National Park Service
U.S. Department of the Interior
Glacier National Park
West Glacier, Montana

Finding of No Significant Impact

Flood Protection for Lake McDonald Lodge and Historic District and Sprague Creek Campground and Picnic Area

Recommended:

11/01/2017

Eric Smith — Date
Acting Superintendent, Glacier National Park

Approved:

11/3/2017

Kate Hammond — Date
Acting Regional Director, Intermountain Region, National Park Service

Introduction

As a result of the 2017 Sprague Fire, the Snyder Creek drainage and Sprague Creek drainage are at high risk for flooding and debris flows. Should these major debris flows happen there could be major destruction to most all the facilities within the Lake McDonald Lodge (a National Historic Landmark (NHL)) and developed area (an historic district) and the Sprague Creek Picnic Area and Campground (Burned Area Emergency Response (BAER) Report, October 2017).

In compliance with the National Environmental Policy Act of 1969 (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine the proposed action and environmental impacts associated with implementing the proposed flood protection measures for the Lake McDonald Historic District and Sprague Creek Campground and Picnic Area in Glacier National Park to protect values at risk in these areas.

The statements and conclusions reached in the finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are incorporated by reference below.

Selected Action and Rational for the Decision

The EA evaluated one action alternative and incorporated consideration of the no action alternative within the action alternative. (NPS NEPA Handbook Supplemental Guidance). Implement Flood and Debris Flow Protection Measures at Lake McDonald developed area and historic district and Sprague Creek developed area is the NPS selected alternative because it best meets the purpose and need for the project as well as the project objectives to protect historic structures, two national historic landmarks (the Lake McDonald Lodge and Going-to-the-Sun Road (GTSR) and a popular visitor campground and picnic area from potential damage and or destruction as a result of the Sprague Fire.

The following actions will be taken:

- Place rip rap either within or just outside Snyder Creek at a meander in the Creek within 100 feet above the Going-to-the-Sun Road (GTSR). (See Figures 1 and 2) To reach the meander on Snyder Creek, the equipment will drive into the stream near the Snyder Creek Bridge and move upstream to the riprap site. It will remain in the channel until the work is complete.
- Install a stream gauge in Snyder Creek to monitor water levels.
- Clean out the Lake McDonald Access Road culvert and remove approximately 1-2 cubic feet of material from Snyder Creek upstream of the culvert for about 50 feet to increase capacity and reduce the chance of overtopping the road during a flood. Equipment will enter the stream at an already disturbed area of the bank near the culvert.
- Clean out the Sprague Creek culvert and remove approximately 1-2 cubic feet of boulders, cobbles and sediment from Sprague Creek channel above the GTSR in an already disturbed area due to GTSR road rehabilitation, for about 50 feet to increase capacity in case of a flood.
- Raise existing bank and riprap on Snyder Creek approximately 2 feet just upstream of the Lake McDonald Access Road culvert for 100 feet in length. (See Figure 4). Riprap will be placed on top of an already disturbed area occupied by noxious weeds and non-native grasses.
- Place two dikes (Figure 4) in the Lake McDonald developed area to redirect flows through a low area that avoids historic structures, in the event that the floods breach the banks of Snyder Creek. Dike B will be approximately 2 feet high and 90 feet long. Dike C will be approximately 2 feet high and 30 feet long. The dikes will involve minimal removal of shrubs and trees smaller

than 4 inch dbh. Most of the area is already disturbed and compacted due to its roadside location. Dikes could be removed after the drainage has revegetated.

- Install a "rolling" dip in the Lake McDonald Lodge Access Road to facilitate moving water and debris away from structures in the event that the Snyder Creek channel fills up (Figure 4).
- Convert the railing on the pedestrian bridge that crosses Snyder Creek to a break-away railing so it won't block water or debris.

Mitigation Measures

The following mitigation measures have been identified to minimize the degree, extent and or severity of adverse impacts and would be implemented during the project.

Historic Structures and Cultural Landscapes

- Work with the NWS/USGS and others to forecast and monitor large precipitation events
- Prepare to fight floods by purchasing flood fighting supplies, materials and stationing large equipment nearby.
- Develop and exercise a Lake McDonald Lodge/Sprague areas flood response plan. The plan would align with existing broader park flood and evacuation plans. Severity levels would be included for varying levels of response for varying levels of floods. Flood fighting can occur for high frequency moderate floods, but people would be evacuated for major floods or debris floods. The flood plan would provide the park with:
    - Reliable and early detection of weather events (e.g. rainstorm) that could produce floods or debris flows
    - Formalize and incorporate National Weather Service watches, warnings and other communication into park operations
    - Coordinate the various park divisions as well as the concessionaire.
    - Integrate with existing park wide plans and procedures pertaining to law enforcement, dispatch and park emergency/decision making.
    - Improve communications through notification flow chart/phone numbers
    - Apply a severity level system so that actions taken are safe and appropriate for a wide range of flooding events: from minor to catastrophic
    - Enable monitoring, warning, evacuation locations/procedures
    - Document flood fighting equipment, supplies, procedures and deployment locations

Wildlife, Habitat, and Threatened Wildlife Species

- Storage requirements for food, garbage, and other attractants would be strictly enforced during the project.
- Project crews would be trained on attractant storage regulations and appropriate behavior in the presence of wildlife. The handbook "*Bear Safety, Site Sanitation and Other Requirements While Working in Glacier National Park: a Handbook for Construction Contractors*" would be provided to all contractors and work crews.
- During project implementation, park staff (e.g. wildlife technicians and law enforcement rangers) would monitor work and staging areas.
- Equipment would be inspected for fluid leaks prior to use. Leaking equipment would not be permitted in the park. Any equipment that develops leaks would be repaired immediately or removed from the park. Absorbent materials manufactured specifically for the containment and clean-up of hazardous materials would be kept onsite in case a spill should occur.
- Contractors would provide portable toilets for construction workers. All portable toilets would be secured to the ground to prevent them from being blown over in strong winds. Toilet fluids

would be fully contained. In the event of a spill, all contaminated fluids would be contained, collected and disposed of.
- Any damage to stream banks or habitat as a result of equipment access to the work site would be addressed through restoration and revegetation.

Bull Trout and Westslope Cutthroat Trout

- Fish in Snyder and Sprague Creek would be electroshocked and removed prior to removal of material from stream beds and construction of riprap. Fish would be put in Lake McDonald.
- Turbidity and sediment would be monitored during dredging and riprap construction. Work would be periodically stopped to allow the water to clear before continuing to reduce impacts to aquatic resources.
- Disturbance to ground cover and vegetation within riparian areas would be avoided as much as possible. Construction area limits would be flagged to minimize impacts to vegetation.
- Avoid water drafting in streams and lakes occupied by bull trout or westslope cutthroat trout. If this cannot be avoided, screen (with 3/32 mesh) all pump intakes. Limit pump size used on small streams to reduce the potential for stranding bull trout. Adequate stream flow would be maintained and draining water bodies would be avoided.
- Refueling areas and other construction maintenance activities would take place within established parking areas or on the GTSR. If refueling is necessary at the riprap site on Snyder Creek, a hazardous fuel containment system would be used.
- To reduce the spread of invasive species, all equipment would be washed before it enters the park. Any equipment entering park waters must be pressure washed to avoid introducing aquatic invasive species.
- Material removal from streams would only occur during low water.

Natural Soundscapes and Air Quality

- Equipment operators would be encouraged to limit idling time to no longer than 15 minutes.

Vegetation and Soils

- After construction, compaction and further erosion would be mitigated by
- aerating disturbed ground
- replanting/reseeding with native vegetation, and performing non-native invasive plant control.
- Soil amendments, mulches, organic matter and other measures would be applied as appropriate to facilitate revegetation.
- Native species from genetic stocks originating in the park would be used for revegetation seeding and planting efforts. Plant species density, abundance, and diversity would be restored as nearly as possible to prior conditions for non-woody species.
- Riprap, gravel, and topsoil sources would only be obtained from NPS approved sources that are clean and free of noxious weed species.
- Construction vehicles would be inspected and washed, prior to entering the park, to prevent the import of noxious weeds from tires and mud on the vehicles.

Archeological and Ethnographic Resources

- Tribes hold a body of knowledge that may result in the identification of ethnographic resources in the area in the future. If ethnographic resources are identified later, consultation would occur in accordance with federal legislation and regulations and NPS policy.
- Should construction unearth cultural resources, work would be stopped in the area of discovery and the park would consult with the State Historic Preservation Officer and the Tribal Historic

Preservation Officers in accordance with §36 CFR 800.13, Post Review Discoveries. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.

- All contractors and subcontractors would be informed of the penalties for collecting artifacts or intentionally damaging paleontological materials, archeological sites, or historic properties.

Water Resources

- A Section 404 permit is required and would be obtained. Section 404 of the Clean Water Act authorizes the USACE to prohibit or regulate the discharge of dredged material, fill material, or excavation within US waters.
- Instream work would only occur during low flow conditions in the fall.
- Filter barriers would be installed (silt fences, certified weed seed free straw bales, coir logs)
- Fuel, heavy equipment, and hazardous materials would be stored at least 100 feet from the stream channel, where any spill of fuel and lubricants cannot reach flowing water.
- An emergency fuel spill kit on-site during staging and construction would be maintained.
- Clean angular riprap would be used.

Finding of No Significant Impact

As described in the EA, the proposed action has the potential for adverse impacts on water resources and federally listed bull trout, state listed Westslope Cutthroat Trout and Pigmy Whitefish, however no potential for significance adverse impacts was identified.

Construction activities that include construction of riprap in Snyder Creek, cleaning out of culverts in Sprague and Snyder Creek and removal of some material to re-establish the channels of both creeks will generate sediment and have the potential of harming fish species. However, mitigation measures that include electroshocking to remove the fish species prior to the start of the project and periodically stopping instream work to allow it to clear of sediment will minimize impacts to a level that isn't quantifiable. Other mitigation measures will be implemented to minimize impacts.

Installation of riprap on Snyder Creek above the GTSR would not be visible from the historic district or the GTSR; therefore, there would be no effect. The addition of dikes in the historic district, a stream gauge and raising the riprap on Snyder Creek would be a negative impact from introducing non historic visual features. However, they would blend in with the other materials in the district. None of the landscape elements listed as contributing in the district or the buildings and structures would be significantly altered by these actions because these new features won't affect the district's eligibility in the national register of historic places. These actions are intended to protect the larger historic district and the GTSR. Under NEPA the impact would be negative but would not be significant.

Water resources would be temporarily negatively impacted but the impacts would not result in significant impacts. The disturbance would be temporary (about 8 weeks). It would be done during low flow times when there is less potential for sedimentation to occur. Mitigation measures including monitoring of turbidity and stopping work to allow the sediment to settle out would limit the amount of sediment in the water at any one time and reduce the impacts on water quality. The stream bottoms are also mostly boulders and cobble which reduces the amount of sediment that might be released. Over the long term armoring the bank at the meander above the GTSR would reduce the cutting action of the stream but also maintain natural stream function and form (meanders).

There will be no significant impacts on public health, public safety or unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects or elements of precedence were identified. Implementation of the NPS selected action will not violate any federal, state or local environmental protection law.

Conclusion

As described above, the Selected Alternative does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The Selected Alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA.

Based on the foregoing, the NPS has determined that an EIS is not required for this project and thus will not be prepared.

Appendix: Non-Impairment Finding

Historic Structures and Cultural Landscapes—Riprap on Snyder Creek above the GTSR would not be visible from the historic district or the GTSR, therefore there would be no effect. The addition of dikes in the historic district, installation of a stream gauge and raising the riprap on Snyder Creek, while visible within the historic district, would blend in with the other materials in the district. None of the landscape elements listed as contributing in the District or the buildings and structures would be significantly altered by these actions. These actions are intended to protect the larger historic district and NHL's (the GTSR and the Lake McDonald Lodge. Under NFPA the impact would be negative but would not be significant. Under Section 106, the determination is *no adverse effect*. Therefore, the Selected Action will not lead to an impairment of historic structures and cultural landscapes.

Bull Trout/Westslope Cutthroat Trout/Pygmy Whitefish—The Selected Action may adversely affect bull trout a federally listed threatened species and westslope cutthroat trout and pygmy whitefish from sedimentation. However mitigation measures that include performing this work at low flow period (November) and periodically stopping work to allow the sediment to settle and the stream to run clear would minimize impacts on these fish species. Furthermore electroshocking the streams prior to the project beginning would remove the fish from the streams and put them in Lake McDonald, further reducing their exposure to sediment and minimize impacts. They would eventually move back up into the streams likely after the work is complete. None of the fish are spawning at the time this project will take place. Therefore the Selected Action will not lead to an impairment of bull trout, westslope cutthroat trout and pygmy whitefish.

Water Resources— The Selected Action will have temporary negative impacts on water quality from potential for sedimentation. The disturbance will be temporary (about 8 weeks). The project will be conducted during low flow periods (in November) when there is less potential for sedimentation to occur. The stream beds are mostly cobbles and boulders which also will contribute to lower sediment levels. Mitigation measures will include temporarily stopping work to allow sediment to settle out and the water to run clear that will minimize impacts on water quality. Therefore the Selected Action will not lead to impairment of water resources.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the Selected Action.