

Emergency Response at Pipeline Milepost 199.5, Dietrich River Bank Erosion (May-June 2019)

During a TAPS river and floodplain surveillance on Thursday, May 23rd, 2019, aggressive bank erosion was discovered on the Dietrich River near PLMP 199.5. An estimated 25-50 feet of bank buffer between the pipeline right-of-way and the left/easterly riverbank had been lost during Breakup, with 80 feet of buffer remaining to the above ground pipe supports and to the near/westerly edge of the pipeline workpad. Very warm weather and channel changes towards the east side of the floodplain had caused the bank erosion. Flows had been very high for over a week due to rapid snowmelt.

In response to the aggressive nature of the bank erosion and continued high flows, Alyeska immediately stockpiled riprap on the west side of the ROW between the pipe and the river bank as a preventive measure to intercept and arrest the eroding bank should it continue to erode towards the pipeline.

Over the next few days, another 8 feet of bank was lost with the remaining buffer (riverbank to pipeline) measured at between 77 and 82 feet wide. The riprap pile was increased in length to 185 feet long, all on the upland buffer area along westerly edge of the workpad. The westerly/riverside toe at the north end of the berm was 63 feet from center of pipe (station 10533+69), and the toe at the south end 61 feet from PLCL (station 10534+88). The stockpile encroached outside the 42' ROW boundary about twenty feet along its length.

During May 28th, the river claimed all of the upland buffer at this location on the left bank of the river. During this time, approximately 600 cubic yards of material (200' long x 30-40' wide x 2-3 feet deep) was added to the pile in the uplands and 500-1400 cubic yards of rock was placed at water's edge to stabilize the about 400 feet of bank where the river was actively undercutting. The placement was facilitated by a wedge that had broken off from the bank creating a temporary obstruction in the current in the area of the damaged bank.

Once the bank stabilized, a rock key-in at the upstream end was added and dress up work continued at a slower pace completing with respreading of the organics in mid-June. 2480 cubic yards of riprap was placed and 380 cy of gravel.

This emergency response work stabilized the bank and repaired some of the upland buffer that had been lost.