

Eel River Recovery Project Completes Year-3 of SF Eel River Pikeminnow Survey

The Eel River Recovery Project got major support again in 2018 from the University of California, Berkeley, as four students joined seasoned volunteers, and fisheries professionals to survey 12 miles of the South Fork Eel River, from Rattlesnake Creek to Standish Hickey State Park, to count the non-native Sacramento pikeminnow. This is the third year of the survey, which is establishing population levels and demographics that fluctuate from year to year. The study is being done because of widespread concern about the impact of pikeminnow on native Eel River fishes, particularly salmon and steelhead.



Day-2 dive team: back row (l to r) Wes Slaughter, Phil Georgakakos, Sage Kurnie, and Taylor Schabel from UCB, volunteers Walker Wise and Luke Walker. In front (l to r) is Doug Parkinson, Pat Higgins and Eric Stockwell.

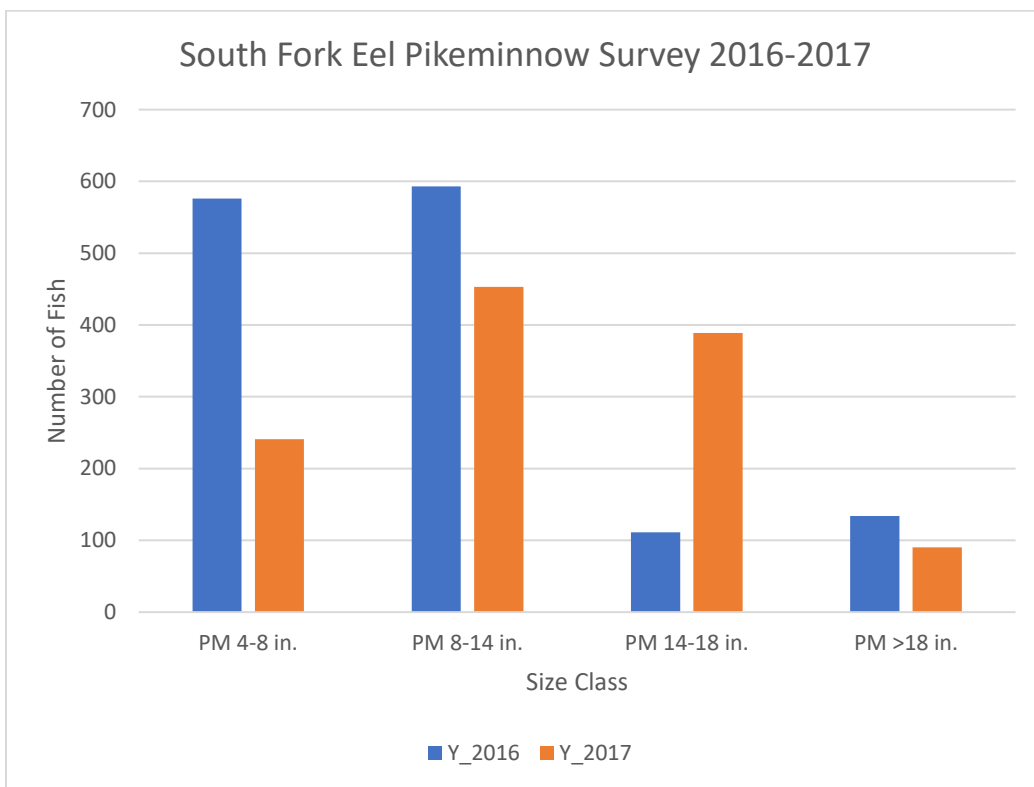


The largest member of the minnow family in North America, pikeminnow get their name from the very large down-turned mouth and their voracious feeding habits. They were released into Lake Pillsbury at the headwaters of the Eel River in 1979, and rose to dominance with a population in the millions during the 1986-1994 drought. Recent basin-wide observations suggest that otters are limiting the pikeminnow population, but that some native fish like sculpin and suckers have not recovered from pikeminnow predation.

Sacramento pikeminnow lying in wait for prey in SF Eel run.

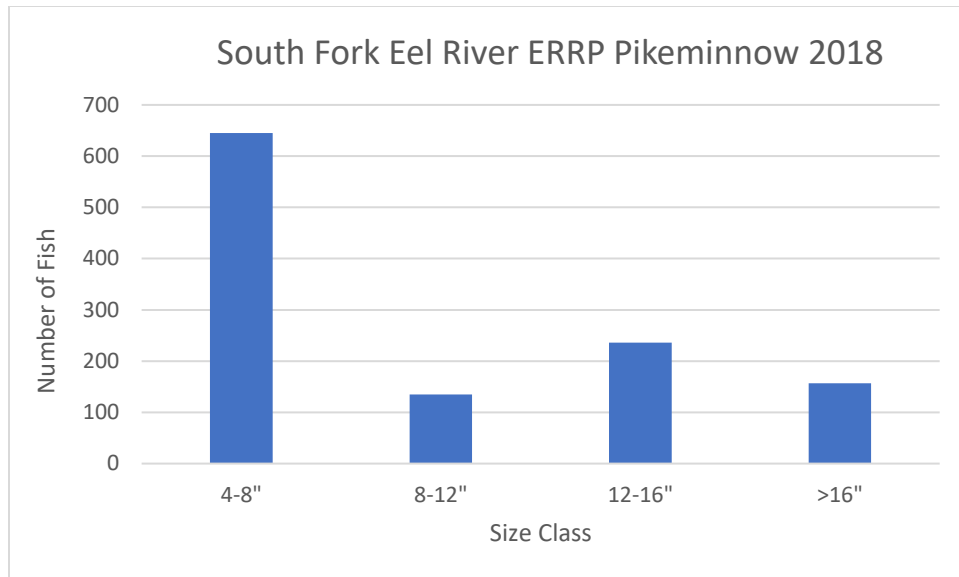
ERRP is being advised by Dr. Brett Harvey of the U.S. Forest Service Redwood Science Lab in Arcata, who has studied Eel River pikeminnow extensively. His diet studies substantiated the problem of large pikeminnow preying upon steelhead juveniles in the upper South Fork Eel River. He has recommended that baseline and trend data be collected, and that larger individuals be harvested to suppress their reproduction and predation. The largest pikeminnow tend to be females that lay tens of thousands of eggs and consume hundreds of native fish per year. The index reach

The population has fluctuated. In 2026 we estimated 1443 pikeminnow; in both 2017 and 2018 we estimated 1173, but the age of the fish has shifted quite a bit. Surveys do not count pikeminnow smaller than 4 inches. In 2016 there were large numbers of smaller fish 4-8 inches and 8-14 inches in length, but far fewer large pikeminnow 14-18 inches or larger. The 2017 survey followed an extremely wet winter that reduced survival of small fish and depressed recruitment, and there was significant drop in fish 4-8 inches and 8-14 inches. Larger size classes increased, reflecting strong recruitment in the drought from 2013-2015, but the largest adults (> 18") decreased from 132 to 104.



2016 and 2017 pikeminnow survey results compared in bar chart.

In 2018 we observed an increased number of 4-8 inch pikeminnow, which indicates a good recruitment year due to low spring flows. Related observations included early onset of cyanobacteria blooms and proliferation of non-native warm water species like green sunfish and bullfrogs. The 2018 survey used different size classes, because Columbia River studies has shown that fish greater than 16" are the greatest consumers of salmonid juveniles. Therefore, 2018 data cannot be directly compared to previous years. The total number of fish over 12" was 393, and 157 were greater than 16". This indicates a high survival rate for larger fish recruited during the 2013-2015 drought and other years dating back to 2008, since the life span of pikeminnow is estimated as a maximum of 10 years.



Pikeminnow by size class during 2018 South Fork Eel River dive survey.



Dive team in formation above Hollow Tree Creek on June 28.

The Wiyot Tribe will be collecting more pikeminnow data on the South Fork Eel this summer and ERRP will help recruit volunteers. Divers can call Eddie Koch at the Wiyot Tribe at 733-5055. ERRP will evaluate methods for harvesting large adults and pursue a permit to harvest them with spears and/or nets in 2019 or 2020. The recent drought has caused an up-tick in large adult pikeminnow and underlines the need for management. There was no dedicated funding for the 2018 pikeminnow dive. Go to www.EelRiverRecovery.org to learn more, to donate or become a member of ERRP and support our work.