CLEAN WATER ACT SECTION 404 (b)(1) EVALUATION
U.S. ARMY CORPS OF ENGINEERS

PROJECT: Skagway River Levee Repair

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PROJECT DESCRIPTION: The USACE proposes to repair the Skagway River levee in Skagway, Alaska. The Skagway River levee protects public infrastructure as well as residential, commercial, and historical properties from flooding by the Skagway River. The levee was constructed between the years 1939—1940 and was damaged by significant flood events in 2022. Damages included a severe loss of the levee toe and riverward armor stone. If the levee is not repaired, erosion will continue. The Skagway Airport runway could become unusable, which could result in a potential loss of life.

The proposed repairs to the levee would include the placement of new rock to restore the level of protection to that of the original design. A small amount of quarry run rock would be placed to restore the design slope and a more substantial quantity of armor stone would be placed to restore the width of the levee and enhance scour protection. Levee reaches where the toe of the existing levee is buried by the natural aggradation of sand would be excavated to allow access to the levee toe. The specific repair needs of the levee vary by reach, but the generic project description is substantially comprehensive. Typical section views of the levee repair by reach are shown in Figure 1. A plan view depiction of the levee repair is shown in Figure 2.

The rock would be provided by the contractor and subject to Corps specifications. The Corps assumes the rock would be sourced from an existing local quarry. Approximately 40,000 cubic yards of armor stone and 5,000 cubic yards of quarry run rock would be required to repair the levee. Approximately 15,000 cubic yards of sand would be excavated to allow access to the levee toe. The excavated material would be used to construct sacrificial berms on the sandbars to temporarily divert floodwater away from the levee. The excavated material would be restored to the toe of the levee after construction is completed.

The construction work would be substantially completed by shore-based equipment. Work would take place during the winter to minimize impacts to aquatic resources and minimize impacts to construction due to flooding.

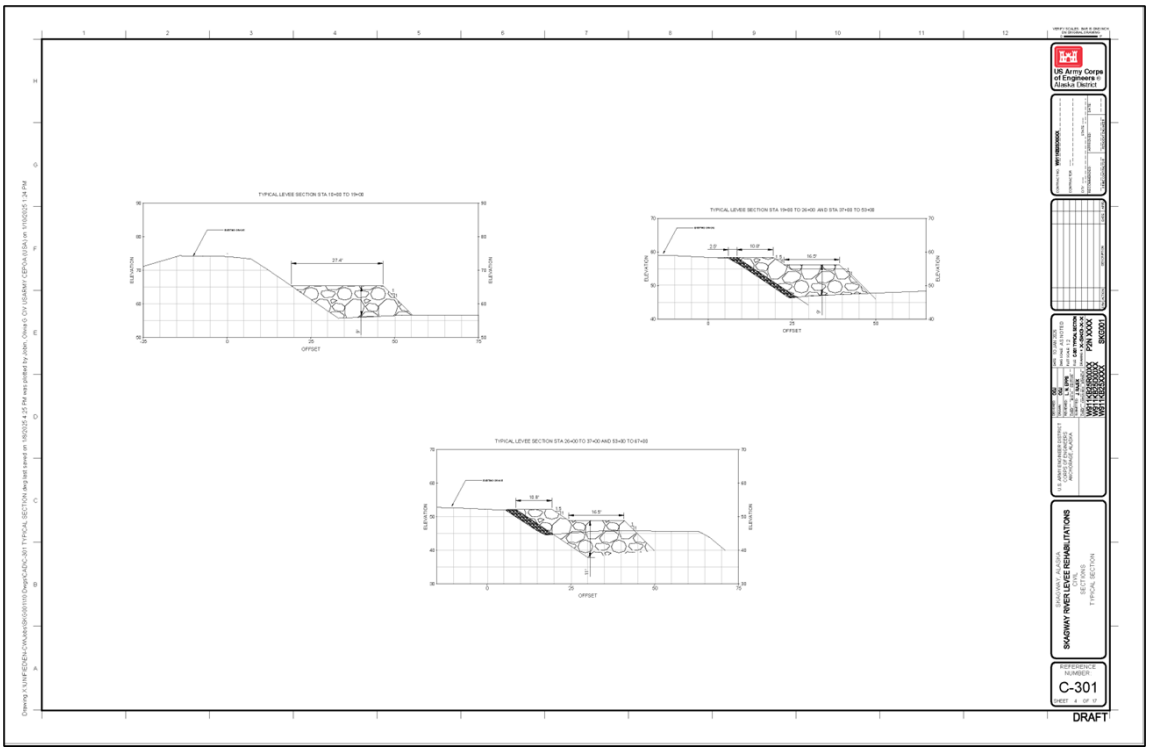

Figure 1. Typical section views of the levee repairs in three reaches.

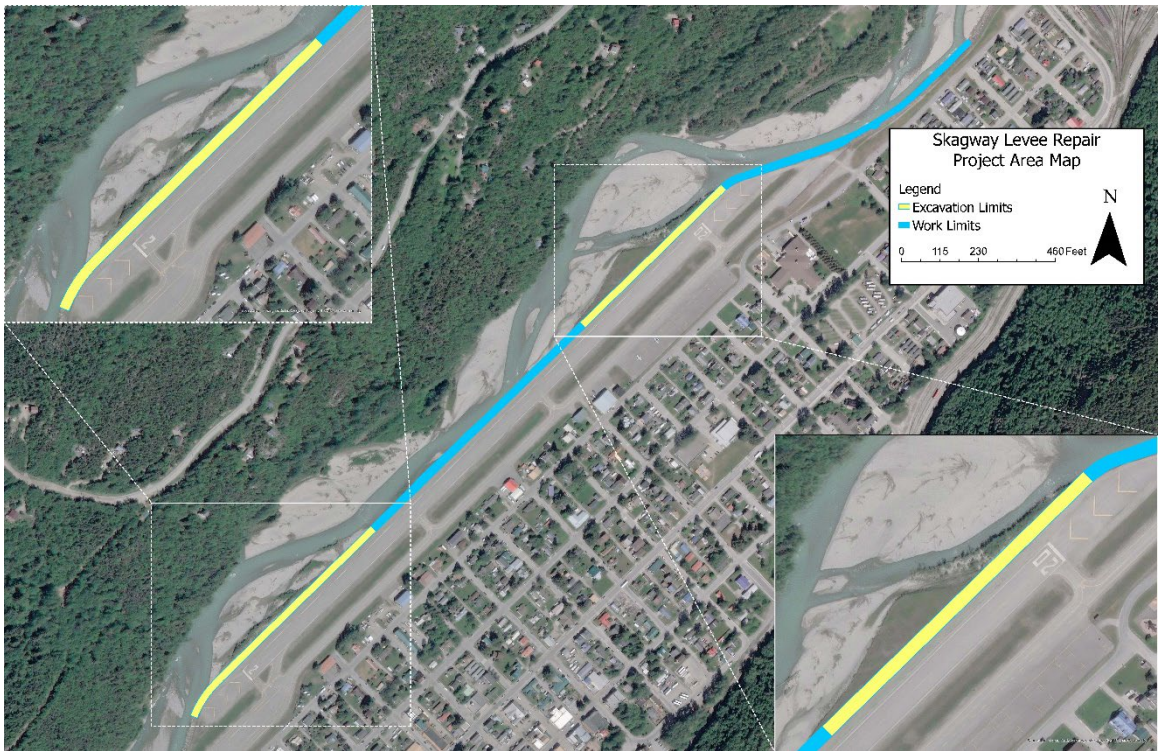

Figure 2. Plan view of proposed levee repair project area

1. Review of Compliance (Section 230.10(a)-(d)).

a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose.

☒YES ☐NO

Discussion: Repair of the existing breakwater is less damaging than construction of a new breakwater or deferring repair. The repair would not occur in a special aquatic site.

b. The activity does not appear to: violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed threatened and endangered species or their critical habitat; and 3) violate requirements of any Federally designated marine sanctuary.

☒YES ☐NO

Discussion: The discharge would consist of predominantly coarse material that is not expected to be a carrier of contaminants. The fill material would be mechanically screened to remove fine particles and minimize turbidity impacts. The proposed project would not be constructed within the known range of Federally listed species or any designated marine sanctuaries.

c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values.

☒YES ☐NO

Discussion: USACE ecological surveys indicate the proposed project area does not contain sensitive habitat. The Skagway River is dynamic and turbid. It changes course often and naturally alters habitat.

d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem

☒YES ☐NO

Discussion: USACE has included mitigation measures in the environmental protection specification. A summary of mitigation measures is included in Part 5 of this checklist.

2. Technical Evaluation Factors (Subparts C-F)

a. Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C) (Sec. 230.20-230.25).

Table 1. Potential impacts on physical and chemical characteristics of the aquatic ecosystem

Component	Significant	Insignificant	N/A
Substrate		X	
Suspended particulates/turbidity		X	
Water		X	
Current patterns and water circulation		X	
Normal water fluctuations			X
Salinity gradients			X

b. Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D)(Sec. 230.30-230.32).

Table 2. Potential impacts on biological characteristics of the aquatic ecosystem

Component	Significant	Insignificant	N/A
Threatened and endangered species			X
Fish, crustaceans, mollusks, and other aquatic organisms in the food web		X	
Other wildlife		X	

c. Potential Impacts on Special Aquatic Sites (Subpart E)(Sec. 230.40-230.45).

Table 3. Potential impacts on special aquatic sites

Component	Significant	Insignificant	N/A
Sanctuaries and refuges			X
Wetlands			X
Mudflats			X
Vegetated shallows			X
Coral reefs			x
Riffle and pool complexes			X

d. Potential Effects on Human Use Characteristics (Subpart F)(Sec 230.50-230.45)

Table 4. Potential effects on human use characteristics

Component	Significant	Insignificant	N/A
Municipal and private water supplies		X	
Recreational and commercial fisheries		X	
Water-related recreation		X	
Aesthetics		X	
Parks, national and historic monuments, national seashores, wilderness areas, research sites, and similar preserves			X

3. Evaluation and Testing (Subpart G) (Sec. 230.60-230.61)

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material:

Physical characteristics	☒YES	☐NO
Hydrogeography in relation to known or anticipated sources of contamination	☒YES	☐NO
Results from previous testing of the material or similar material in the vicinity of the project	☒YES	☐NO
Known, significant sources of persistent pesticides from land runoff or percolation	☒YES	☐NO
Spill records for petroleum products or designated hazardous substances (Section 311 of CWA)	☒YES	☐NO
Public records of significant introduction of contaminants from industries, municipalities, or other sources	☒YES	☐NO
Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	☒YES	☐NO
Other sources (specify)	☐YES	☒NO

Discussion: The material discharged into waters of the United States would consist of predominantly coarse material (rock) sourced from a local quarry. The material excavated from the toe of the levee would be discharged adjacent to the extraction site and exempted from testing under 40 CFR 230.60c.

b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and disposal sites and not likely to require constraints. The material meets the testing exclusion criteria.

☒YES ☐NO

4. Disposal Site Delineation (Section 230.11(f))

a. The following factors, as appropriate, have been considered in evaluating the disposal site:

Depth of water at the disposal site	☒YES	☐NO
Current velocity, direction, and variability at the disposal site	☒YES	☐NO
Degree of turbulence	☒YES	☐NO
Water column stratification	☒YES	☐NO
Discharge vessel speed and direction	☒YES	☐NO
Rate of discharge	☒YES	☐NO
Dredged material characteristics (constituents, amount, and type)	☒YES	☐NO
Number of discharges per unit of time	☒YES	☐NO
Other factors affecting rates and patterns of mixing (specify)	☐YES	☒NO

Discussion: The placement site is the existing levee, previously impacted by construction and maintenance activities. The placement would not substantially alter the physical characteristics of the existing substrate.

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable:

☒YES ☐NO

5. Actions to Minimize Adverse Effects (Subpart H)(Sec. 230.70-230.77)

a. All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge:

☒YES ☐NO

List of Mitigations:

i. Remove trash and debris from existing levee prior to degradation
ii. Screen fine-grained material from new levee rock
iii. Construct repairs during winter months when water levels are expected to be low
iv. Reasonable precautions and controls will be used to prevent incidental and accidental discharge of petroleum products or other hazardous substances. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.
v. During construction, spill response equipment and supplies such as sorbent pads will be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount will be reported in accordance with Discharge Notification and Reporting Requirements (Alaska Statute 46.03.755 and 18 Alaska Administrative Code 75 Article 3). The contractor must contact by telephone the Alaska Department of Environmental Conservation Area Response Team for Southeast Alaska at 907-465-6648 during work hours or 1-800-478-9300 after hours. Also, the contractor must contact by telephone the National Response Center at 1-800-424-8802.
vi. Construction equipment will not be operated on the project if equipment is leaking fuel, oil, hydraulic fluid, or any other hazardous material. Equipment will be inspected and recorded in a log on a daily basis for leaks. If leaks are found, the equipment will not be used and pulled from service until the leak is repaired.
vii. The contractor must stabilize any excavated material (temporarily or permanently) stored on upland property to prevent erosion and subsequent sedimentation into jurisdictional waters of the United States. The material must be contained with siltation control measures to preclude reentry into any waters of the U.S., including wetlands.
viii. Fill material must be clean sand, gravel or rock, free from petroleum products and toxic contaminants in toxic amounts.
ix. Trees, shrubs, limbs, or other large woody debris will not be allowed to fall into fish bearing waters.

6. Factual Determinations (Section 230.11).

A review of appropriate information as identified in items 2 - 5 above indicates that there is minimal potential for short or long term environmental effects of the proposed discharge as related to:

Physical substrate (review sections 2a, 3, 4, and 5 above)	☒YES	☐NO
Water circulation, fluctuation, and salinity (review sections 2a, 3, 4, and 5 above)	☒YES	☐NO
Suspended particulates/turbidity (review sections 2a, 3, 4, and 5 above)	☒YES	☐NO
Contaminant availability (review sections 2a, 3, and 4 above)	☒YES	☐NO
Aquatic ecosystem structure, function, and organisms (review sections 2b and c, 3, and 5 above)	☒YES	☐NO
Proposed disposal site (review sections 2, 4, and 5 above)	☒YES	☐NO
Cumulative effects on the aquatic ecosystem	☒YES	☐NO
Secondary effects on the aquatic ecosystem	☒YES	☐NO

7. Findings of Compliance or Non-compliance

The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines:

☒YES ☐NO

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