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SUSITNA-WATANA HYDRO

Proposed Susitna dam an outdated option, would set salmon back

Rand Hagenstein, Corinne Smith | February 1, 2015

OPINION: Hydropower will continue to have a place in a clean, carbon-neutral energy portfolio for Alaska. But the new era of low-impact hydropower doesn't look like the dams of the past.
Bill Roth / ADN

The recent withdrawal of funding for the Susitna dam project from Gov. Bill Walker's budget recommendations may have clouded the future of the proposal for now. While it's too soon to know the project's ultimate fate, it's not too early to assess what the proposed dam would mean for Alaska salmon.

The Susitna River is home to Alaska's fourth-largest run of chinook salmon. In a single summer you could catch all five species of salmon in its waters. The river supports subsistence traditions, sportfishing and commercial fisheries, and as such, its contributions to the people of Alaska are tremendous.

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At the same time, the facts show that Alaska has plenty to gain from hydropower. It's a clean energy source. It can be relatively inexpensive. Many communities in Alaska -- Sitka, Kodiak and Cordova are among them – rely on small-scale hydropower for an alternative to municipal diesel generators. And of course, in the year 2015, we cannot deny the value of carbon-neutral energy. That's plus, plus and another plus for hydropower.

This is why The Nature Conservancy works with communities, governments and power utilities around the world to help make sure that hydropower is developed and managed in a way that doesn't harm fish and wildlife. This includes working hand in hand with the U.S. Army Corps of Engineers in the Lower 48 to reduce impacts to fish from existing dams. Just last spring, the conservancy joined the U.S. Bureau of Reclamation in a historic effort to restore Colorado River fish habitat with a rejuvenating pulse of water. The conservancy also helps lead the innovative Low Impact Hydropower Institute, a nonprofit led by a diverse array of companies and organizations committed to sustaining hydropower's contributions to the nation's energy grid while reducing its impacts on our nation's rivers.

As Alaskans, we want to know that when hydropower gets developed, it's done in the right way. While we've neither opposed nor supported the Susitna project, we have applied our organization's global hydropower expertise to address an important question for Alaska: How does the Susitna supply what salmon need, and how would a hydropower project as proposed affect the river's ability to provide it? To answer questions such as these, we've recently published the "Ecological Risk Assessment of Large-Scale Hydropower on Braided Rivers in Alaska."

Risk assessments like this gauge how planned megaprojects could affect people and natural resources. In this case, we've specifically addressed how hydropower proposed for the Susitna would affect salmon.

We know, for instance, that dams like the one currently proposed for the Susitna do more than block spawning salmon on their upstream migration. Even though relatively few salmon spawn and rear above the proposed dam site (records confirm some chinook salmon in these waters) it's important to understand that a dam would change the 184 river miles downstream from the dam too.

The Susitna River -- with its mix of side channels, sloughs and deep pools -- provides plenty of spawning habitat. Perhaps more important, the Susitna provides nurseries for developing salmon -- eggs, alevins, fry and smolts. Before salmon can migrate to the sea, they need safe places to grow.

The risk assessment tells us that building and operating a Susitna dam as proposed would mean some immediate changes for salmon. Summer flows would fall below historically recorded levels and could limit the ability of salmon to reach spawning grounds. Winter flows may reach volumes of up to five times higher than historic conditions. Some river sections may no longer freeze, while ice may threaten salmon eggs and young fish by scouring the river bottom in other stretches. We also know that many changes to the river wouldn't affect salmon immediately. But over time, changes to water quality, water temperature and the river's ability to naturally transport wood and sediments will all impose risk on salmon.

Hydropower will continue to have a place in a clean, carbon-neutral energy portfolio for Alaska. But to be clear, the new era of low-impact hydropower doesn't look like the dams of the past. The proposed Susitna dam, as currently designed, would be an outdated option. Let's think creatively, tap our ingenuity and work together to find Alaska's best hydropower solutions. Alaska's future generations are counting on us to do just that.

***Rand Hagenstein** is Alaska state director for The Nature Conservancy. **Corinne Smith** is the organization's Mat-Su program director. The "Ecological Risk Assessment of Large-Scale Hydropower on Braided Rivers in Alaska" is available at http://nature.ly/SusitnaHydroERA.*

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