

# Talkeetna River



# Condition of Improvements

## 31 December 2022

### Talkeetna River, Alaska

(CWIS No. 072746)

**Authorization** Flood Control Act, 3 July 1958 (House Doc. 34, 85th Congress, 1st Session) as adopted, provides for bank protection by rip-rapping 1,660 feet of river bank downstream from the Alaska Railroad bridge and for construction of an armor rock dike 1,200 feet in length to divert river flow from the bank.

**Previous Authorization** Flood Control Act, 24 July 1946, under Section 14, for emergency bank protection work, as adopted, provides for the stabilization of 1,500 feet of river bank by construction of a brush and natural timber fascine along the southern bank of the Talkeetna River about 1,000 feet in length downstream from the Alaska Railroad bridge.

**Table 1**

Existing Project	Length ft.	Width ft.	Height ft.
Revetment	1650		
Dike	1150	8 (top)	4

**Project Usage** The permanent project continues to provide adequate flood protection for the city of Talkeetna.

#### Progress of Work

1951	Work on the original project begins in March and is completed successfully in May by contract at a cost of \$24,586.
1970	The permanent project carries an "inactive" classification during the economic life of the emergency improvement.
1975	A restudy indicates that the emergency project is no longer adequate. A General Design Memorandum is prepared in February for the existing permanent project.

## Progress of Work

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1979	Construction of the permanent project begins in June, is completed in September, and turned over to the Matanuska-Susitna Borough for operation and maintenance in October. The improvement is subject to periodic inspection by the Corps.
1992	The inspection report indicates the formation of a sand and gravel bar along the original timber fascine.
1993	An inspection in September finds no deficiencies in either the original work or the permanent project.
1998	The project is found to be in satisfactory operational condition.
1999	An inspection in July finds 60 feet of the downstream end of the dike under attack from the Talkeetna River; minor erosion is apparent but not significant.
2000	Despite Borough repairs to the downstream end of the dike, an additional area (6' x 100') has suffered erosion upstream of those repairs. Locals have been notified.
2001	Repair is made to the dike by local interests. The project is in good condition.
2002	The annual inspection finds the project in good condition, June 2002.
2003	The Corps' inspector describes the project as being well maintained and in good shape.
2004	Corps inspector finds that 150 feet of the downstream section of the dike has significant erosion along the toe and needs repair. The inspector also recommends that vegetation on the main revetment be cut. Local authorities have been notified.
2005	Repairs recommended in last year's report were not completed at the time of the September inspection. An additional 20 feet of dike are recommended for armoring. Approximately 100 feet of revetment near 2nd Avenue appears to be undercut; this erosion needs to be monitored. Some repair with armor stone is also recommended at two locations along the revetment top.
2006	The Corps' inspection found that the prior year's damage to the toe of the armor revetment along the Talkeetna River segment of the project was well repaired. It was recommended that brush on both the Talkeetna River and the Susitna River segments of the project be cut.
2012	A site visit in October found the entire crest of the dike was completely intact with no signs of failure other than some minor scouring. Material was lost along the dike at the toe from 330 to 530 ft. south of the railroad bridge and at the southwest end of the dike where it keys into the bank at the confluence of the Susitna and Talkeetna Rivers. A site visit in November found a major growth of trees and brush growing on the training dike and revetment. Conversations with Borough representatives found that the dike was completely submerged during the break-up flooding this year.

## Progress of Work

2013	Inspection performed in July notes heavy vegetation growth and damage to facine pilings.
2014	Inspection performed in August notes vegetation removal in progress and active erosion along the entire length of the dike. Armor stone repairs with a weighted toe were recommended.
2017	Inspection performed in September notes no significant change from the previous inspection of dike and revetment. Community repaired dike extension to original extents using the original rock specifications.
2018	Inspection performed in June notes active erosion at end of dike extension repair and scalloping of dike extension at water line. No significant changes in dike and revetment from previous inspection.
2019	Inspection performed in August notes movement of armor rock along dike due to boats tying up along dike to bolted D-rings into armor rock, increased erosion at the end of the dike extension repair, and erosion at the toe of the revetment bend. Vegetation had been removed from the crest of the revetment. It was recommended that boat moorage be prohibited along the dike and armor stone repairs performed.
2021	Inspection performed in June notes that most of the dike's toe was underwater due to high flows/stage. The part of the toe stone that was not underwater was visibly eroding at the riverbank. The top of the dike has several areas of missing stone and is highly vegetated.

**Table 2 Cost to Date**

Project	Description	Cost \$
072746	CG Appropriation	516,694
	CG Costs	516,694

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Upstream view of the rock revetment and the railroad bridge, August 2019



Downstream view of the rock revetment, October 2014