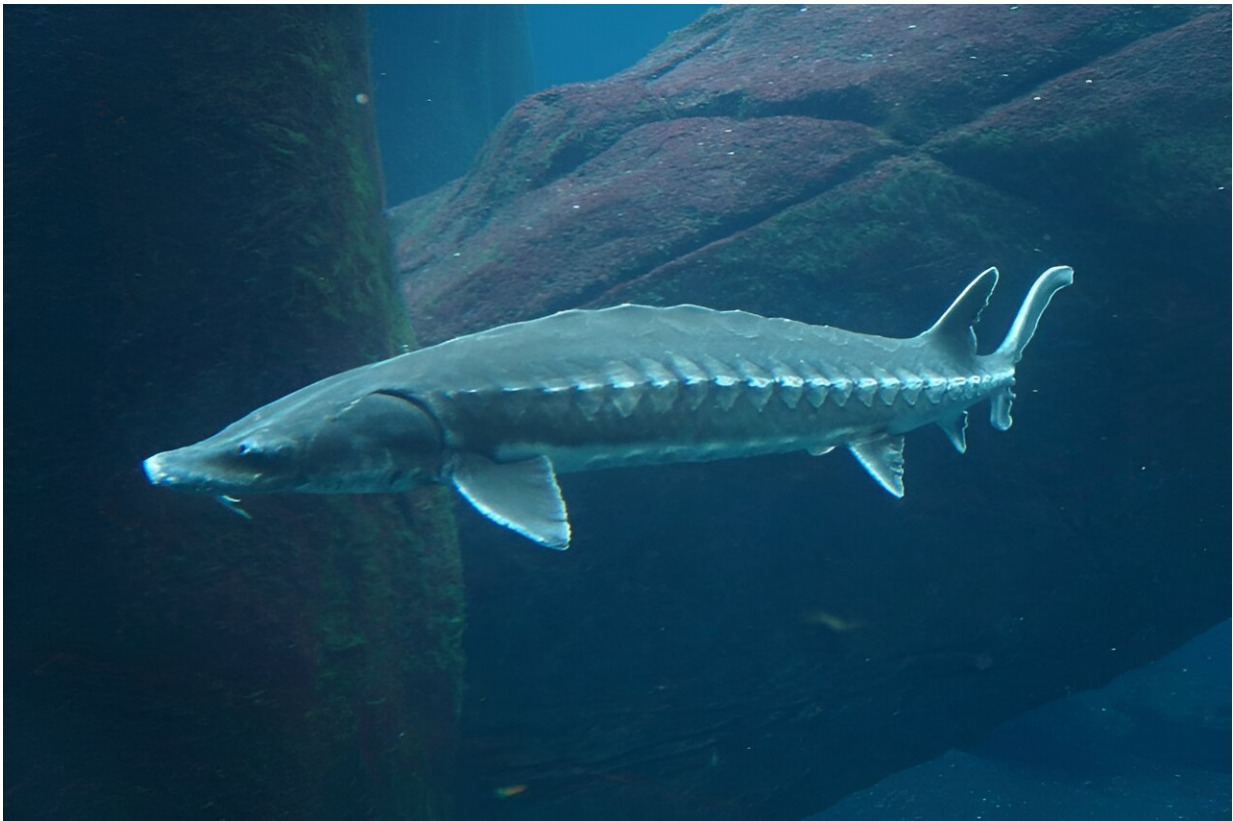


Nation's largest freshwater fish could be added to California's threatened species list

June 27 2024, by Ian James, Los Angeles Times



A white sturgeon. Credit: Wikimedia Commons. [Jiaqian AirplaneFan](#) Creative Commons Attribution [3.0 Unported license](#).

The largest freshwater fish in North America, which was once abundant in California's major rivers and San Francisco Bay, has declined in

numbers to a point that state officials will consider whether to protect the fish as a threatened species under the state's Endangered Species Act.

White sturgeon can grow to more than 10 feet long and spend much of their lives in San Francisco Bay, swimming upstream in rivers to spawn. Some white sturgeon are thought to live as long as a century.

Recent population estimates indicate the fish have been struggling to survive in the face of multiple pressures.

The California Fish and Game Commission voted last week to accept a petition that calls for placing white sturgeon on the state's endangered species list. The commission's decision that protections may be warranted starts a review by state fisheries experts, who are expected to present a report within about a year. The commission will then decide whether to declare white sturgeon a threatened species.

Proponents of imposing protections say the fish are threatened by diversions of water that reduce river flows, harmful algae blooms that can trigger fish kills, and overfishing by recreational anglers. They say the fish are particularly vulnerable because they spawn infrequently—only in wet years that bring high river flows.

The giant size of white sturgeon makes them an outlier among [fish species](#) in the Sacramento-San Joaquin River Delta estuary.

"They're even larger than a mountain lion," Jon Rosenfield, science director for the group San Francisco Baykeeper, said in a speech to the commission. "This is an ancient lineage. White sturgeon diverged from other sturgeon and paddlefish about 46 million years ago. In that time, they've withstood everything that Mother Nature had to throw at them, which makes it particularly poignant that they're having trouble surviving us."

San Francisco Baykeeper and other groups, including California Sportfishing Protection Alliance and Restore the Delta, submitted the petition last year calling for listing the species as threatened.

If the state ultimately declares white sturgeon a [threatened species](#), the protections could further complicate debates over [water management](#) and ecological protections in the delta, the central hub of the state's water system, where pumps fill aqueducts that supply farms and cities across California.

Advocates for protecting the fish argue that the state's plans for infrastructure projects such as Sites reservoir and a proposed water tunnel in the delta would further imperil the species.

"Their population is in decline, and there's an imminent threat to further degrade their habitat by diverting high river flows," Rosenfield told the commission.

He and other conservationists said stresses on the species will probably worsen with climate change.

"They're in bad condition. They've been declining for a while now," Rosenfield said. "So they need protection under the Endangered Species Act."

Representatives of water agencies urged the commission not to accept the petition. Jennifer Pierre, general manager of the State Water Contractors, and Federico Barajas of the San Luis & Delta-Mendota Water Authority said in a letter to the commission that the petition is flawed and incomplete, lacks evidence and "does not rely on the best available science."

They also said the petition ignores regulations that are already in place

providing protection for white sturgeon.

Pierre and Barajas, who together represent agencies that provide water for about 29 million people and 1.9 million acres of farmland, argued that claims the species would be harmed by the Delta Conveyance Project and Sites reservoir are unfounded, and that water diversions for those projects would be subject to state and federal permits and environmental restrictions.

"The current regulatory framework is protective," Pierre and Barajas wrote, adding that available data show the [population size](#) has been stable over the last 14 years.

Others who spoke against the petition run businesses with recreational fishing boats.

The commission's decision means that white sturgeon will temporarily fall under protections while the state considers the petition. Fishing for sturgeon has been allowed until recently based on fish size and other restrictions, but fishing will now be prohibited while the state review is underway.

Other fish species that are currently listed by the state or the federal government as threatened or endangered in the Bay-Delta watershed include longfin smelt, delta smelt, spring-run Chinook salmon, winter-run Chinook salmon, steelhead trout and the distinct population of green sturgeon.

Environmental regulations that are designed to protect fish species at times trigger restrictions on pumping at the state and federal facilities that draw water from the delta.

Sturgeon are distinguished by their shark-like, torpedo-shaped bodies

and rows of bony plates called scutes within their skin. They have been called living fossils because their ancestors swam in rivers and estuaries 200 million years ago, and they survived the mass extinction that doomed the dinosaurs 66 million years ago.

Because of their long lives, the giant fish are also called "the redwoods of the bay."

In the late 1800s, California had a commercial fishery for white sturgeon, but the population soon crashed and the fishery was shut down in the early 20th century.

In 1954, the state opened a recreational fishery for white sturgeon.

Boaters have continued to catch the fish legally under state regulations, which until recently allowed a limited catch of fish 40 to 60 inches long.

Others have turned to illegal fishing for the prized sturgeon roe, selling the caviar for profit. In recent years, some poaching investigations by [state officials](#) have led to arrests.

According to state estimates, the population of white sturgeon that are of a size to be legally caught has declined from between 150,000 and 200,000 in the 1980s to the most recent five-year average of 33,000 fish.

That estimate, however, does not account for losses during an algal bloom in San Francisco Bay in 2022, when white sturgeon were among large numbers of fish that died.

Biologists with the California Department of Fish and Wildlife will conduct the review of the species' status. The process allows officials one year, but they may request a six-month extension to complete their analysis.

The state's population estimates have been calculated through the standard method of catching fish, attaching dime-size metal tags at the base of their dorsal fin, and releasing them. In past years, those who catch the fish have turned in the tags for cash rewards, helping biologists calculate estimates of how many fish there are in the estuary.

"There have been persistent long-term declines," said John Kelly, the statewide sturgeon coordinator for the Department of Fish and Wildlife. "They face a number of challenges."

The review will involve analyzing available data from agencies, academic researchers and other sources, Kelly said, and will also undergo a peer-review process.

White sturgeon can venture from San Francisco Bay into the ocean, but they are thought to spend most of their lives in the estuary. There are other populations of the species in the Pacific Northwest, including in the Columbia River as well as British Columbia's Fraser River.

Rosenfield said one way to help California's white [sturgeon](#) would be to allow only catch-and-release fishing, which is popular on the Fraser River.

"It's been very, very successful. The fish are much bigger than our fish because they live longer," he said.

"People can still enjoy fishing for these fish," he said. "They can enjoy them without killing them."

2024 Los Angeles Times. Distributed by Tribune Content Agency, LLC.

Citation: Nation's largest freshwater fish could be added to California's threatened species list (2024, June 27) retrieved 30 June 2024 from <https://phys.org/news/2024-06-nation-largest->

freshwater-fish-added.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.