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Cook Inlet AQUACULTURE ASSOCIATION

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Northern pike: The Arctic's prize catch is Southcentral's predator

Northern pike are a threat to salmon native to Southcental Alaska. Learn how CIAA works to eliminate this unwanted invader from our waters.

BY LISA KA'AIHUE | JUNE 29, 2022

This small pike was harvested with a belly full of juvenile salmon. *CIAA*

Subsistence and sports fishermen across much of Alaska prize the northern pike. But in Southcentral Alaska, pike are a threat to salmon populations. The Cook Inlet Aquaculture Association (CIAA) works in partnership with other organizations to safeguard salmon from invasive pike in the Cook Inlet area.

Northern pike in Alaska

Pike are native all over the northern hemisphere, including north and west of the Alaska Range. To the south of the Alaska Range, pike are an **invasive species**, which means a nonnative species that causes or is likely to cause economic or environmental harm or harm to human health.

Pike thrive in fresh and brackish waters. They prefer vegetated, low flow, shallow habitats where they can easily hide and dart out to ambush prey. They

are voracious hunters, known to eat smaller fish, insects, frogs, small birds, and rodents.

Pike were **illegally** introduced into Bulchitna Lake in the Susitna Watershed in the 1950s. Since then they have spread throughout the watershed and further into the Kenai Peninsula.

This three-month-old pike is already able to start preying on salmon fry. ***CIAA***

What's the problem with Northern pike in Southcentral Alaska?

In their native range, pike have coexisted for thousands of years with other native species. For example, pike coexist with the world's largest sockeye salmon population in Bristol Bay. The bay's large drainages allow salmon to take advantage of deep lakes and fast running streams to avoid pike.

Southcentral Alaska is full of shallow, weedy habitat. For 11,000 years, these areas have been home to juvenile salmon and trout in the absence of pike. When pike invade these habitats, salmon and trout cannot escape to deeper refuge to hide from the invading predators. Coupled with the fact that pike prefer juvenile salmon over other prey, many salmon populations in Southcentral Alaska are vulnerable to northern pike.

Since its introduction, pike have spread to over 150 systems in Southcentral Alaska. Northern pike have totally replaced once-thriving salmon populations. One example of this was at **Alexander Creek** where invasive pike wiped out a popular Chinook salmon fishery.

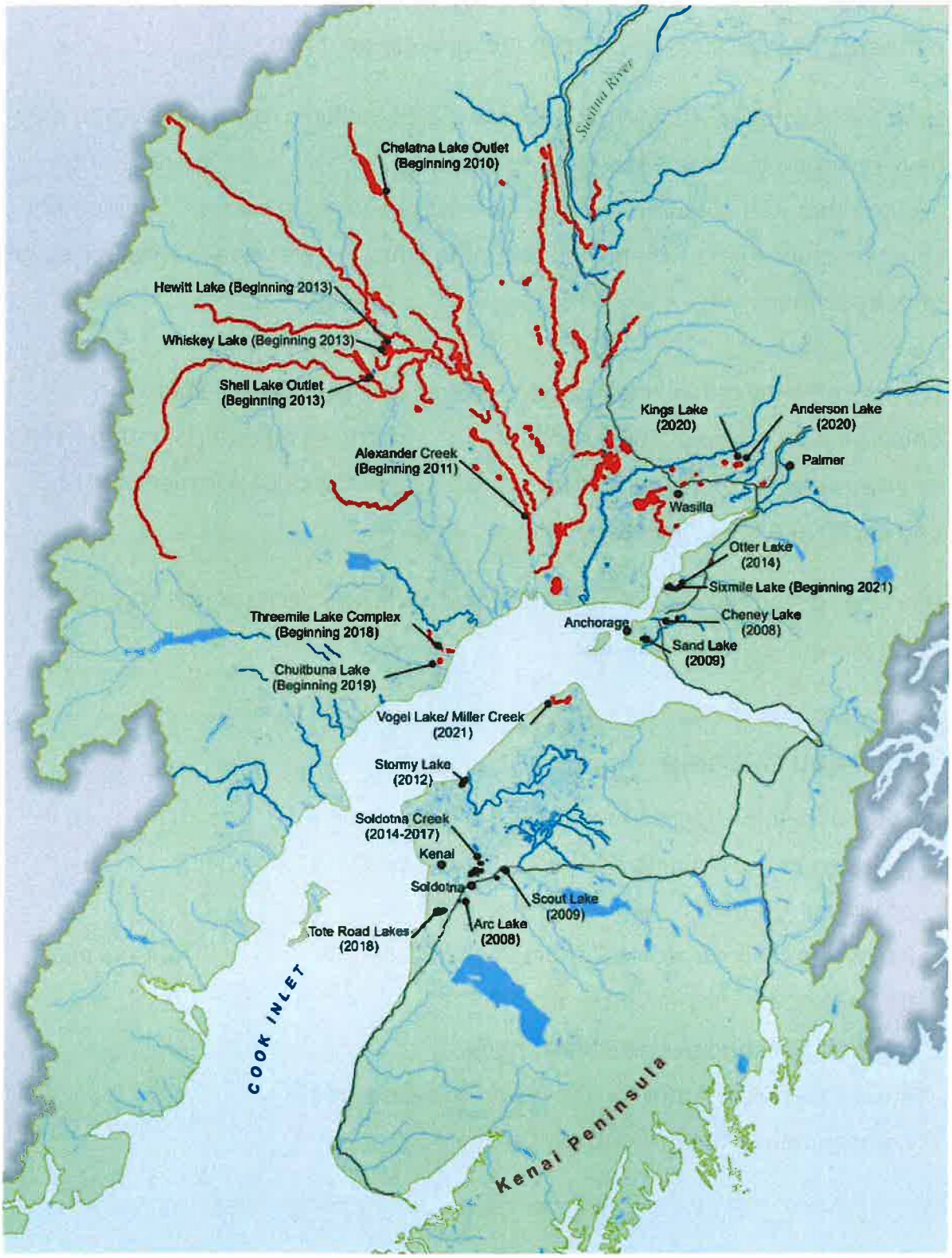
CIAA uses gillnets to harvest northern pike. Here, we are harvesting pike in prime pike habitat at Whiskey Lake. *CIAA*

How does CIAA help stop invasive pike?

CIAA conserves and improves salmon habitat because these habitats are important for ensuring future runs regardless of a salmon's origin in a hatchery or in the wild. Invasive species work is part of our habitat program.

CIAA has monitored juvenile and adult salmon throughout the Susitna watershed. Over the years, we noticed changes in lakes that had northern pike populations. Starting in the mid-2000s, we started investigating northern pike impacts to several lakes.

With the result of those initial studies in hand, we began to focus on Shell, Chelatna, Whiskey, and Hewitt lakes — all of which are or were significant producers of sockeye salmon. At Shell Lake, we are trying to save the native population. Pike and other contributing factors nearly eliminated these fish. We have been using intensive harvesting, combined with the use of our Trail Lakes Hatchery to reintroduce native salmon to Shell Lake.



Northern pike removal efforts in the Cook Inlet region. *ADF&G*

An ongoing effort: Northern pike will never be gone

Due to the interconnectedness of the Susitna watershed, complete eradication is not an option, but we know that suppression of pike populations helps salmon populations. At Chelatna, Whiskey, Hewitt, and Shell lakes, we have harvested over 20,000 pike to keep the population down.

Lead CIAA biologist, Andy Wizik, estimates 2.25 million more adult salmon may have returned to these lakes by removing the pike. This estimate takes into account that each pike removed ate at least one juvenile salmon. The number could be much higher when you account for the pike we've seen with bellies full of baby salmon.

We are currently harvesting northern pike at Whiskey, Hewitt, Shell, and Chelatna lakes through 2023. Much of CIAA's northern pike work is supported by grants and we work with partners such as the Alaska Department of Fish and Game and the University of Alaska Fairbanks.

Working to stop the spread and impacts of invasive species is one way CIAA helps provide salmon fisheries.

How you can help

You can help protect salmon fisheries in the Cook Inlet region by retaining and reporting any pike caught in this region. Reports can be made at: **ADF&G Invasive Species Reporter** or by calling 1-877-468-2748 or by emailing at **dfg.dsf.InvasiveSpecies@alaska.gov**.
You can also learn more in the newly-released pike management plan for Southcentral Alaska.

Get the Plan

STORY BY

Lisa Ka'aihue

Lisa Ka'aihue is the Special Projects Manager at CIAA. Her career has been almost entirely in environmental nonprofits, driven by the desire to protect Alaska's natural resources. She grew up in a commercial fishing family based out of Kenai.

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