

WWII contaminants on an Aleutian island are a step closer to finally being cleaned up

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Credit: Pixabay/CC0 Public Domain

Richard Ragle looked at the island as the boat pulled up. He'd studied historical photographs of Great Sitkin Island for years, but it wasn't exactly what he expected—some things were bigger and others were

smaller than he had imagined.

The island, nestled into the Aleutians, has grasses that grow so tall they're difficult to walk through. It's green and lush, but has a rugged coastline and a tall ridge often obscured by clouds. And there's a volcano towering above, a snowy peak mottled with ash deposits, Ragle said.

After a summer of field work, Great Sitkin Island is now closer to being cleaned up after functioning as a naval refueling station during World War II and being abandoned.

Ragle is a project manager with the Army Corps of Engineers who works for the Formerly Used Sites program—known as FUDS—in which the U.S. Defense Department hires the Corps to clean up sites where the agency no longer owns the property.

In the case of Great Sitkin Island, it's now owned by the U.S. Fish and Wildlife Service as part of the Alaska Maritime National Wildlife Refuge.

There are more than 100 FUDS projects around Alaska and 77 have been cleaned up so far, with 60 more to go, according to Ragle.

The projects are ranked as a way to guide funding requests for cleanup, Ragle said. After an initial investigation determined the level of risk at Great Sitkin, the project was paused so the Corps could address projects with greater risk, which tended to be closer to population centers.

"Great Sitkin has finally worked its way up high enough on the list that we could request funding for it," he said.

That occurred in 2014, and from there experts analyzed old photographs of the island to try to identify where disturbances occurred, which

ultimately culminated in a 2021 summer of field work on the island, Ragle said.

Workers spent 65 days over the summer investigating the extent of contamination there.

A refueling base, a tsunami and burning fuel

The island was once used as a naval refueling station during World War II. Tanks there stored more than 10 million gallons of fuel.

"Those tanks were not full when the Navy abandoned the facility, but they were not empty either," Ragle said.

Construction on what was called the Sand Bay Naval Station began in 1942. It could accommodate as many as 680 people plus had places to store fuel, but by 1949 only 10 people remained on the island. Naval ships heading west during World War II refueled at Great Sitkin on the way to Japan, Ragle said.

In 1957, a tsunami hit the island. The wave reworked a lot of the infrastructure near the coast on the island, disturbing and resituating things like the dump, buildings and utility poles, said Tim Plucinski, an environmental contaminants biologist with the U.S. Fish and Wildlife Service.

"At least the mess prior to that, I think, was all consolidated in specific areas," Plucinski said. "But after that tsunami hit, I think it kind of mixed everything back up again."

The Navy abandoned Great Sitkin in 1963, according to the Corps.

In order to clean up leaking fuel in the following decade, the Navy

burned it, "in some cases by breaching the sides of the storage tanks with explosives and lighting the pool of liquid with incendiary grenades," the U.S. Fish and Wildlife Service said.

Ragle said that appeared to be a common practice at the time—there are photos of the Navy taking similar measures on Attu Island as well.

"We don't have lots of records for what actually occurred," Ragle said. "But the plan was to release fuel out of the tanks and burn it."

There are some notes that the efforts were successful with some tanks and less so with others, he said.

In the 1980s, the Fish and Wildlife Service found several petroleum spills and seeps as well as lead, chromium and other contaminants in the soil, according to information from the Corps. By the 1990s, the site was listed as a FUDS property, and for several years afterward, different steps were taken toward cleanup through analysis and a few site visits.

Finally, in 2019 a contract was awarded to investigate several features at the site. During the summer of 2021, a contractor worked to figure out how much contamination was left on Great Sitkin.

Investigators sampled soil at the surface of the island, where it's available to wildlife, to figure out the risk to different animals, Ragle said. They also used different techniques to find petroleum underground.

Cleanup completion timeline uncertain

The current project is the first significant effort of its kind at Great Sitkin since the inception of the FUDS program, Plucinski said. It's one of 29 FUDS sites within the Alaska Maritime National Wildlife Refuge, he said.

"The fact is, prior to the Department of Defense's occupation of these sites, they were much more in their native state and with human occupation and then in a lot of cases the military just walking away, I just see that they're taking on the responsibility of cleaning these places up," Plucinski said.

Thick, viscous bunker fuel and fluid heating fuel were found on the island as well as aviation fuel, diesel and gasoline, he said. And while petroleum is the "most prevalent concern on Great Sitkin," there's also concern surrounding lead batteries, metals and solvents as well as questions about whether certain contaminants made it into groundwater and creeks.

There are major seabird populations on and near Great Sitkin, but no major nesting areas, he said. However, the contaminants might impact the habitats of terrestrial birds like lapland longspurs, rosy finches and ptarmigan.

Plus, there are rats on the island. Rats have often been brought to [islands](#) by the military, Plucinski said. In the treeless Aleutians, rats can devastate birds that nest on the ground.

"We talk about a rat spill—we call them spills—being more ecologically damaging than actually the contaminants themselves," Plucinski said.

A [final report](#) about the investigation is still multiple months away, Ragle said, since contractors collected massive amounts of data during the summer.

"But on a grander scale, the site was not as dirty as I personally expected," Ragle said.

Most of the contamination wasn't as deep as he'd initially anticipated,

which should make cleanup efforts easier. Once they figure out the extent and nature of the leftover fuel, Ragle said, they can come up with ways to clean it.

But in terms of when the island will be cleaned up, it's not clear just yet. FUDS projects can take a lot of time.

"It's really important that we clean up the environment," Plucinski said. "And turn it to as close to a natural state as we possibly can."

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