WHOOSHH
INNOVATIONS

November 19, 2018

Operations Project Manager
U.S. Army Corps of Engineers
Bonneville Lock and Dam
P.O. Box 150
Cascade Locks, OR 97014

Re: Requesting Access for Project 18BON67 Adult Fish Facility Image Data Collection by Whooshh

Dear Bonneville Dam Operations Project Manager,

Whooshh Innovations (Whooshh) is writing to formally request access to the Bonneville Adult Fish Facility (AFF) to conduct a project which involves the installation of a scanner to photograph fish that pass through the AFF flumes and exit through the bypass rather than the sampling tank. There are currently two AFF bypass pipes, each associated with one AFF flume. The project will involve only one AFF flume path. We will substitute the terminal end of one of the bypass pipes with the scanner through which the fish will slide through without handling, delay or confinement to exit into the calm channel just as they had via the bypass pipe. The second bypass pipe will remain intact and operational supporting the bypass route for all fish that enter the other AFF flume. The installation work will be completed during the winter maintenance period when the AFF is dewatered. The Whooshh scanning equipment will be removed and the bypass exit pipe restored during the following year winter maintenance period.

The project operation period will be from Spring to late Fall 2019. The scanner will photograph fish any time the AFF flumes and bypasses are being used in routine AFF operations and will automatically shift to low power mode during non-use, and overnight hours. The scanner operates automatically sensing fish sliding through, operating the camera shutter and logging the images. All images will be subsequently uploaded for manual identification and classification to enable algorithm development for an automated fish feature and identification system. Fish counts and Whooshh image analyses will be summarized at routine intervals and will be provided to the Bonneville Fisheries Research Coordinators and interested CRITFC biologists. CRITFC biologist have expressed a specific interest in Steelhead counts and lengths which can be determined via the current scanner image software.

Whooshh presented the project to the Fish Passage Operations and Maintenance Team (FPOM) at the October Meeting. Following that the District Fisheries Biologist, Erin Kovalchuk, and Bonneville Fisheries Research Coordinator, Andrew Derugin, submitted an OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE for the project to FPOM to be considered at the November FPOM meeting. Whooshh was informed that the outcome was a green light to proceed with access request documents and project plans and safety documentation. The Governor's salmon and orca task forces have expressed considerable interest in Whooshh technologies as innovative options to consider for population analysis and recovery. The scope of the on-site AFF work is limited to automated fish counting and image collection and thus is self-funded. The classified image dataset, however, will provide valuable insight into the collection of fish that are not sampled which pass through the AFF. Exploring opportunities to improve or augment fish passage counts is well aligned with the BPA and U.S. Army Corps of Engineers invested efforts to address fish monitoring, fish passage and environmental concerns.

Whooshh will work together with the Project Biologists to coordinate installation engineering and equipment transport and placement. In addition, Whooshh will develop plans and training procedures aligned with those captured in the Guide for Researchers, to address on-site safety requirements.

As the first dam upstream on the Columbia River, the fish numbers and species diversity experienced at the Bonneville Dam AFF are unsurpassed by any other Columbia River location. We, at Whooshh, consider it a great privilege to have the opportunity to conduct this project at the AFF. If there is any additional information you require in granting the requested access to perform this project, please do not hesitate to ask.

Sincerely,

Janine Bryan, PhD
VP Biological and Environmental Sciences
Whooshh Innovations, Inc.
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