

FINDING OF NO SIGNIFICANT IMPACT

UPPER AND LOWER LEGION LAKES REPAIRS Fort Jackson, South Carolina

August, 2017

1. Proposed Action

The National Environmental Policy Act of 1969 (NEPA), requires federal facilities to evaluate the environmental impacts of a proposed action and any associated alternative actions prior to Construction of the action. This Finding of No Significant Impact (FNSI) summarizes the results of the Environmental Assessment (EA) and documents Fort Jackson's conclusions.

Fort Jackson is proposing to make repairs to Upper Legion Lake dam and permanent repairs to replace the temporary emergency repairs (discussed in section 1.2.2 of the EA), to the Lower Legion Lake dike. This is alternative 3 from the EA. This alternative would maintain the stormwater detention capacity that existed prior to October 2015. The repairs would upgrade the Upper Legion Lake dam to current dam safety standards by removing the trees on the downstream face of the dam and replacing the spillway. Upper Legion Lake would be listed on the National Inventory of Dams and would undergo periodic inspections and maintenance as required by dam safety standards. The repairs to the Lower Legion Lake dike would replace the temporary outlet structure and would improve the stability of the dike. Because of its size and limited depth, Lower Legion Lake is not required to be listed on the National Inventory of Dams.

2. Other Alternatives Considered/Analyzed

The EA evaluated various alternatives before arriving at a preferred alternative. Alternatives analyzed in the EA:

No Action: The No Action Alternative would leave Upper and Lower Legion Lakes in their current conditions. Upper Legion Lake does not meet current dam safety standards, mostly because of tree growth on the downstream face of the dam and the fact that it was constructed with what would now be deemed inadequate spillway capacity. The post-October 2015 repairs to Lower Legion Lake were temporary and do not meet current safety standards.

Alternative 2 consists of the total removal of the dams on Upper Legion Lake and the dike on Lower Legion Lake. In order to maintain the stormwater detention function that the Legion Lake complex provided prior to October 2015, stormwater detention ponds would be constructed. The stormwater detention ponds would be placed throughout the green area shown in Figure 2.2 of the EA. The detention ponds would be of adequate size and number to maintain the existing storm water detention function of Upper and Lower Legion Lakes. Construction of the detention ponds would require construction of several berms to impound the stormwater.

3. Environmental Impacts of the Preferred Alternative

Resources were evaluated for impacts in the EA. The impacts to the resources from implementing the preferred alternative included the following:

- **Land use** - Construction of the preferred alternative would not result in any significant or negative impacts to land use.
- **Climate** - Construction of the preferred alternative would not result in any significant or negative environmental impacts on climate.
- **Physiography, Geology, Topography, and Soils** - Construction of the preferred alternative would not result in any significant or negative environmental impacts on physiography, topography, geology, or soils. Construction of the preferred alternative would provide a long term positive environmental impact by allowing sediments from runoff to settle out of suspension during high flow events, thereby reducing sedimentation downstream of the dam. During construction, best management practices (BMPs) would be followed to reduce temporary negative impacts from erosion and runoff due to construction activities.
- **Surface Water and Stormwater** - Construction of the preferred alternative would cause temporary changes to stormwater and surface water flow during construction. These impacts would consist of a short term increase in turbidity and increased downstream sedimentation during construction that would subside shortly after construction activities cease. The preferred alternative would have a long term positive impact to surface water by allowing sediments to settle out of runoff and improve the water's clarity. Once construction is completed the stormwater and surface water at Upper and Lower Legion Lakes would be the same as the pre-flood condition. Best management practices would be implemented during construction to reduce impacts to water quality.
- **Ground water** - Construction of the preferred alternative would not result in any significant or negative environmental impacts on ground water.
- **Floodplains and Wetlands** - Construction of the preferred alternative would lead to no significant changes from the current conditions of the floodplains and wetlands at Upper and Lower Legion Lakes as the area would be returned to pre-construction conditions after construction activities are completed. No practical non-floodplain alternative exists. The preferred alternative does not conflict with applicable state and local standards concerning floodplain protection. The preferred alternative will not significantly affect the natural and beneficial values of the floodplain. In compliance with Executive Order 11988, a Finding of No Practicable Alternative for construction in the floodplain has been prepared.
- **Fish and Wildlife** - Construction of the preferred alternative would result in temporary construction related impacts to wildlife. During construction, any wildlife in the area would likely leave, but would be expected to return following construction. Construction of the preferred alternative would not result in any long term significant or negative impacts to fish. The water level in Upper Legion Lake will be lowered during construction, but will be returned to its normal level upon completion of construction activities. Lower Legion Lake will be drained during construction, and then the water level will be restored to its normal level when construction is completed. Both lakes will be restocked with fish after construction is completed. In the long term construction of

this alternative would maintain the current habitat and aquatic species composition of Upper and Lower Legion Lakes.

- **Vegetation** - Construction of the preferred alternative would not result in any significant impacts to vegetation. A small number of trees (predominately pines) growing on the dam and dike for Upper and Lower Legion Lakes would be removed to improve the stability of the dam and dike.
- **Threatened and Endangered Species** - There will be no effect to listed species from construction of the preferred alternative.
- **Air Quality** - Construction of the preferred alternative would lead to a short term increase in emissions during construction from the operation of construction equipment. No long term increases in emissions would occur from construction of the preferred alternative, as construction equipment would no longer be in use once construction was completed. Best management practices would be implemented to reduce impacts to air quality.
- **Noise** - Construction of the preferred alternative would lead to an increase in noise during construction. Best management practices would be implemented to reduce noise during construction. No long term increases in noise would occur from construction of the preferred alternative.
- **Cultural Resources** - Construction of the preferred alternative would not have an effect on historic properties or cultural resources.
- **Hazardous Materials and Hazardous Waste Management** - There are no known hazardous waste, or hazardous material sites within the immediate vicinity of Upper and Lower Legion Lakes. As is typical with large rehabilitation projects, on-site hazardous materials will be present to support equipment operations. These materials will be handled and stored in accordance with all applicable state and federal laws and no negative environmental impacts, resulting from these materials, are expected as a result of construction. Best management practices would be implemented to reduce the risk of spills or other means of contamination during construction.
- **Environmental Justice and Socioeconomic Condition** - Construction of the preferred alternative would cause no significant adverse environmental impacts to any of the residents in the area regardless of race, national origin, or level of income of residents.
- **Aesthetics and Recreation** - Construction of the preferred would maintain the current aesthetics and recreational opportunities of the area.
- **Cumulative Impacts** - No significant adverse cumulative impacts are expected as a result of implementing the preferred alternative. The impacts of the preferred alternative for Upper and Lower Legion Lakes, when considered along with present and future actions, are cumulatively insignificant because all impacts from the preferred alternative are minor, temporary, construction related impacts and known present and future actions in the Wildcat Creek watershed area expected to be minor and largely construction related. Any impacts associated with the preferred alternative, when added to other past,

present, and reasonable foreseeable future actions are collectively insignificant as the preferred alternative would return Upper and Lower Legion Lakes to pre-storm conditions.

4. Mitigation Measures

The EA identified mitigation measures and BMPs that must be followed to further reduce impacts of the preferred alternative (see summary in Table 3.2 of the EA or Table 1 of this document). These mitigation measures and BMPs will be incorporated into any contract documents and specifications.

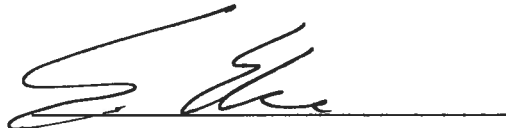
5. Conclusions

This FNSI was distributed for public review in August 2017 for a 30 day comment and review period. The Final EA and FNSI include a section addressing the comments received during this review period. The full Environmental Assessment can be downloaded from the internet at www.sac.usace.army.mil/SemmesandLegionLakes/.

I have considered the results of the analysis in the EA and the comments received during the public comment period, and have decided to proceed with the selection of the preferred alternative. The implementation of the preferred alternative would not result in a significant impact on the quality of the human environment, and therefore the preparation of an Environmental Impact Statement is not warranted. Therefore, issuance of this FNSI is appropriate.

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Date



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Table 1. Best Management Practices (BMP) and Mitigation Measures

Resource	Impact	BMP and Mitigation Measures
Climate	Greenhouse gas emission	To reduce greenhouse gas emissions, the following BMPs will be utilized: reducing fugitive dust emissions, avoiding the unnecessary idling of construction equipment, and maintaining construction equipment in good operating condition.
Physiography, Geology, Topography, and Soils	Soil erosion during construction	To reduce soil erosion, the following BMPs will be utilized as needed: silt fencing and/or other control devices, mulching, removing sediment from pavement, temporary seeding, minimize exposed soil during construction, and other applicable erosion control practices. All erosion control and sedimentation control measures must be in place prior to land disturbance. Thereafter, all controls will be maintained and functioning until the area is permanently stabilized. Materials used for erosion control [hay bales, straw etc] will be certified as weed free from the supplier. Weekly inspections will be performed to safeguard against failures. Once the project is initiated, it will be carried out expeditiously to minimize the period of disturbance. Upon project completion, all disturbed areas will be permanently stabilized with vegetative cover, riprap, or other erosion control methods. Where vegetation is removed, supplemental plantings will be installed following completion of the project. Such plantings will consist of appropriate native species.
Surface Water and Stormwater	Increased turbidity and sedimentation during construction	To reduce stormwater velocity, the following BMPs will be utilized as needed: limiting of the amount of area disturbed at a time, staging and/or phasing of the construction sequence, sediment basins and sediment traps, diverting off-site flow around the construction site, and controlling the drainage patterns within the construction site. To reduce stormwater velocity, the following BMPs will be utilized as needed: surface roughening along slopes, sediment basins and traps, level spreaders, erosion control blankets, turf reinforcement mats, riprap, and staging and/or phasing of the construction sequence. All stormwater controls will be inspected on a weekly basis
Air Quality	Emissions during construction	To reduce impacts to air quality, the following BMPs will be utilized: reducing fugitive dust emissions by taking the following measures; avoiding the unnecessary idling of construction equipment, imposing a strict slow speed limit for vehicular traffic in the construction site, wetting areas to reduce dust, and maintaining construction equipment in good operating condition.

Noise	Noise during construction	To reduce noise, the following BMPs will be utilized: limiting work to daylight hours and avoiding the unnecessary idling of construction equipment.
Hazardous Materials and Hazardous Waste Management	Waste during construction	To reduce Hazardous Materials and Hazardous Waste, the following BMPs will be utilized: keeping equipment in good operating condition, properly storing and handling fuels, and cleaning leaks and spills immediately. Measures will be taken to prevent POL products, trash, debris etc from entering adjacent areas, wetlands and surface waters.