



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

CECW-POD

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Lowell Creek Flood Diversion Feasibility Study, Integrated Feasibility Report and Environmental Assessment

1. This memorandum transmits the Lowell Creek Flood Diversion Final Integrated Feasibility Report and Environmental Assessment (EA) to your office for approval. The purpose of the proposed Federal action is to implement flood risk management for the City of Seward, Alaska. The City of Seward is the non-Federal sponsor (NFS) for the study and project.

2. The Lowell Creek Flood Diversion System is located in Seward, Alaska, 125 miles south of Anchorage by the highway. The City of Seward lies immediately below the flood diversion system at the head of Resurrection Bay, on the north shore of the Gulf of Alaska, on the Kenai Peninsula. The existing flood diversion system in Lowell Canyon does not adequately manage flood events and presents a risk to life, property, and critical infrastructure with little to no warning. The hospital and senior living center are located approximately 800 feet from the existing spillway. In addition, the area at the tunnel outfall near Resurrection Bay is prone to the accumulation of debris and sediments at the bridge on the only road to the Lowell Point community. The bridge has been damaged, destroyed, and/or buried under as much as 20 feet of debris on multiple occasions.

3. The Authority to study and implement this project is contained in Section 5032 of the Water Resources Development Act of 2007, as amended, which states:

SEC. 5032. LOWELL CREEK TUNNEL, SEWARD, ALASKA

a. LONG-TERM MAINTENANCE AND REPAIR

(1) Maintenance and Repair: The Secretary shall assume responsibility for the long-term maintenance and repair of the Lowell Creek tunnel, Seward, Alaska.

(2) Duration of Responsibilities: The responsibility of the Secretary for long-term maintenance and repair of the tunnel shall continue until an alternative method of flood diversion is constructed and operational under this section or 20 years after the date of enactment of this Act, whichever is earlier.

b. STUDY

(1) The Secretary shall conduct a study to determine whether an alternative method of flood diversion in Lowell Canyon is feasible.

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c. CONSTRUCTION

(1) Alternative Methods: If the Secretary determines under the study conducted under subsection (b) that an alternative method of flood diversion in Lowell Canyon is feasible, the Secretary shall carry out the alternative method.

(2) Federal Share: The Federal share of the cost of carrying out an alternative method under paragraph (1) shall be the same as the Federal share of the cost of the construction of the Lowell Creek tunnel.

4. Per the 2 September 2020 memo, Subject – “Lowell Creek, Alaska Flood Diversion Feasibility Study, National Economic Development Exception Request”, your office approved a policy exemption to complete the feasibility study based on life safety criteria under the Other Social Effects account in lieu of the No-Action Plan under the National Economic Development (NED) criteria.

5. The recommended plan is Alternative 4A, which constructs a new flood diversion system and maintains the existing system. New structural components constructed upstream from the existing dam and tunnel include: a diversion dam, an 18-foot diameter tunnel capable of conveying approximately an 8,500 cubic foot per second flow, with a canopy protecting the tunnel inlet from landslides and a stream gauge within the tunnel. A 150-foot long new tunnel outfall extends over Lowell Point Road and discharges directly on the east side of the road near Resurrection Bay. The plan includes the selective removal of larger trees in the Lowell Creek drainage upstream that could potentially become part of the debris flow and cause a blockage of the tunnel. The new diversion system essentially captures all of the creek flow originating in the drainage, however, this alternative also refurbishes the existing tunnel so it can provide backup for the new diversion system, or to accept diverted flow during inspection and maintenance of the new tunnel.

6. The estimated total project first cost (October 2020 price level) is \$185,225,000, consisting of \$184,500,000 for construction and \$725,000 for Lands, Easements, Rights of Way, Relocations, and Disposal Areas (LERRDs). Average annual Operations, Maintenance, Repair, Rehabilitation, and Replacement (OMRR&R) costs are estimated at \$699,000. Per the authority’s implementation guidance, dated 29 June 2009, construction costs for the recommended plan will be 100% Federal, and the NFS will be responsible for providing all LERRDs at no cost to the Government and assume all OMRR&R responsibility and costs once construction is completed.

7. At the fiscal year 2021 discount rate of 2.5%, the average annual equivalent cost of the project is \$7,504,000, with average annual National Economic Development (NED) benefits of \$1,869,000. The net average annual NED benefits are -\$5,635,000 and the benefit to cost ratio is 0.25. The project is estimated to reduce average annual life loss by 0.64, which is an approximately a 2.2 orders of magnitude reduction in life loss over the future without project condition.

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8. Environmental Compliance. An EA has been prepared and a Draft Finding of No Significant Impact is ready for signature, subject to your review and approval. There are no outstanding environmental compliance requirements still to be completed for the feasibility phase of the project.

9. Technical Review. In accordance with USACE policy on the review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and rigorous review process. The comprehensive review process included District Quality Control Review, Agency Technical Review, and Headquarters Policy and Legal Compliance review to confirm the planning analyses, alternative design and safety, and the quality of decisions. Washington-level review indicates that the plan recommended by the reporting officers complies with all relevant elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies, as well as other administrative and legislative policies and guidelines. The views of interested parties, including federal, state, and local agencies, were considered and all comments from public reviews have been addressed and incorporated into the final report documents where appropriate.

10. Based on my review of the Lowell Creek Flood Diversion Study and Integrated EA, I find the proposed plan is engineeringly feasible, justified based on reductions to average annual life loss, and environmentally acceptable. The proposed project complies with applicable Corps planning procedures and regulations. The views of interested parties, including federal, state, and local agencies, have been considered. I recommend approval to implement flood risk management in accordance with the recommended plan at an estimated total project first cost of \$185,225,000. I also recommend you approve the signing of the FONSI by the Alaska District Commander. The recommendation contained herein reflects the information available at this time and current departmental policies governing post-authorization projects.

11 Encls

1. Report Summary
2. Project Placemat
3. Review Certifications
4. Documentation of Review Findings
5. Finding of No Significant Impacts
6. Sponsor Support and Self-Certification
7. OMB Briefing Slides
8. Draft Letter to OMB
9. Project-Specific Implementation Guidance
10. Approved NED Policy Exception
11. Final Report and Appendices

ALVIN B. LEE
Director of Civil Works