

2016 Atigun Award spotlight: Teamwork, Sag River flooding response
Wednesday, June 1, 2016



It was a perfect storm for a flooding disaster. In the 2014-15 winter, heavy flowrates engorged the Sagavanirktok River, better known as the Sag River. That fed spring 2015's extreme aufeis buildup, which had ice climbing as high as 12 feet. And then came mid-May's record high temperatures, swift snow melt and unrivaled river levels.

In a flash, the Sag River made national news, flooding miles of the North Slope and endangering two of Alaska's critical economic lifelines: TAPS and the Dalton Highway. Both closely parallel the Sag River for long stretches.

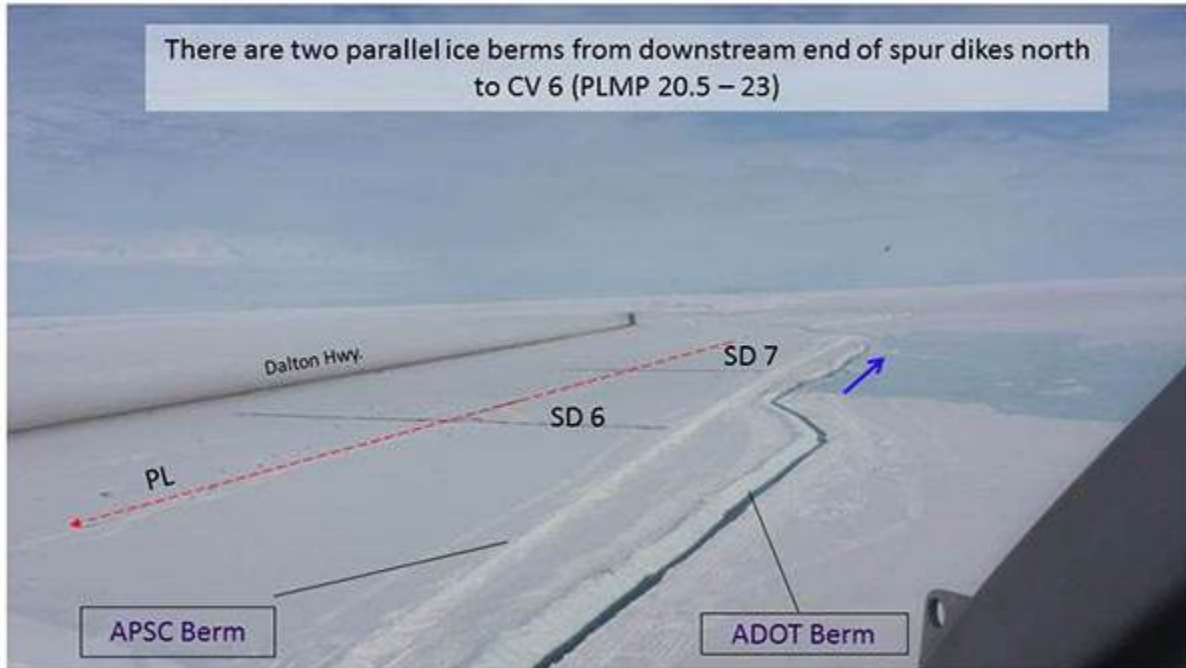
A handful of TAPS workers saw this storm coming. Because of their anticipation, communication and preventative work, TAPS and its fragile environment were spared from what could have been catastrophic damage. For their proactive efforts and monumental cleanup work, a large and diverse group of TAPS workers are being recognized with the 2016 Atigun Award for Teamwork.

The recipients embody teamwork: they represent many disciplines from many TAPS groups at many locations. Award winners acknowledge additional Alyeska and TAPS contractor staff (right of way workers,

engineers, environmental coordinators, surveyors, security, operators, laborers and more), as well as the State of Alaska's Department of Transportation, the University of Alaska Fairbanks' Water Resources Department, and other support organizations.

"This was a significant event and the right people stepped up when they needed to and protected the pipe," said Chuck Southerland, Alyeska Right of Way Integrity Manager who nominated the group for the Atigun Award. "The other great thing is that even with all that work and pressure, there were no safety incidents or accidents."

Berm at Downstream End of Spur Dikes



As the waters rose ...

Ross Oliver and Jim Criner, Pump Station 1 Pipeline & Civil Maintenance Coordinators, and Alex Lai, a Senior Civil Program Engineer and river/flood plains expert based in Fairbanks, know the Sag well. In late February, they recognized all the warning signs and knew an extreme flooding event was coming.

They were especially concerned about valves and below-ground piping between Pipeline Mileposts 19-23. There, the pipeline runs on the east side of the Dalton Highway between the road and river while a smaller fuel gas line runs along the west side of the highway.

"The sheer energy of that river and the flooding waters could expose the pipe and then bend or buckle it," Lai said. "And that would be a bad day."

With the threat eminent, the trio joined others and launched a plan to bolster pipeline protection and complement the existing sets of 9-foot-tall, 1,000-foot-long spur dikes near TAPS. Baseline crews were dispatched to build large ice berms to block the brunt of the flooding and dig 8-10 foot trenches to divert floodwater away.



"We only had about two weeks to plan and prepare, survey a route to trench, make sure it was safe to operate 100,000-pound equipment on ice and then mobilize the right people and equipment," said Lai. "Because of our great working relationships and communication, we were all able to move swiftly and make this work successful."

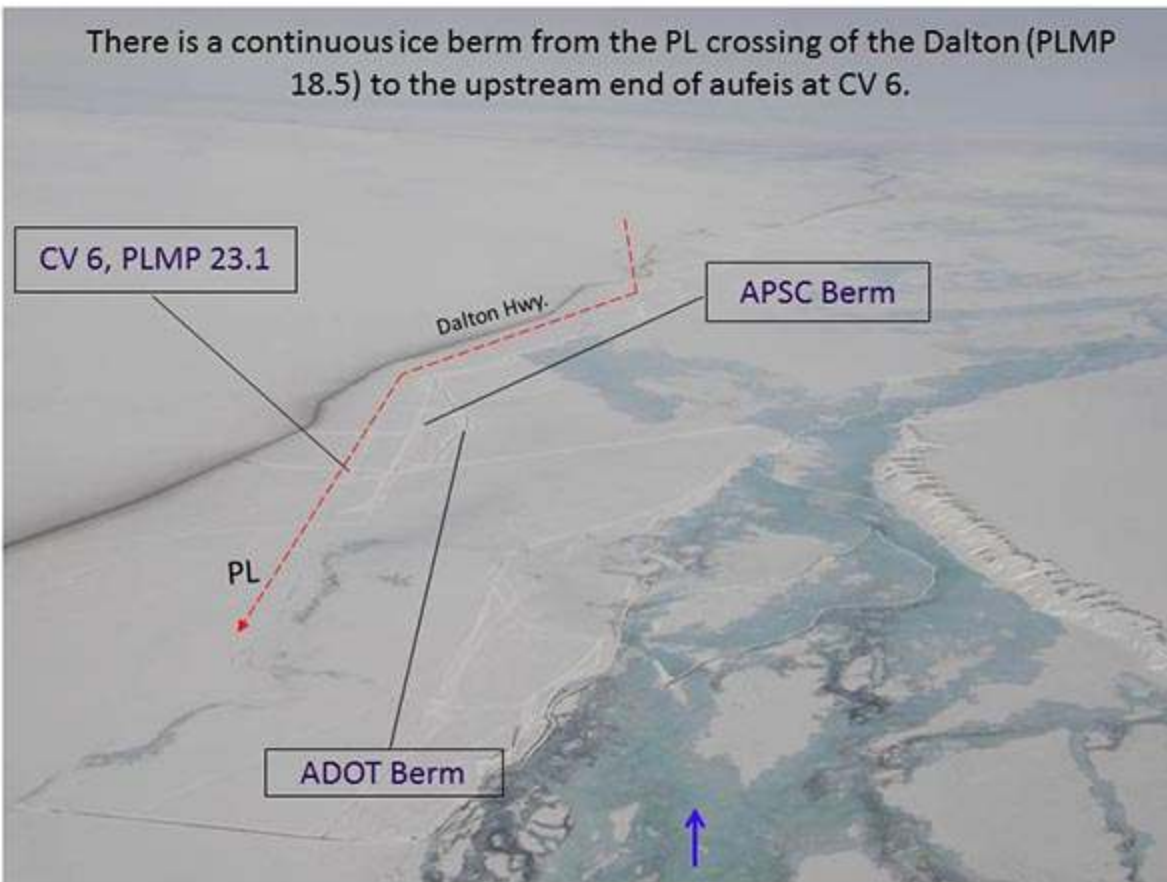
On May 17, their predications came true. A spring breakup that usually spans a month exploded over three days of severe warmth and melting. With the surge blocked by downstream ice, the flooding returned back upstream and spread across the tundra. Water found a low spot on the 10-foot-high Dalton Highway near Milepost 22. There, it oozed across the road and deteriorated the highway so much it forced a three-week closure.

"I've never seen anything like that flooding in all my years up there," said Adam McAllister, a baseline foreman.

The ice berms and trenches around TAPS did their jobs and the impact was minimal.

Lai added: "The berms and trenches did very well. The areas we were concerned about the most didn't have any pipe exposed. We had some spur dike damage, but that's what they are there for – to obstruct things from getting to the pipe."

PLMP 22 Aufeis Overview Sag. River – May 3, 2015 Looking North



When the waters cleared ...

Because the waters jumped the Dalton Highway, some below-ground portions of TAPS and the smaller fuel gas line on the west side of the road closer to Prudhoe Bay were unexpectedly swamped. Water movement was tame compared to the raging action on the east side, though, and while parts of the pipeline and fuel gas line were exposed, they went undamaged.

Infrastructure like the right of way, access roads and pads weren't so lucky, though. When the water receded, baseline crews shifted from preventative efforts to recovery work that lasted for most of the summer.



"Putting the pieces back together was an enormous task," said Oliver. "I think we hauled 68,000 cubic yards of rock, gravel and riprap through summer. That's about 20 times normal baseline summer work. I have to give the crews and baseline foremen a lot of credit. They accomplished a lot on top of the usual activities

they do every year, and they did so safely."

Those receiving Atigun Awards for Teamwork are Alyeska's Pipeline & Civil Maintenance Coordinators Jim Criner (PS1), Ross Oliver (PS1), Frank Duncklee (Fairbanks), Nathan Green (PS4/Fairbanks) and Daryl Beeter (PS4); Alyeska's Senior Civil Program Engineer Alex Lai (Fairbanks); Alyeska's Oil Spill Coordinators Earl Rose (Glennallen Response Base) and Ben Pennington (PS1); additional Alyeska staff Don Richardson, Shaune O'Neil, Tom Coghill, Isabel Edwards, Dave Allen, Oliver Fleshman, Lorena Hegdal and Jack Dupier (former Alyeska); Houston Contracting Company's Baseline Foremen Thomas Jurasek (PS5), Phill Huelskoetter (PS4) and Adam McAllister (PS1); Athna Projects staff Scott McIlroy, Dave O'Donnell, Gary Hall, Josh Howitt, Garrett St. Clair, Chris Vaden, Joshua Bartholomew, Bret Bradley, Mike Boston, John Britt, Albert Creach, Richard Draper, Josh Goodlataw, Rosie Gibson, Anthony Giovanni, James Howard, Gearold Kinsman, Scott Lawhon, Eli Nicholas, Steven Parker, Craig Peters, Byron Phillips, Mike Rainwater, Federico Salinas-Johns, Mark Still, Wilmer Thomas, James Trapp, Wallace Wynia and Joseph Waggoner; Hamilton Oil Field's Dwight Stuller, Jay Nelson and Brian O'Dowd; Price Gregory's Ken Yockey, Greg Erickson, Bud Gish and Ayden Smith; TEAM Industrial's Josh Bell; Coffman Engineering's J.D. Weyers, Cynthia Cacy and Andrew Roche; Merrick's Butch Toms and Greg Johnson; and Hawk's Gary Dillon and Arnold Bell-Lincoln.