

# Port gets new name, but problems remain



The Anchorage Assembly voted Oct. 24 to rename the Port of Anchorage as the Port of Alaska in a move to emphasize the importance of the infrastructure to the entire state rather than just its largest city. Corroding piles and decades of damage from Cook Inlet ice have weakened Terminal 1, where this past summer a 57,000-pound fender fell off the dock while a cruise ship was in port.

(Photo/Elwood Brehmer/AJOC)

The Port of Anchorage is no more.

No, it did not slough off into Cook Inlet overnight, though parts of it have.

Rather, the Anchorage Assembly changed its name to the Port of Alaska on Oct. 24, a gesture intended to emphasize the importance of the ailing infrastructure to all of Alaska, not just its largest city.

Regardless of the name, the price tag to keep it in service for the next 75 years remains at upwards of \$700 million.

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## Steve Ribuffo

Port Director Steve Ribuffo and External Affairs manager Jim Jager said in a joint interview shortly before the name change that while it has been known for close to 20 years the port needs a massive overhaul, the clock is ticking on the status quo.

Officials at the city-owned port began casing the most corroded steel piles that support the dock with steel jackets in 2004. The pile-patching program has since ramped up to a \$3 million per year operation, according to Jager. To date, about 600 of the piles have been jacketed, which is just less than half of all the piles.

## Jim Jager

The problem is the steel jackets that are helping the port outlive expectations are only useful for about 10 years themselves.

“If you do the math, basically 10 years from now we are going to be closing docks because of load-bearing capacity,” Jager said.

And that’s if an earthquake doesn’t knock it offline sooner.

**Starting in 2004, the most corroded steel piles that support the dock have been encased with steel jackets. The pile-patching program has since ramped up to a \$3 million per year operation and to date, about 600 of the piles have been jacketed. That’s just less than half of the piles at the port. (Photos/Courtesy/Port of Alaska)**

Roughly 2,400 containers cross the Anchorage docks every week, according to Jager, and either finding alternative places to offload them or new ways to get the groceries and other consumer goods they hold to Alaska in a timely fashion is just part of the challenge almost everyone in mainland Alaska would face if the port closes.

The Port of Seward has just one large ship berth and employing it for jobs now taken up by Anchorage would also mean relying on the Seward Highway to get freight to Anchorage and north to the Fairbanks area.

Whittier's port is equipped for rail barges and handles industrial materials and equipment destined for the North Slope and other project destinations. There is also only one way in and out of the small town through a 2.5-mile tunnel that doubles as a railroad and roadway.

"Ninety percent of freight in the state comes via water and half of that crosses this dock and half of what crosses this dock keeps going outside of Anchorage, so we have got a responsibility of being able to maintain that supply chain," Ribuffo said from the port's administrative building, which sits on the dock.

Jager described the situation another way.

"We have marine connects to road. We have marine connects to rail. We have marine connects to air. We even have marine connects to pipeline because we have pipelines to JBER and to Ted Stevens (International Airport) and down to Nikiski," Jager said. "The dock rust issue is a mass disruption issue. The disruption that (the port closing) is going to cause is huge. I don't think we can even begin to describe what it is."

Ribuffo added that the Anchorage port is the state's critical hub — not only for cargo but also disaster response — because it was the only piece of usable infrastructure like it left standing after the 1964 earthquake.

As it stands, load capacities on the port's Terminal 1 have already been reduced because of weakened piles, Jager said, meaning Matson Inc. could not move its container cranes to Terminal 1 and offload there if need be.

Matson and TOTE Maritime each provide twice-weekly service into Anchorage; Matson with containerships and TOTE with roll-on/roll-off trailers made for truck transport.

"We can't even use the big fork lift that they use for setting the gang plank on all of this dock, much less offload containers," Jager added.

Alaska's military installations add another layer to the port's importance. It is one of 19 commercial ports across the country classified as a National Strategic Seaport by the Department of Defense. About 20 percent of the cargo, much of it jet fuel, that crosses its docks is Defense related, according to Jager.

**The Matson containership Kodiak is seen at the Port of Alaska alongside fenders making up the dock facing. Below, one of those fenders is seen**

## **being removed from Cook Inlet after the 57,000-pound structure fell off the dock because of corrosion. (Photos/Courtesy/Port of Alaska)**

In June, a cruise ship was docking at the port when a 57,000-pound fender fell off the dock because the steel supports gave way due to corrosion. Luckily, that was the worst of it.

“On the one hand it was a nothing event. It was a nothing event that cost us \$30,000 but it was a nothing event in terms of nobody got hurt, no trips got missed, nothing was delayed,” Jager said. “On the other hand, guess what, that is one of more than 100 fenders we have and it’s not the only one that has that problem.”

In concept, rebuilding the port is a fairly straightforward, albeit very large, construction project: Replace the pilings and the docks they support in phases to allow the freight vessels, fuel tankers and cement ships that commonly call on the port to — with some inconvenient shuffling — continue to provide Alaskans with the things they need.

In reality, of course, everything is much easier on paper.

While the need to do something soon is clear, Ribuffo, Jager and their colleagues must also convince the skeptics of the new rebuild program that it will not be a repeat of the first Port of Anchorage construction and expansion project, which, depending on who’s talking, failed miserably because of design flaws or construction incompetence.

“It’s a dock replacement project; it’s not an expansion project and we can’t stress that enough,” Jager said.

The Port of Anchorage Intermodal Expansion Project started in 2003 but came to a halt in 2010 after extensive damage to the Open Cell Sheet Pile being installed to support the new docks was discovered. That work, much of which has been or will be removed as part of the new plan, cost roughly \$300 million from a consolidated pool of local, state and federal dollars.

The plan for the Port Modernization Program is to stick with a more traditional pile-supported dock. Built to modern standards, it is expected to last at least 75 years. The first of the current docks were commissioned in the early 1960s and the pile jackets have acted as life support to keep the port going well beyond their 35-year design life.

“Back then — late ‘50s through the mid-‘70s — the piling were 7/16s of an inch thick, hollow, and some of it was left over pipe from the (Trans-Alaska Pipeline) days even, and that was what was used to finish the place over here,” Ribuffo described.

Cook Inlet’s ice sheets and general ice buildup on the supports literally rip cathodic corrosion protection systems off the dock, so the designers of the new dock have decided to quit fighting the corrosion battle, which in salt water is almost always a losing battle anyway.

The new piles will be up to one-inch thick steel and 48 inches in diameter as opposed to the hodgepodge of smaller piles put in years ago. More importantly, they will be filled with reinforced concrete that will act as the main load-bearing structure, meaning the dock will not be compromised as the ocean eats away at the outside steel, Ribuffo said.

The piles will also be driven deeper — up to 180 feet down — into the compacted layers of glacial sediments that act as bedrock to keep the port intact should a severe earthquake effectively turn the topsoil to mud, according to Jager.

Most of the damage caused by the 1964 earthquake in Anchorage was not because of the ground shaking things apart; rather the top layers of soil, comprised mostly of glacial muds, ostensibly liquefied and washed some structures away and left others with no foundational support.

Bigger, stronger piles also means fewer of them are needed, which in a worst-case earthquake means soil, and everything it carries with it, will hopefully flow through the dock and down to the ocean without taking the port with it.

“For the environment up here it makes sense to go bigger and wider and deeper and fewer and you get the same level of support,” Ribuffo said.

## **Phased construction**

The [first phase](#) (PDF) of the modernization project entails building a new petroleum and cement terminal on the south end of the port to replace the weakened Terminal 1, where tankers and cement ships currently offload.

On the north end, a portion of the backlands created during the expansion project and held back by the sheet pile will be removed to open space for TOTE at Terminal 3 and improve current flow past the docks to ease sediment fill issues.

Ribuffo said port officials are hopeful phase one can be done with the \$127 million left unspent from the first construction project.

The Municipality of Anchorage also got \$19 million from seven different settlements in the lawsuit it filed in 2013 against contractors and design firms in the first project. That suit closed in January and the settlement money is being put into rebuilding the port.

A separate suit against the U.S. Maritime Administration, or MARAD, which managed the failed expansion project, is ongoing in federal court. Municipal attorneys have said they are seeking about \$300 million spent on the project under MARAD's watch.

Bringing the Anchorage port up to modern standards does mean widening the docks to about 100 feet and pushing them out 150 feet to reach 45-foot water depths. However, that is all to simply accommodate the larger vessels and dock cranes that are standard equipment in the shipping industry these days.

"It's not more dock, but it's more capacity," Jager said. "We're hurting our competitiveness by forcing them to use smaller equipment."

Subsequent construction phases will rebuild terminals 1 and 2; remove the rest of the northern extension from the prior work; rebuild the second tanker dock and demolish Terminal 3.

With a plan in place, the challenge becomes paying for it.

"Once you've started this you've got to finish it. There's no running out of money halfway through," Ribuffo said.

Preliminary price estimates based on a 15 percent design in late 2014 when the concept was unveiled put the rebuild at nearly \$500 million.

The price is now up to roughly \$700 million at a 30 percent design largely because of issues that have arisen as work has progressed, he said. It also accounts for inflation between now and the end of the work years into the future.

For example, port officials have determined they will have to contract for an additional tug to help the vessels longer than 900 feet that call on Anchorage safely maneuver around the work barges that will be in the water during construction. That will cost about \$25 million during the seven-year project, according to Ribuffo.

His team is also negotiating with the U.S. Army Corps of Engineers for at least partial funding to dredge a channel in front of the new cement dock. The Corps pays all the costs for annual dredging of previously dug areas at the port, but first time dredging is usually the owner's responsibility, he explained.

However, the first design concept had the cement dock farther out in an area that is regularly dredged and for multiple reasons the Corps asked for the dock to be pulled back into shallower water in need of dredging.

Whoever ends up paying for it the first round of digging is an unplanned-for \$13 million, he added.

The port users, Jager noted, could pay for some of the necessary equipment upgrades included in the \$700 million and those discussions are ongoing.

At the time of this writing the Anchorage Assembly had not taken up the matter of deciding on the construction management firm recommended by port officials, so the company remains confidential. Ribuffo said the Assembly was expected to discuss the issue in November, at which point the firm would become public.

The Assembly and both former Mayor Dan Sullivan's and current Mayor Ethan Berkowitz's administrations have leaned on the Alaska Legislature to pay for most of the project as most of the state relies on it in some way, but to no avail.

In December 2016 the Assembly requested \$298 million from the Legislature, but got silence in response.

With the State of Alaska still in the throes of \$2.5 billion-plus deficits annually and the last savings accounts dwindling, there is little appetite for capital spending, even on a project recognized to be as vital as rebuilding the port.

Gov. Bill Walker floated the idea of a \$500 million state general obligation bond package in early 2016 to address the state's most pressing needs, but it didn't get far.

Some legislators have said municipality needs to resolve its litigation with MARAD so it's known what's needed before the state contributes. Ribuffo said he is hopeful the suit can be settled soon, but if not it could drag into late next year or beyond.

That could challenge the window port officials are up against to get the project done before the port rusts away too far, so other funding avenues are being examined.

“Everything is on the table for consideration as par of the solution,” Ribuffo said. “Do we hang a ‘For Sale’ sign on the Port of Anchorage and potentially find a buyer that will come in and take this risk and responsibility off the city’s hands?”

Third parties own other major ports around the country, but who would buy something needing \$700 million of work is an open question.

Ribuffo said municipal leaders are also open to the myriad of public-private partnership options that are available instead of just a straight sale.

To this point, years of federal grant applications hasn’t yielded much, he acknowledged, but they keep trying.

Day-to-day the port is self-sustaining financially, but it has only \$3 million to \$4 million at most to chip in per year, Ribuffo said.

Looking at the port’s fee structure is one partial option.

“We’re not saying by any stretch the state should pay for the whole darn thing. We know there are contributions we can make,” he said. “We still don’t know what any settlement with the federal government would amount to. We do know that in the world of ports we’re a pretty cheap date right now. We’ve got a little bit of room to help ourselves and not scare too many people away. All of that has to be in the package, if you will, that makes this thing happen.”

Jager added that paying for the port through a combination of revenue or general obligation bonds or tariff increases roughly equates to a \$1,200 to \$1,500 “tariff” on each Alaska household over the next 25 years, or the life of a bond. That presumes a tariff hike on the port users would be passed on to consumers through higher freight fees.

The alternative is drastically higher costs and longer waits on everything if the port has to be shuttered.

## **Current business**



Ribuffo expects business to be down about 5 percent in 2017, which is roughly on par with the average decline in Alaska's major industries as the state works its way through the current recession.

Total tonnage across the docks was down about 7 percent in 2016 from a year prior to nearly 3.5 million tons of cargo and petroleum products, according to port records.

"This is a meat and potatoes kind of business that we do here and there's fewer mouths to feed now, so that kind of thing is going to happen," he said of the decline in activity.

However, increased demand for jet fuel from the state's military bases and strong cargo business at the Anchorage airport have helped keep the losses from being more severe, according to Ribuffo.

Those factors, combined with the closing of the Flint Hills North Pole oil refinery, which mainly produced jet fuel used in-state, have nearly tripled the petroleum imports to Anchorage since 2014. Tankers coming into the port now make up nearly half of the port's business, he said.

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