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Independent Regulatory Review Commission

WATER SCIENCE INSTITUTE

Comments to Proposed rulemaking changes to amend Chapter 105-Dam Safety and Waterway Management (25 PA. Code CH. 105)

Members of the Board, thank you for the opportunity to respond to the proposed Rulemaking notice referenced above.

The Water Science Institute is a private organization formed in part to identify and promote best management practices related to dams, dam removal and the impact of dam breaching on local waterways. Directly and thru partnerships with other organizations including the Lancaster Clean Water Partners, Franklin and Marshall College, National Resource Conservation Service, PADEP and the PADEP Growing Greener program, the Susquehanna River Basin Commission and The Steinman Foundation the Institute has mapped over 2000 historic and contemporary impoundments throughout the lower Susquehanna River Valley watershed of Pennsylvania and developed methodologies for identifying their contributions of legacy sediment and nutrients to local waterways and eventually the Chesapeake Bay. We support many aspects of the proposed rulemaking but feel it is limiting its scope by largely focusing on proposed "dam, water obstruction or encroachment" projects while remaining largely silent on the significant issue that current dam removal projects and accidental breaches have on both local and Chesapeake Bay water quality goals, including the proposed Conowingo Dam WIP (See attached Lancaster Clean Water Partners comments letter). We urge the Board to consider expanding or clarifying the scope of its rulemaking, provide for a more extensive public comment period and schedule public hearings to take full advantage of this timely and important subject.

The phrase "dam, water obstruction or encroachment" appears throughout the document to represent future or existing projects contemplated by the rulemaking to anticipate and recommend specific actions for permitting and installation. However, guidance on dam removal projects is largely relegated to the 105.12 section Waiver of permit requirements-Abandonment. It would seem to be a reasonable text change to modify the proposed language to "Abandoned or proposed dam, water obstruction or encroachment" (projects) so that the regulated goals and definitions for both types of activity are considered equally important in weighing their permitting. The extensive proposed guidance in 105.13

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Regulated Activities-information and fees would be significantly strengthened with the incorporation of the above suggestion to recognize holistic dam removal as critically as new construction projects for the health, safety and environmental benefit of the Commonwealth's citizens.

We raise this issue to encourage policy makers to better recognize and examine the role dams and dam removal plays in developing sustainable practices for long term water quality benefits. Typically, in the breaching of dams the resuspension of legacy sediments (fine silts and clays and associated nitrogen and phosphorus) results in an initial mobilization and transport of this material. This has adverse impacts that include increased turbidity, elevated sedimentation, higher loads of nitrogen, phosphorus and occasionally toxic metals and destabilization of stream banks that contributes long term nutrient and sediment loads to local waterways. Both the immediate and long-term loads have the adverse effect of completely offsetting investments in upland best management practices (BMPs) designed to prevent sediment and nutrients from entering local waterways. It should be understood that dam breaching does not flush away stored materials behind the impoundment in a matter of days or years but may contribute significant loads for decades before bank stabilization is achieved thru natural processes. As important the contribution of elevated turbidity and sedimentation to local streams may have the added effect of reducing fish and macroinvertebrate habitat which is one of the primary goals of planned dam removal projects. One recent dam removal (2018) in a DEP designated alternative TMDL watershed contributed approximately 5000 tons of sediment in a few months and is currently releasing 1-4 Tons per Foot of sediment from bank erosion above the removed structure. A proposed removal in the same watershed is estimated to contain 80,000 tons of sediment with an average of 3.9 pounds of N and 1.25 pounds of P per Ton. See attached Lancaster Clean Water Partners letter. These are clearly avoidable impacts as contemplated in the proposed rulemaking to address unavoidable impacts to aquatic resources and aquatic resource functions, but it is UNCLEAR that this regulatory goal applies equally to new "dam, water obstruction or encroachment" as well as proposed dam removal projects. Clearly the proposed requirements for environmental assessment, environmental impact analysis and mitigation plans should be addressed to ensure that both types of projects and their consequences be understood in the context of this rulemaking. Incorporating the previous suggested language re "Abandoned..." would provide this clarity and offer more specific guidance for both types of projects.

The proposed rules offer waivers of certain requirements for "beneficial projects", but it raises the concern that beneficial projects is a very subjective term that has not been adequately discussed or defined particularly in the context of the above examples. Greater clarity on how and why waivers are determined should be a clear goal of this rulemaking. Additionally, the proposed rules repeatedly reference wetland impacts (a specific aquatic resource category), but clarity is needed to determine if the intent of the rule is to limit this impact determination specifically to wetlands or is to the broader category of "Aquatic Resources".

We wish to thank the Board for its acceptance of these comments and respectfully request that it consider these suggestions in its deliberations:

Please clarify that dam removal projects are contemplated in the rulemaking as equivalent to new projects in the application of the proposed 105 revisions;

Confirm that dam and obstruction removal is a component of stream restoration subject to the proposed revisions for enhanced requirements for environmental assessment and impacts analysis;

How such removal projects are required to use the framework of aquatic resource function criteria proposed to include environmental assessment, impacts analysis and mitigation as a potential alternative;

The contemplated role of mitigation banking and how that alternative would be utilized for dam removals or to offset any dam removal adverse impacts;

Are mitigation banks envisioned as an alternative too current MS 4 regulatory requirements and provide examples of how this process could be utilized;

Clarify the distinction between unavoidable and avoidable impacts and how this will be assessed in the context of dam removal projects and provide criteria or examples of unavoidable impacts;

Is it the Board's intent that dam removal as a mitigation project could/would serve as an MS 4 alternative?

Are the referenced Chapter 102 regulations currently applied to address Erosion and Sedimentation for dam removal permits contemplated to apply only to the permitted physical dam removal or are do such permits anticipate E&S that occurs following such removals?

What is the process for post dam removal monitoring of E&S that follows dam removal and how is that reviewed and verified?

Respectfully submitted by

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February 3, 2021