

# EXTINCTION IS FOREVER

WHY WE NEED TO SAVE THE WILD SALMON



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When salmon spawn and die, amazing things happen. The energy collected over months and years at sea is returned to the very waters they were born in. Their bodies feed the aquatic insects that will feed the next generation of wild salmon. Ravens, eagles, mink and bear will carry bits and pieces deep into the forest. Some of this will find its way into the soil to nourish the roots of ferns, alder and willow, which in turn will shade the creek, and help keep its waters cold through the summer months.

Some of the salmon will be carried into the ragged crowns of ancient cedar and spruce, where eagles have nested for generations. Young eaglets will be fed wild salmon so that they can grow quickly and strong. Some will end up in the canopy of these great trees, where entire gardens exist of wild berries, lichen, moss and liverworts. Below these towering gardens in the sky, wolves will pick up the scent of wild salmon. Coastal wolves have waited all year for their return. Like a bear, these sea wolves depend on these fish, so much so that their coats may turn a reddish hue from their salmon-rich diet. You see, wild

salmon and the cool, clear waters that sustain them breathe life into these places. The fingerprints they leave behind reach far and wide across plants and animals, fungi and soil.

Back in 2010, I had a sticker on my car that read “No Pebble Mine.” As a young, excited freshwater ecology student at UC Berkeley, I soaked up lectures from professors who explained the mine in detail, what was at risk and why the mine should not come to fruition. Even then, nine years ago, it was clear this proposed mine had the potential to ruin one of the last wild places on Earth, where millions of salmon return each year to pour upstream to the very waters where they were born. In their natal waters, each of the millions of wild salmon would reproduce and die, releasing a massive pulse of nutrients that literally feeds ecosystems, from rainbow trout and soil to grizzlies, seabirds, and marine mammals offshore.

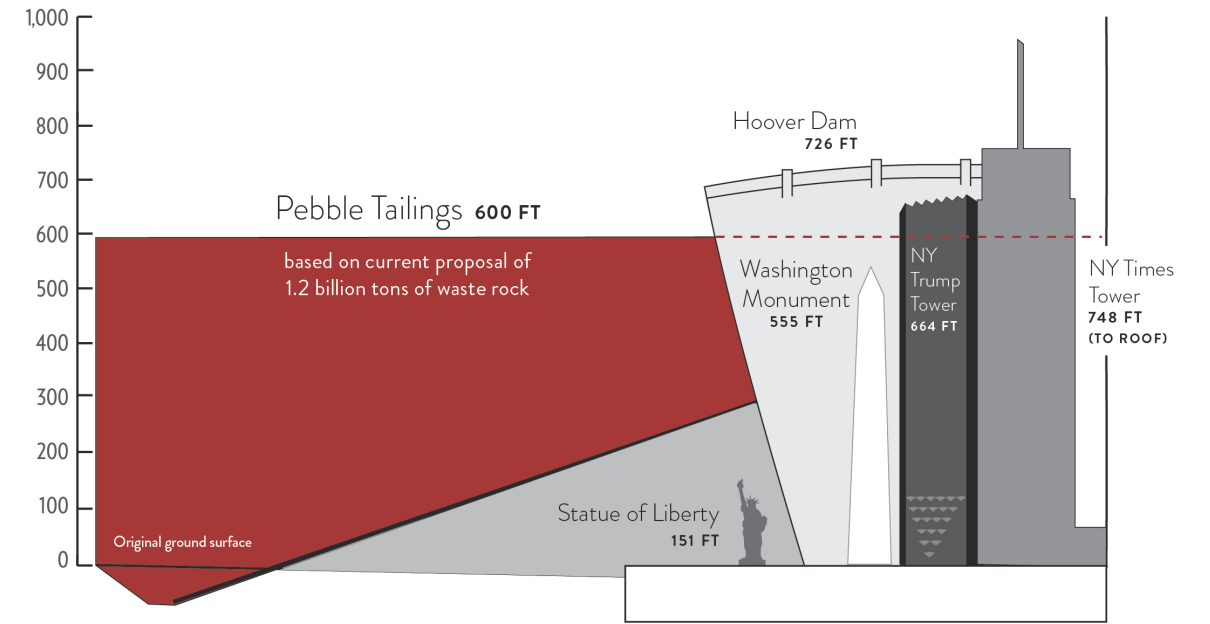
There’s no question that the rapid industrialization and taming of nature is making its mark on the world. Exponential growth seems to be what our world is after, yet a quick review of ecology will tell you

that exponential growth doesn’t exist in the natural world: there are checks and balances to ensure long-term stability.

I’ve been thinking a lot about exponential growth lately, where we have to draw a line in the sand and think to ourselves, “It’s pretty darn good right here, so how can I hold onto this, find balance and establish something sustainable?”

With this in mind, there’s no way the proposed Pebble Mine is sustainable, mindful, or remotely worth the loss of a wild place brimming with life. It’s a place like no other on Earth, where millions of animals thrive, as well as the thousands of people who rely on these wild Alaskan salmon as they have for millennia.

They say hindsight is always 20/20. If this is true, then the obvious always becomes strikingly apparent. I can promise you nobody will look back on this mine in 100 years and say, “I sure am glad we destroyed one of the last great wild salmon strongholds so a massive international mining operation could extract gold and copper!”



Source: Wild Salmon Center

*Having trouble picturing this mine? Illustratively, the proposed Pebble Mine has some striking attributes. Phase I of the proposed Pebble Mine (as described in the Army Corps permit application) includes:*

- A pit over a mile in length, one mile wide and over 650 feet deep; selenium, a heavy metal byproduct of the mining process, will be discharged at levels toxic to fish and wildlife (there is no known treatment for this toxin).
- A 600-foot dam to impound 1.2 billion tons of toxic-waste rock. These impoundments, known as tailings storage facilities (see illustration), would be some of the largest in the world and must impound the tailings forever behind an earthen dam — a highly unlikely prospect.
- Impacts to over 80 miles of salmon streams and nearly 4,000 acres of wetlands near the mine site.
- Destruction of an entire stream that supports coho, sockeye and chinook salmon.
- An 83-mile-long transportation corridor with 65 miles of private two-lane road, an 18-mile ferry crossing, and eight bridges.
- A ferry terminal on Lake Iliamna, located over the most productive sockeye salmon nursery in Alaska.
- A private and large port facility on Cook Inlet adjacent to the McNeil River brown bear refuge and extending more than four miles into the inlet waters — known habitat for sea otters, endangered Cook Inlet beluga whales, humpback whales and seals.
- A 270-megawatt power plant that could open the region to additional mining.
- A 188-mile-long natural gas pipeline over land and under Cook Inlet and Lake Iliamna.
- At closure, the tailings and the pit will have to be monitored and maintained in perpetuity, in a region where seismic activity and extreme weather conditions could trigger a catastrophic dam failure and release toxic mining waste down the Nushagak and Kvichak Rivers — the most productive salmon rivers in Bristol Bay.
- This is likely just the beginning. Phase I of the project (over the first 20 years) will access only 12% of the deposit, most of which is low-grade ore. Are we to believe that they are going to walk away from the remaining 88% and leave the high-grade ore in the ground?





How can this damn mine be a good idea? Sitting back isn't an option. One of the world's largest proposed open pit mines does not deserve a place in the heart of a watershed that sustains the planet's last great wild salmon fishery. An invaluable piece of Earth is once again on the chopping block, guided by blind greed and nothing more.

For nearly 10 years, I studied salmonid ecosystems. I grew up with a stream in my Northern California backyard that supported wild salmon for millennia before they disappeared forever thanks to the Army Corp of Engineers, who transformed our little creek into a cement culvert devoid of life. I was raised in a house that had a small stream running just beyond the back fence. Wild salmon arrived each fall as they had for ages. We spent many days at sea, fishing the coastal waters for wild salmon. We lived just an hour north of San Francisco in a sleepy town nestled in the redwoods. Even there, wild

salmon were a part of the ecology and social fabric. This isn't just an Alaska story, this is a story that has relevance and roots from the far north to Los Angeles, from British Columbia to Kamchatka, from South Korea to Portland and everywhere in between. Salmon are the blood life of the Pacific and have been since time immemorial.

The optimist in my mind says, "Thankfully, we still have Alaska." It's true, my favorite place and time on Earth is August in that state, when the salmon return to the very waters they were born. Millions of them. It's a reminder of what we have to lose, and in turn how much we have to save.

But that notion of, "Thankfully, we still have Alaska" is shortsighted. The plight of wild salmon is representative of the plight of our wild landscapes, wildlife, and the very ecosystems we rely on across the globe. This is a story that touches the waters of Maine,

Scotland and Iceland, where Atlantic salmon live. This story impacts the docks and wharfs from Crescent City to Cordova, and it touches the forests that shade salmon water from the Hoh Rainforest to Santa Cruz and beyond.

What happens when we've destroyed the last wild salmon strongholds, when we look back on our actions and realize a mine was worth less than these animals?

If we can't save one of the world's most important commercially, socially and ecologically invaluable wildlife species, the ecosystems that sustain wild salmon and countless people, how can we steward and protect those species and ecosystems that don't make the headlines, those slipping away out of sight and out of mind? It's a test for humanity, one that will undoubtedly have repercussions that ripple across Earth.