



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

NOV 28 2016

REPLY TO THE ATTENTION OF:
E-19J

Jessica Hogrefe
U.S. Fish and Wildlife Service
5600 American Boulevard West
Bloomington, Minnesota 55437

**RE: Final Supplemental Environmental Impact Statement: Ballville Dam Project –
Sandusky County, Ohio (CEQ# 20160254)**

Dear Ms. Hogrefe:

The U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Fish and Wildlife Service's (USFWS) October 2016 Final Supplemental Environmental Impact Statement (FSEIS) for the Ballville Dam Project located in Sandusky County, Ohio. This letter provides our comments on the FSEIS, pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA reviewed the Draft Supplemental EIS (DSEIS) for this project and provided comments to USFWS on April 11, 2016. We rated the DSEIS as **Environmental Concerns - Insufficient Information (EC-2)**. This rating was based primarily on concerns relating to contaminants and nutrients from the DSEIS's sediment analysis. Prior to this review, EPA reviewed the original DEIS for the project and provided comments on March 26, 2014; our review of the DEIS also resulted in a rating of **Environmental Concerns - Insufficient Information (EC-2)**. We also provided comments on the Final EIS (FEIS) on September 8, 2014. EPA's previous comments and primary recommendations have focused on wetland and water resource impacts, mitigation, water quality, endangered species, historic preservation, and sediment issues.

Both the original FEIS and the DSEIS selected Incremental Dam Removal with installation of an ice control structure (ICS) as the Proposed Action for providing fish passage upstream and downstream of the Ballville Dam location, restoring natural hydrologic and sediment transport regimes, and addressing dam safety and liability.

The FSEIS is a limited scope document that builds on the previous environmental documents compiled for this project, incorporating new information regarding contaminant analysis of sediments located within the Ballville Dam's upstream impoundment on the Sandusky River brought to light during the interim period of the publication of the project's original Record of Decision (ROD) in October 2014 and the present.

On July 7, 2015, the Sierra Club filed suit in District Court alleging that the City of Fremont (City), the USFWS, and the U.S. Army Corps of Engineers (USACE) (as the cooperating agency) failed to “*lawfully consider and mitigate the environmental harm that the release of the massive quantity of contaminated sediment that has grown behind the dam for over a century will cause downstream to the Sandusky River, Sandusky Bay and Lake Erie following the dam’s removal in the manner approved in the EIS*” and, further, failed to “*lawfully consider reasonable alternatives to addressing this sediment in a more environmentally protective manner.*”

Concurrently, USACE determined that further testing of the sediments impounded by Ballville Dam would be required to complete the Clean Water Act Section 404 permitting process. USFWS determined that this additional sediment data would add significant new information that could inform their understanding of the impacts of the proposed alternative on the environment in the project area. As such, USFWS worked closely with USACE, the Ohio Department of Natural Resources (ODNR), and the City to develop a plan to complete additional testing, reevaluate the potential impacts based on the analytical results, and incorporate this additional information into the decision making process through the completion of the DSEIS and the FSEIS.

In addition to the noted allegations, the lawsuit detailed other concerns also related to sediment management and sediment impacts. These topics include questions regarding the estimate of total quantity of sediment impounded by Ballville Dam, the potential impacts of the proposed alternative on harmful algal blooms (HABs) in the Sandusky River and Lake Erie due to the proposed sediment release, the potential impacts of the proposed alternative on downstream habitats due to sediment release, the accuracy of cost estimates of sediment removal within the DEIS, evaluation of a by-pass and excavation alternative provided in comments on the FEIS, and the potential for beneficial reuse of sediments impounded by Ballville Dam. These topics were covered by USFWS’s publication of the DSEIS.

USFWS provided additional review and assessment in the FSEIS to help further clarify the issues raised during public review of the project’s DSEIS. After the publication of the DSEIS, in May 2016, a meeting was held with Sierra Club representatives, ODNR, and USFWS to discuss comments and the project. At this meeting, the Sierra Club suggested a new conceptual alternative for the management of sediment currently impounded by Ballville Dam. Following that meeting, the Sierra Club and the owner of Universal Farms LLC (a local business specializing in yard waste recycling and mulch manufacturing) met with the City where this concept was also presented as an option to reduce sediment movement downstream. Subsequently, a new alternative for beneficial reuse of sediment was further developed; this alternative was described in section 2.2.3 of the FSEIS. With an estimated cost of \$55 per cubic yard of removed sediment (for removal and trucking plus other associated costs), at an estimated \$20 per cubic yard sale price, there would be an approximate loss of \$25 per cubic yard of removed sediment. Instead of recouping overall project costs, these estimates would translate into an additional net cost of this alternative of approximately \$7M to \$10.5M, in addition to the cost of dam removal. Due to the estimated costs, when viewed in light of the expected limited long term risk of impacts downstream, USFWS determined that excavation along with beneficial reuse of the impounded sediment was neither necessary nor economically feasible. Therefore, this alternative was not carried forward for further analysis.

USFWS has an agreement with ODNR to fund the Proposed Action under the Great Lakes Restoration Initiative (GLRI) through the Great Lakes Fish and Wildlife Restoration Act, pursuant to NEPA compliance. The GLRI is a driver for environmental action and represents a collaborative effort on behalf of EPA and 15 other federal agencies, including USFWS, to address the most significant environmental concerns of the Great Lakes. EPA continues to be in support of the project, and appreciates USFWS's diligence in responding to comments from EPA, other Federal and state agencies, and the public, raised during the DSEIS comment period.

EPA's comments on the FSEIS continue to be based primarily on concerns relating to contaminants and nutrients from the DSEIS's sediment analysis and subsequent information provided in the FSEIS. We recommend that USFWS address our remaining concerns and issues as project design, refinement, and environmental permitting progress.

SEDIMENT TESTING – NUTRIENTS

- Both the FSEIS, and before it, the DSEIS, ultimately concluded that the release of Ballville Dam's impounded sediments would likely not have significant negative impacts on harmful algal blooms (HABs) downstream or on Lake Erie eutrophication. EPA, in our DSEIS comment letter dated April 11, 2016, raised questions relating to algal bloom toxicities, Nitrogen to Phosphorous (N:P) ratios, and whether or not the DSEIS sediment analysis considered different pathways of N versus P loss in impoundment sediments following drawdown, which could possibly alter actual N:P ratios delivered downstream and to receiving waterbodies.

A response to EPA's questions and recommendations was provided in Appendix B1 of the FSEIS. The response in Appendix B1 does not specifically consider impoundment-only N:P ratios/N loading if N is significantly more mobile than P when sediments are largely kept in place and flows may be relatively low. The response does put the potential N load mobilized from the impoundment in perspective of annual Sandusky River N loading. The response assumes most N is currently, and would be mobilized, in a largely unavailable form.

Recommendations: If that assumption holds (that most N is currently, and would be mobilized, in a largely unavailable form) and N does not have a chance to be processed into a more bioavailable form before it reaches HAB communities in Sandusky Bay, the response is adequate. However, as this response is based on an assumption, further clarification and/or research into the potential issues associated with N, if mobilized in an available form, should be undertaken.

SEDIMENT TESTING – CONTAMINANTS

- Based on the sampling effort design and the way in which the data is represented, EPA reiterates our determination, as noted in our DSEIS comment letter, that that there does not appear to be a significant threat for adverse impacts from metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbon (PAHs), or pesticides based on the current data associated with the proposed sediment release. Our DSEIS comment letter recommended that the FSEIS identify and describe which section of the sediment cores were used for comparison to below-dam samples, and describe why; and describe how all of the samples were prepped for analyses (i.e.; cores split, homogenized, etc.). These comments and EPA's

request for additional information was satisfactorily addressed in the FSEIS and in USFWS's responses provided in Appendix B1.

Previously, EPA had also recommended that the FSEIS identify and describe contaminant results from the 10 sediment core samples taken from the impoundment, and describe which sediment core sections are likely to be mobilized based on their location and depth. The FSEIS states in Section 4.1.2.1.2 that sediment depths within the impoundment range from "11 feet near the dam to over 20 feet near the outer margins." However, during sampling, depth to refusal was met between 3-11 feet at the pre-determined locations (Section 4.1.2.1.4). Currently, characterization data does not describe sediment at depths greater than 11 feet. Specifically, it is unclear in the FSEIS if sediment at depths from 11-20' in the impoundment are still at risk to mobilize.

USFWS's response to earlier EPA comments (found in the Appendix B1 response) states, "Sample sites were determined by assessing the likely areas that would mobilize during dam removal and cross referencing that with previously completed depth soundings by Stantec Inc. Initially, several sample locations were to be split into two depth intervals (e.g., 0-10 feet and 10-20 feet), however refusal depths varied between a few feet and approximately 11 ft. Therefore, sediment cores were not split into sub-samples, but were homogenized as a single sample for each sample location and these homogenized samples were used for comparison to below-dam samples. Utilizing homogenized samples best reflects expected sediment mobilization and composition during release under the alternative Incremental Dam removal with installation of ice control structure (the Preferred Alternative)." Additionally, USFWS's response in Appendix B1 states, "It is expected that sediment from all sampling locations, with the possible exception of sample location #8, are likely to be mobilized." If there are sediments at depths greater than 11 feet that have the potential to mobilize, it would be worthwhile to understand why there is no risk and/or what contaminant levels are.

Recommendation: EPA recommends that USFWS clarify if there are any sediments at depth intervals greater than 11 feet that are estimated to be mobilized. If yes, the contaminant levels of these sediments should be characterized and risk levels evaluated.

EPA appreciates the opportunity to review this FSEIS. We are available to discuss our comments with you in further detail if requested. If you have any questions or comments regarding the content of this letter, please contact EPA's lead NEPA reviewer for this project, Ms. Liz Pelloso, PWS, at 312-886-7425 or via email at pelloso.elizabeth@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
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