

## DEPARTMENT OF DEFENSE

## UNITED STATES ARMY

**DRAFT FINDING OF NO PRACTICABLE ALTERNATIVE FOR  
JOINT BASE LEWIS-MCCHORD, WASHINGTON PROJECT  
FOR DIVERSION STRUCTURE REPAIRS AT LAKE  
SEQUALITCHEW****1.0 Introduction**

Fort Lewis and McChord Air Force Base merged on February 1, 2010 to form Joint Base Lewis–McChord (JBLM). As a sub-installation of Fort Lewis, Yakima Training Center (YTC) was included in the merger. The Installation encompasses 413,714 acres — 90,283 acres at the main base in Pierce and Thurston Counties, and 323,431 acres at YTC in south-central Washington. Troops may train in a high desert environment at YTC, or in dense woods or conduct amphibious operations at the main base. Both locations are key to service member readiness, allowing troops to maneuver in more than 50 training areas, fire at more than 90 ranges, or shoot artillery, mortars and other munitions into multiple impact areas.

The proposed project will take place on the western side of Lake Sequalitchew. The lake is situated on the Northcentral side of JBLM in Pierce County, Washington (WA) located just 1.6 miles from DuPont, WA. The lake is 81 acres in size and is an important fiscal and ecological asset of JBLM. Recreational activities such as fishing and hunting at Lake Sequalitchew can be accessed through Morale Welfare and Recreation (MWR) for active duty and civilians alike. The Lake feeds into the marshes found on the southwestern side, which supports the wetland's vegetation and wildlife. However, the marshes are not dependent solely on the outlet of the lake, as the regions significant rainfall maintains their water levels. On the most eastern side of the lake is the Sequalitchew springs water distribution system that supplies the Installation with 90 percent of its potable water supply.

Joint Base Lewis-McChord proposes to implement a demolition and construction improvement project for diversion structure repairs at Lake Sequalitchew. The environmental impacts of the Proposed Action will be assessed through a Record of Environmental Consideration (REC) under the following Categorical Exclusions:

- *32 Code of Federal Regulations (CFR) Part 651 Appendix B, subparagraph (c)(1) Construction of an addition to an existing structure or new construction on a previously undisturbed site if the area to be disturbed has no more than 5.0 cumulative acres of new surface disturbance. This does not include construction of facilities for the transportation, distribution, use, storage, treatment, and disposal of solid waste, medical waste, and hazardous waste (REC required).*
- *32 CFR Part 651 Appendix B, subparagraph (g)(1) Routine repair and maintenance of buildings, airfields, grounds, equipment, and other facilities.*

It was determined that elements of the Proposed Action must be located within portions of the designated floodplain. Under Executive Order (EO) 11988, *Floodplain Management*, as amended by EO 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input* the Army must find that there is no practicable alternative to development within the designated floodplain. Further, the Army must take all practicable measures to minimize harm to or within floodplains.

**2.0 Notice of Floodplain Involvement**

EO 11988 requires federal agencies to determine whether a proposed action would occur within a floodplain and to avoid floodplains to the maximum extent possible when there is a practicable alternative. The designated floodplain is established as required in the amended EO 11988. The Army has determined that certain facilities and infrastructure proposed in the project necessitate development in the designated floodplain on JBLM.

45 The project would be constructed in the designated floodplain associated with Lake Sequalitchew at JBLM (**Figures 1**  
46 **through 4**). Development can impact these natural resources via the loss or degradation of their natural functional  
47 benefits such as water storage, infiltration, and filtration. These impacts extend to the intrinsic value of these  
48 resources or the benefits associated with their use, such as wildlife habitat, recreation, and aesthetic enjoyment.  
49 Floodplain functions and values are also susceptible to changes in the volume, rate, and quality of stormwater  
50 discharge, particularly as influenced by the amount of impervious surface within a watershed.

51 This preliminary finding incorporates the analysis and conclusions of the Lake Sequalitchew Diversion Structure  
52 Repair Project at JBLM. The notice also states that a 15-day public comment period applies to this Draft Finding of No  
53 Practicable Alternative (FONPA) in arrangement with the REC. This document will be made available for a 15-day  
54 public comment period, in accordance with EO 11514 Section (2)(b) and 32 CFR Part 651.14. Comments on the  
55 Draft FONPA may be offered either during a telephonic/online or in person public meeting. Due to the COVID-19  
56 Pandemic, all public meeting materials will be provided at <https://home.army.mil/lewis-mcchord/index.php?CID=452>.

57

### 58 **3.0 Description of the Proposed Action**

59 The Proposed Action is to implement a new outlet diversion weir system at the tailwater of the triple reinforced concrete  
60 box bridge structure to restore stream flow to Sequalitchew Creek, regulate the lake level, and to prevent backwater flow  
61 from entering the spring's water distribution system. The canal-creek cross culvert pipe is to be removed, and hydraulic  
62 connectivity re-established from the canal-marsh system to the creek with a new connecting channel.

63 The Lake Sequalitchew area outfall structures have deteriorated over the years and require repair to restore the  
64 correct seasonal normal storm flows to Sequalitchew Creek while diverting higher storm flows to the north JBLM  
65 Stormwater Canal. The canal-creek crossover culvert system has collapsed and lost connectivity to the JBLM North  
66 Canal and to Sequalitchew Creek. The outlet diversion weir, which controls the backwater to the lake and the now  
67 disconnected conveyance system is controlled by wooden stop logs that are leaking and in dire need of replacement.  
68 Beaver dams below the lake have created cascading pool areas within the creek-canal marshes that are causing  
69 secondary backwater control to the lake. The defunct fish ladder structures are a maintenance hindrance that traps  
70 debris within the structure adding to the backwater effects to the lake.

71 One area of removal will include the removal of the center structure of the fish ladder, and stabilizing the lake  
72 embankment with vegetation. The other area for removal will include the canal-creek cross culverts and the area  
73 graded to provide hydraulic connectivity between the canal and the creek. The debris from these areas shall be  
74 hauled to an acceptable location per JBLM requirements.

75 Construction plans include three weir diversion structures; one at the proposed tail end of the triple 4-foot (ft) by 8-ft  
76 reinforced box culvert to divert higher storm flows from the lake. The second one will be just downstream from the  
77 outlet to control the backwater of the lake. The third will be placed at the existing earthen diversion berm to serve as  
78 an overflow for the canal. Each reinforced concrete structure will have approximate dimensions of 38-ft long by 7-ft  
79 high with a stop log system. Weir length opening of 20-ft will be notched into each structure with stainless steel  
80 structural channels supporting the stop log system with a lifting gate (Plastifab or equal). The structure is proposed as  
81 cast-in-place reinforced concrete. A supervisory control and data acquisition (SCADA) telemetric gage will be  
82 installed within the diversion box for controlled lake level monitoring at the outfall. This system would be part of the  
83 JLBM SCADA domestic water supply system.

84 The restoration of the site along with the proposed outfall diversion weir structures at the lake outlet will restore the  
85 flow of stormwater runoff, lake flow, and groundwater interflow to the creek and canal conveyance system. This is the  
86 proposed stormwater management for this project to divert the stormwater channel from the Marsh into Sequalitchew  
87 Creek. The approximate channel restoration length will be 80-ft with natural woody and/or native vegetation  
88 stabilization. Existing stormwater flow upstream of the project is assumed treated before it enters the canal. New

89 stormwater management facilities are not required since this project does not involve any new development or  
90 redevelopment projects.  
91

92 Impacts and Mitigation Measures

93 The size of land disturbance that will occur for the proposed project to take place is approximately 23,000 square feet  
94 (sf) and that amount of floodplain may be subject to temporary, construction-related effects. A Stormwater Pollution  
95 Prevention Plan (SWPPP) and Environmental Protection Plan (EPP) is included with erosion and sediment control  
96 measures in accordance with PWE-633 Construction Site Stormwater Runoff Control Program and the 2019 Stormwater  
97 Management Manual for Western Washington (SWMMWW). The project is expected to improve natural water flow of the  
98 area and is unlikely to negatively impact the floodplain long term.

99 Following JBLM's Erosion and Sediment Control Plan, mitigation measures will be implemented for demolition and  
100 construction at the site. Also, the removal of overgrown vegetation that may lead to sedimentation and erosion of  
101 Sequatchew Creek will be taken into account. Mitigation measures will include actions such as installing temporary  
102 channel liners, slope installations, temporary seeding of erosion controlling plants, and brush barriers. Additionally,  
103 there will be permitted areas designated for construction equipment to access the project site. These permitted areas  
104 will reduce the potential for any long lasting disturbances that could be caused to the floodplain.

105 EO 11988 states that if the only practicable alternative requires siting in a floodplain, the agency shall, prior to taking  
106 action, design or modify its action to minimize potential harm to or within the floodplain. Under the Proposed Action,  
107 Best Management Practices (BMPs) and Low Impact Development (LID) measures would be implemented to reduce  
108 the potential for adverse impacts on the designated floodplain and areas downstream.  
109

110 Combining together, the identified BMPs, LIDs, and mitigation measures recorded in the construction plans would  
111 avoid or minimize the loss of and impacts on floodplains at JBLM. These measures represent all practicable  
112 measures to minimize harm to floodplains.  
113

114 **4.0 Finding**

115 During development of the Proposed Action, it was determined that the project must occur within the designated  
116 floodplain due to the previous structure residing within the same space. As such, the Army has determined there are  
117 no practicable alternatives to avoiding development within the floodplain on JBLM.

118 Following a thorough evaluation of demolition and construction plans that would satisfy the purpose and need for  
119 Proposed Action, I find that there is no practicable alternative that would allow siting elements of the Proposed Action  
120 entirely outside of the floodplain. Therefore, the Army will ensure that all practicable measures to minimize impacts to  
121 and within the floodplain environment are incorporated into the Proposed Action.  
122  
123  
124  
125  
126

\_\_\_\_\_  
Date

\_\_\_\_\_  
Ms Carla K. Coulson  
Deputy Assistant Secretary of the Army  
Installations, Housing & Partnerships

127  
128  
129  
130  
131  
132

- 133 **Attachments:** Figure 1: Flood Insurance Rate Map (FIRM) of Project Footprint with buffer of 100-Year Floodplain
- 134 Figure 2: Existing Site Conditions
- 135 Figure 3: Detail Image Mitigation Measures
- 136 Figure 4: Detailed Image of Proposed Project Construction Plan
- 137

Figure 1: Flood Insurance Rate Map (FIRM) of Project Footprint with buffer of 100-Year Floodplain

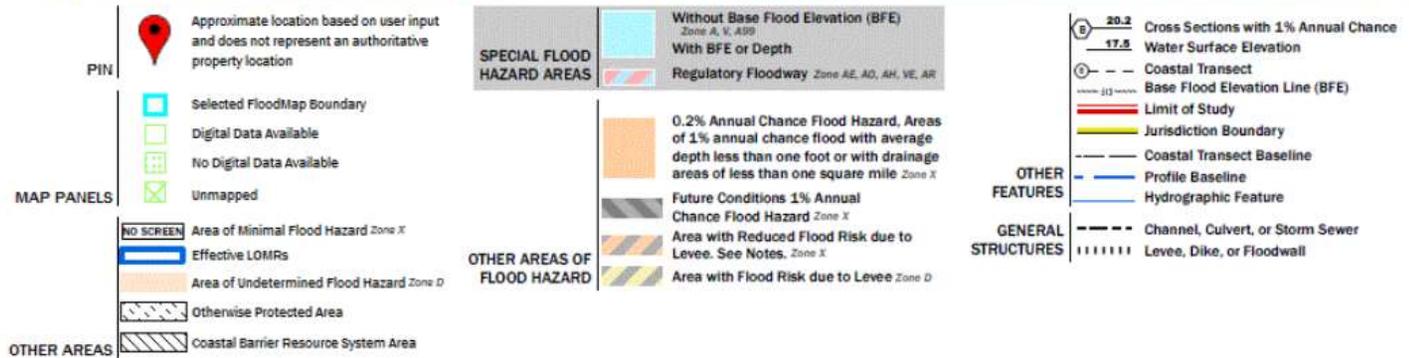


Figure 2: Existing Site Conditions

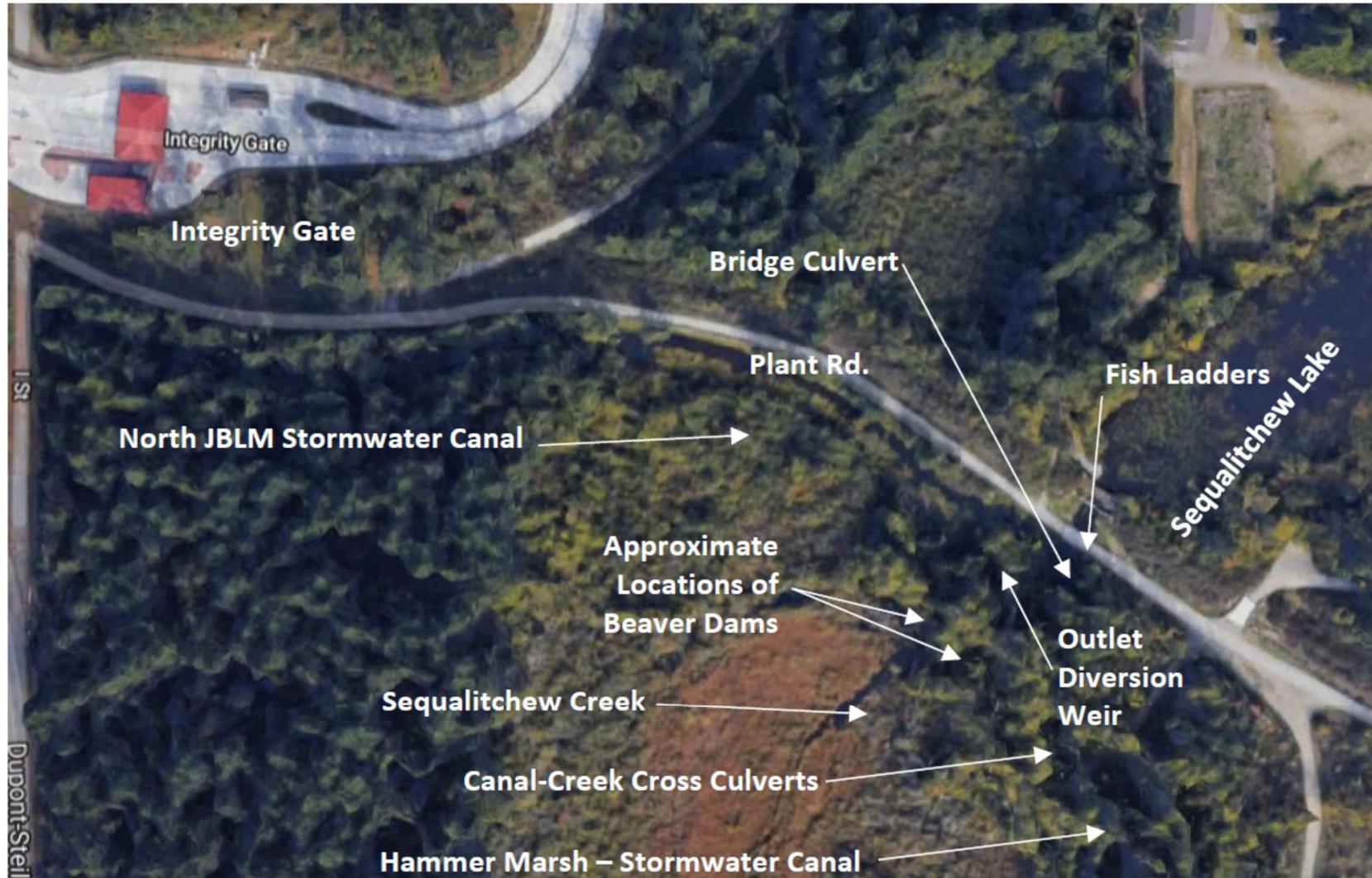


Figure 3: Detail Image Mitigation Measures

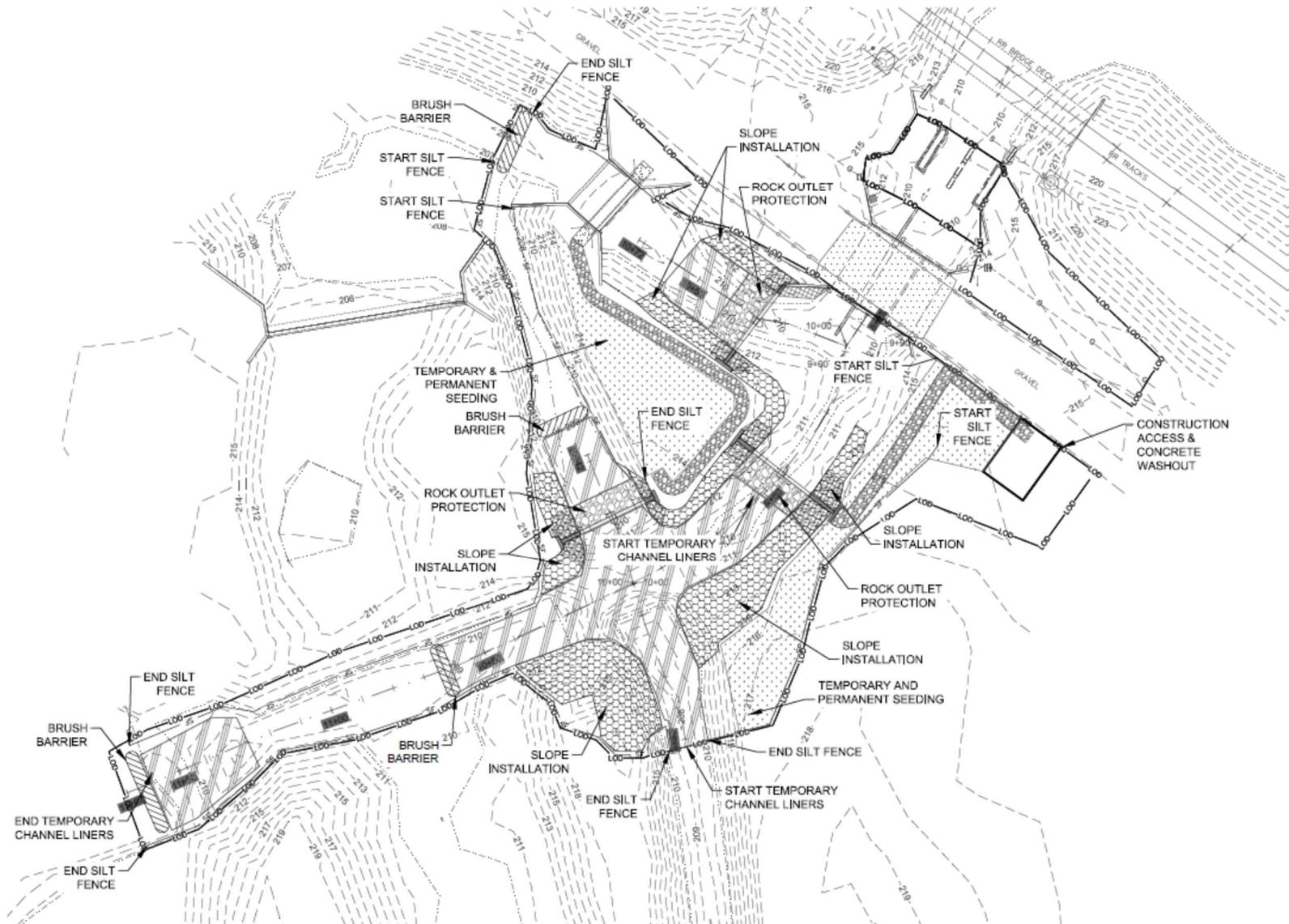


Figure 3: Detailed Image of Proposed Project Construction Plan

