

PFC Abraham G. Sams Memorial Bridge Replacement Project - Appendix I

The following pages contain a copy of the Draft Conservation Measures, as presented to USFWS in the "Biological Assessment and West Virginia Coordination Document," dated November 13, 2014, prepared by EnviroScience, and transmitted to USFWS on November 17, 2014 by FHWA.

Consideration of these measures is part of the Endangered Species Act, Section 7 Formal Consultation process, to be completed prior to finalization of the Alternative Selection for the project.

B. CONSERVATION MEASURES

The Preferred Alternative includes a number of conservation measures. Standard construction Best Management Practices (BMPs) will be employed as well as outreach activities, a mussel translocation from the direct impact area and buffers, and pre- and post-habitat monitoring. Conservation measures will include:

BMPs for Monitoring Effects through Habitat Monitoring:

- Conduct habitat and depth monitoring within one year prior to construction;
- Conduct habitat and depth monitoring within one year following construction, including an assessment of any bridge and construction materials remaining on the stream bottom;
- Provide an assessment in the form of a final report describing the cumulative effects of the project on habitat and the ability of the site to recover, post-construction.

BMPs for Protection of Water Quality/Pollution Prevention Plan Items:

- Transfer of fuel and vehicle maintenance should occur within a containment site with adequate buffering (berms, vegetation, etc.) from receiving waters;
- Staging areas for construction vehicles and equipment should be on appropriate work pads located away from receiving waters and avoid impacts to riparian vegetation;
- Since construction equipment will be used in the Elk River, it must be power washed to remove any contaminants before being brought to the AGSM Bridge site.
- Since construction equipment will be used on a cofferdam in the Elk River, it is imperative that *regular daily inspection of all construction vehicles and equipment* used shall be done to identify and control possible leakage of toxic materials including fuels, lubricants, hydraulic fluid, etc. If leakage is found, the fluids will be contained and removed immediately in accordance with applicable regulations and the equipment repaired prior to further use;
- All potential toxic substances such as fuels, paints, solvents, lubricants, etc. should be stored within a containment area with adequate buffering (berms, vegetation, distance, etc.) from streams;
- Any unpermitted discharges to waterways shall be reported immediately upon discovery;
- Stockpile accumulated debris and construction waste away from watercourses;
- Implement a proper sediment and erosion control plan including super-silt fence where appropriate. An erosion and sediment control plan (E&S plan) will be provided to the service for review and approval prior to beginning any ground disturbing activities. The expected components of the E&S plan are provided in Appendix D, and;
- Disturbed areas will be mulched and re-seeded with native vegetation. River banks will be mulched, re-seeded, and planted with native vegetation on and around the ordinary high water mark using live stakes;

- Runoff from the bridge will be diverted into a vegetative swale prior to being drained to the river.

BMPs for Minimizing Footprint Area:

- Use clean rock or other suitable natural materials for any rock fills (e.g., existing piers) and completely remove rock fill following project completion;
- The total (cumulative) footprint of the cofferdams will not exceed 5,680ft² of direct impacts below the OHWM, and 1,140ft² of direct impacts to Suitable (Marginal) mussel habitat (Figure 3).
- The contractor, in conjunction with WVDOT will submit a causeway plan (detailing the temporary works required for the completion of the project) to the USFWS for their review and approval prior to beginning causeway construction. This will ensure all parties are aware of the plan and expectations, as well as define the procedures and contacts in the event of an unexpected condition or incident.

BMPs for Minimizing Negative Hydraulic Effects:

- Pier configuration will closely match existing layout to maintain stream hydrology;
- Wider and open bridge deck configuration will allow for scour repair and log debris maintenance to be completed quickly, without work in river;
- Wider and open bridge deck configuration will allow for future construction and rehabilitation to be completed without work in river;
- Minimize the duration and extent of in-stream construction activities to one construction season.

BMPs for Minimizing Effects through Communication:

- The WVDOT will notify the contractor regarding the presence of threatened and endangered (T&E) species and proper implementation of avoidance and minimization measures. Inclusion of language providing notification and special conditions related to federally endangered mussels will be included in the bid contract. An incentive/disincentive payment special provision will be included in the contract language. The purpose of the incentive/disincentive is to motivate the contractor to limit the duration of in stream work;
- The contractor, in conjunction with WVDOT will develop an E&S plan in accordance with Appendix D and will submit the plan to USFWS for their review and approval prior to beginning any ground disturbing activities. This will ensure all parties are aware of the requirements and expectations for successful sediment and erosion control, as well as define the procedures and contacts in the event of an unexpected condition or incident.

BMPs for Minimizing Effects through Mussel Relocation, Monitoring and Repopulation:

- Prior to in-stream activities the project impact area will be rigorously searched for freshwater mussels in accordance with a prepared Mussel Salvage Plan. The salvage

will be completed for both listed and non-listed mussels. Any take of listed mussels resulting from project implementations will be monitored and reported;

- Assess/monitor impacts to mussel communities, mussel habitat and federally endangered mussels within the direct and indirect effect areas associated with the project;
- Provide \$5,000 dollars to the WVDNR for freshwater mussel repopulation efforts and to provide manpower for these efforts.

BMPs for Minimizing Effects through Timing of In – Stream Construction and Mussel Salvage:

- In- water work will not be conducted from April 1 through June 30 to avoid interference with fish migration and spawning events;
- Mussel salvage will occur during the late summer or early fall the year before construction to assure the best water conditions (low flow and best clarity) occur.

BMPs for Minimizing Effects through Removal of Known Future Impacts to Mussel Populations:

- The old bridge will be removed from the project area to avoid possible structural failure/collapse and its catastrophic impacts to mussels and mussel habitat as well as to local residents;
- Removal of old bridge through the use of the new bridge means that disturbances of mussels and mussel habitat are minimized;
- The new bridge will be designed to allow for most of the future maintenance and rehabilitation to occur using a top down method of construction. This will further minimize future stream impacts.

BMPs for Minimizing Effects through Outreach:

- The WVDOH has sponsored a mussel ecology and taxonomic workshop for key environmental staff, project managers, and consultants. The focus of the workshop was to improve understanding of freshwater mussels and how they relate to transportation projects. All environmental staff, project managers, and consultants will continue to attend freshwater mussel trainings and meetings;
- The WVDOH will conduct a preconstruction meeting and will inform the contractor about the environmental commitments of the project and the nature of the mussel resources at the site in order to further minimize the effects of the project.

IV. ACTION AREA

A. DEFINITION OF THE ACTION AREA

A map of the Action Area is presented in Figure 2 and was defined as the area that may be affected directly or indirectly by the proposed project. The Action Area was defined to

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