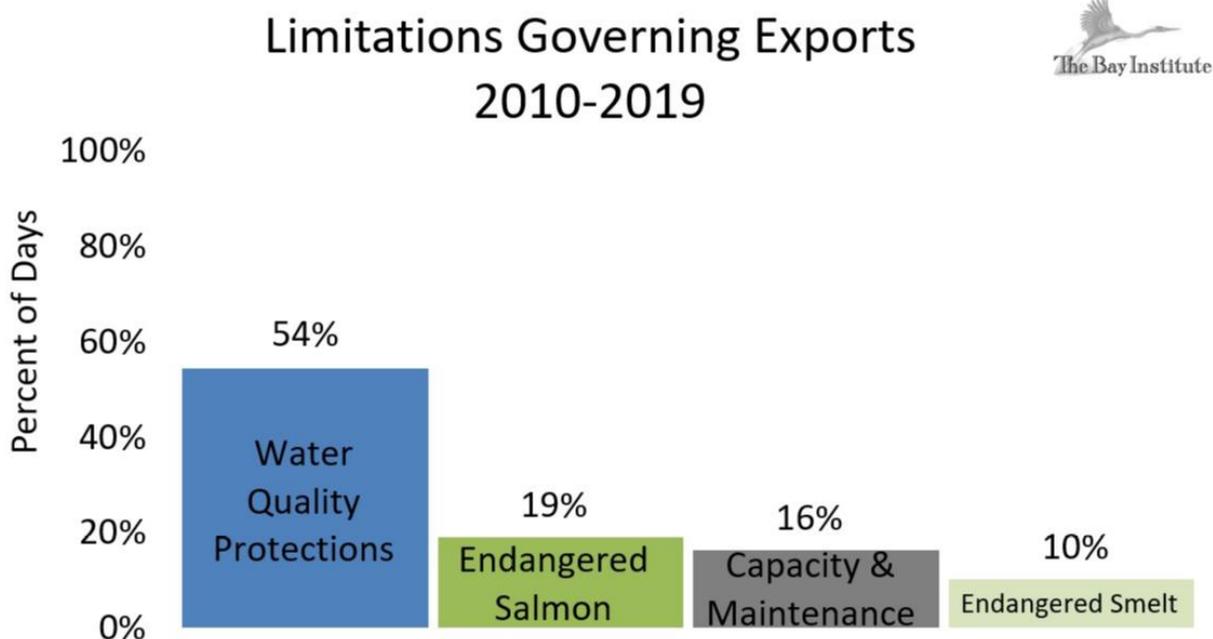


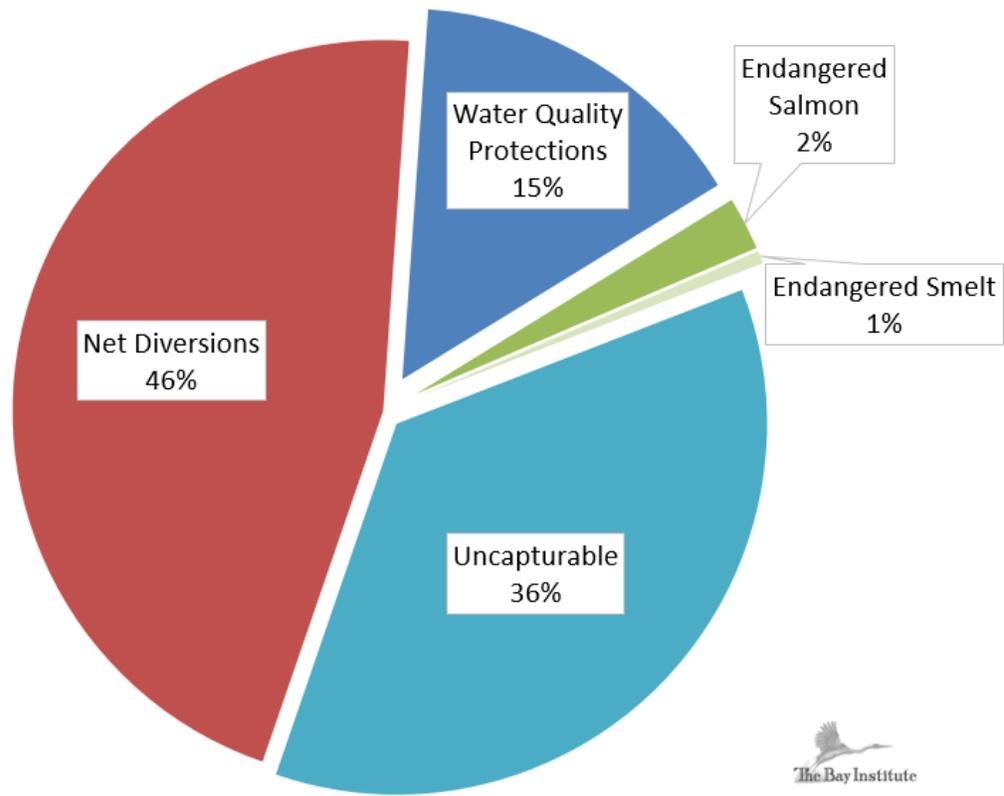
The Facts About Endangered Species Protections and Water Use in California

It's not unusual to hear about claims that federal Endangered Species Act requirements adopted in 2008-9 to protect endangered fish species in California's great San Francisco Bay-Delta estuary have devastated the state's water supply – even shutting down the giant federal and state pumps that export water from the Delta to farms and cities in the San Joaquin Valley and Southern California. **But the truth is that endangered species protections have had relatively little water supply impact, much less than routine actions to protect water quality and maintain pumping infrastructure, and pumping has never been completely shut down for environmental reasons since then.** In 2019 scientists from the Bay Institute, the Nature Conservancy, and San Francisco Baykeeper analyzed Delta exports by the State Water Project (SWP) and Central Valley Project (CVP) and Bay inflow for the 2010-2018 water years. Factors limiting exports were quantified both in terms of number of days and volume. Here we've extended the analysis through the 2019 water year, showing a full ten-year period when both ESA Biological Opinions for salmon and smelt were in effect – before being gutted by the Trump Administration at the end of 2019.



Limitations Governing Exports, 2010-2019: the percent of days that SWP and CVP exports in the Delta were governed by each limitation. “Water Quality Protections” consist of state regulations to protect water quality for a broad array of municipal, industrial, agricultural and environmental uses. “Endangered Salmon” consists of days when exports were limited in order to protect salmon or of days covering both salmon and smelt; “Endangered smelt” consists of days when exports were limited only for endangered smelt. “Capacity and Maintenance” consists of days when pumping was reduced due to maintenance, full canals or reservoirs, or low demand; the only reason export pumps were ever shut down completely were for capacity or maintenance reasons, not for fish and wildlife protection.

End Use of 2010-2019 Central Valley Runoff



End use of 2010-2019 Central Valley Runoff: this pie chart shows percent of unimpaired runoff to San Francisco Bay from its Central Valley watershed. “Net Diversions” consists of total diversions (Delta exports, in-Delta diversions, and diversions upstream of the Delta), minus water reuse, imports from other river basins, and releases from prior year storage. “Water Quality Protections” consist of state regulations to protect water quality for a broad array of municipal, industrial, agricultural and environmental uses. “Endangered Salmon/Smelt” consists of actions to restrict exports to prevent jeopardy to these species. “Uncapturable” consists of flows that exceeded the physical capacity of the SWP and CVP to pump, convey or store exports from the Delta; some of this water also helped to meet “Water Quality Protections” and “Endangered Smelt” needs.

Source: adapted from Gregory J. Reis, Jeanette K. Howard, and Jonathan A. Rosenfield, 2019, “Clarifying Effects of Environmental Protections on Freshwater Flows to—and Water Exports from—the San Francisco Bay Estuary,” *San Francisco Estuary and Watershed Science* 17-1: 1-22. Available at: <https://escholarship.org/uc/item/8mh3r97j>