



Bureau of Waterways Engineering and Wetlands

Accounting of Compensatory Wetland and Stream Mitigation

April 9, 2020

*Chesapeake Bay Program Partnership
Management Board Meeting*

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Agenda

- Pennsylvania Regulatory Requirements
- Accounting of Compensatory Mitigation
- Mitigation Bank Site Example
- Review the Ad hoc Committee Proposal
- Questions



Pennsylvania Regulatory Requirements

- Chapter 105 – Dam Safety and Waterway Management

- § 105.1 – Definitions

- Mitigation—*

- An action undertaken to accomplish one or more of the following:
 - Avoid and minimize impacts by limiting the degree or magnitude of the action and its implementation.
 - Rectify the impact by repairing, rehabilitating or restoring the impacted environment.
 - Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.
 - If the impact cannot be eliminated by following clauses (A)—(C), compensate for the impact by replacing the environment impacted by the project or by providing substitute resources or environments.



Pennsylvania Regulatory Requirements

- Chapter 105 – Dam Safety and Waterway Management
 - **§ 105.18a. – Permitting of structures and activities in wetlands**
 - Exceptional Value Wetlands
 - No adverse impact, as determined in relation to review of applications and environmental assessment
 - The project must be water-dependent
 - No practicable alternative
 - The project would not cause or contribute to a violation of an applicable State water quality standard
 - The project would not cause or contribute to pollution of groundwater or surface water resources or diminution of resources sufficient to interfere with their uses
 - The applicant shall replace affected wetlands in accordance with §105.20a (relating to wetland replacement criteria)
 - Other Wetlands
 - No significant adverse impact. The determination if the impact is significant includes:
 - The areal extent of the wetland impacts
 - The wetland's values and functions
 - Whether the affected wetlands values and functions are unique to the area or region
 - Comments from other state and federal environmental agencies concerning the scope and effect of the impact
 - Adverse environmental impacts on the wetland will be avoided or reduced to the maximum extent possible.
 - There is no practicable alternative to the proposed project that would not involve a wetland
 - The project will not cause or contribute to a violation of an applicable state water quality standard
 - The project will not cause or contribute to pollution of groundwater or surface water resources or diminution of the resources sufficient to interfere with their uses
 - The cumulative effect of this project and other projects will not result in a major impairment of the Commonwealth's wetland resources
 - The applicant will replace the affected wetlands to compensate for unavoidable impacts, in accordance with § 105.20a.



Pennsylvania Regulatory Requirements

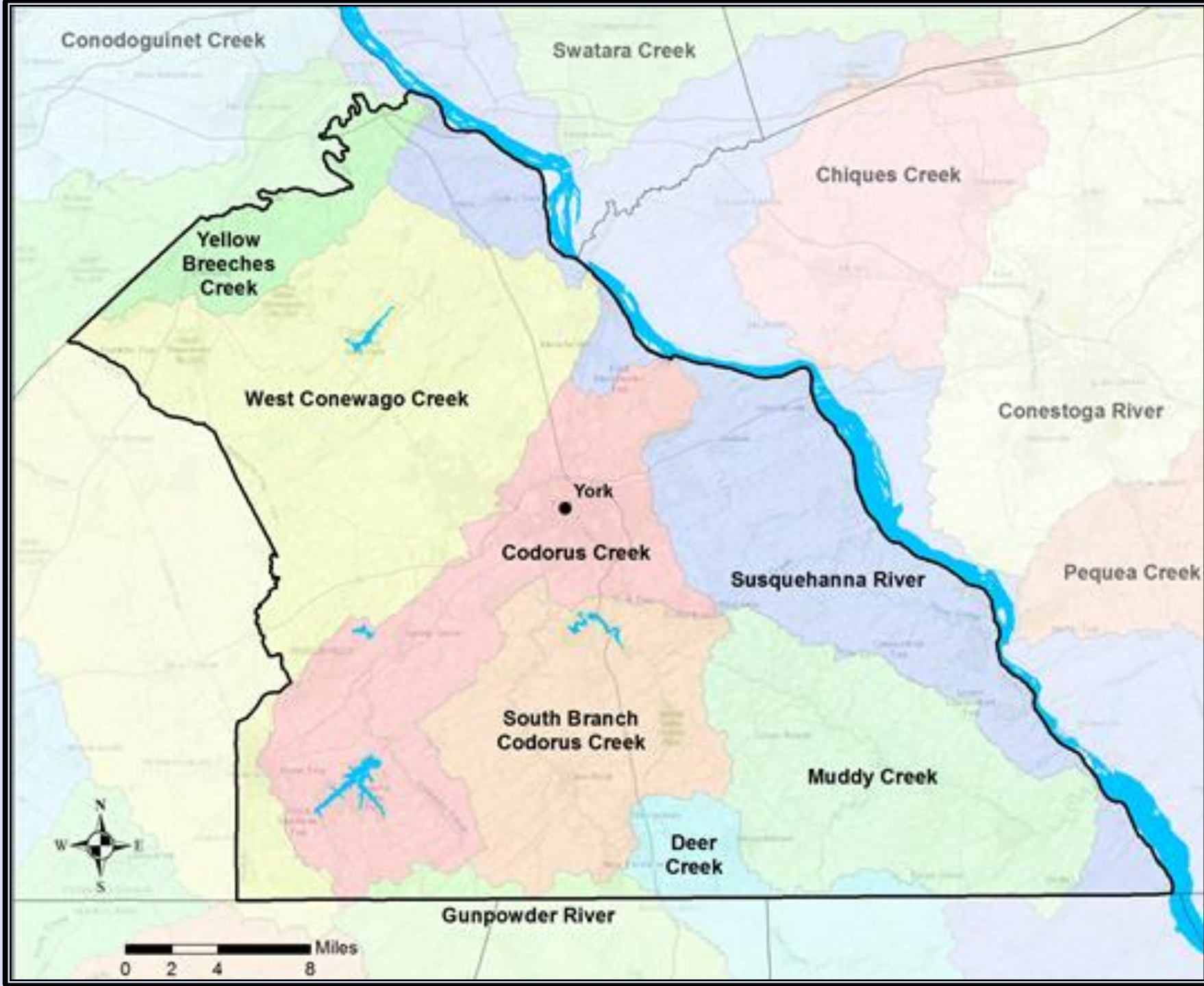
- Chapter 105 – Dam Safety and Waterway Management
 - **§ 105.20a. – Wetland Replacement Criteria**
 - Wetlands replacement must meet the following general criteria:
 - Area ratio – Replaced at a minimum area ratio of replacement acres to affected acres of 1:1. The Department may require the area ratio to exceed 1:1 based on the determination of the area affected and the functions and values which will be destroyed or adversely affected by the project [...]
 - Function and value replacement – Functions and values that are physically and biologically the same as those that are lost shall be replaced at a minimum ratio of 1:1. The Department may required the functions and values ratio to exceed 1:1 based on the area affected and on the functions and values which will be destroyed or adversely affected by the project and the replacement ratio [...]
 - Siting criteria – Replacement shall be located adjacent to the impacted wetland unless an alternative replacement site is approved by the Department [...]



Accounting of Compensatory Mitigation

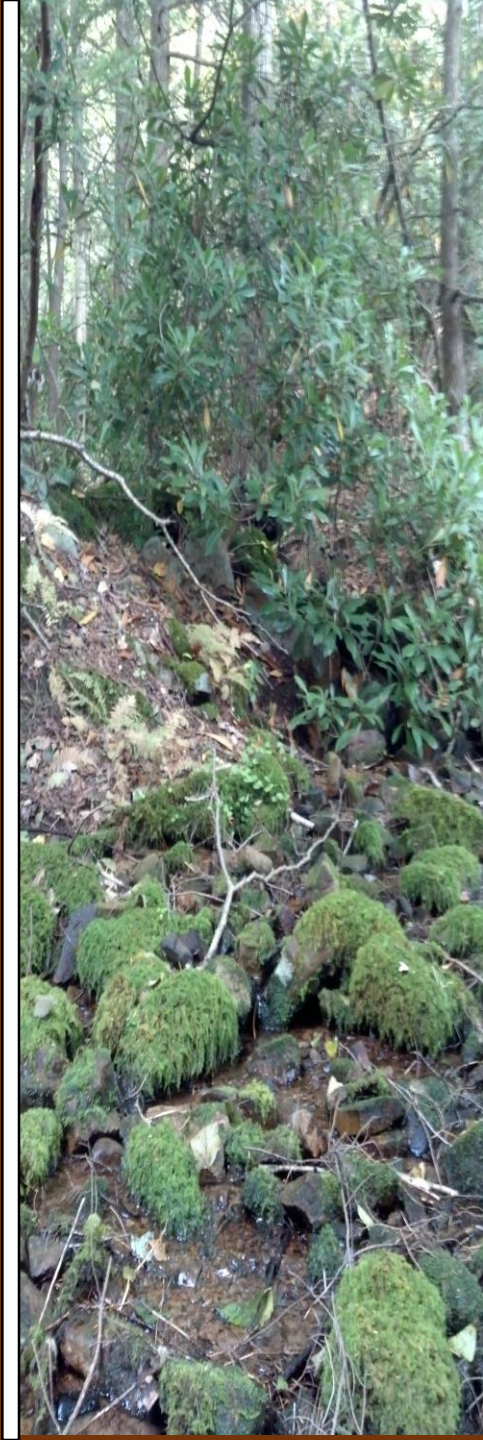
- Historic decision to not account for compensatory mitigation actions had no real basis.
 - All other programs with regulatory context are accounted such as erosion control, stormwater management
- Now that wetlands are a land cover class, there will be some land cover conversions detected in the landcover change analysis.
 - Wetland and stream restoration efforts that occur under regulatory requirements may result in future forest loss change detection efforts without accounting of the restoration gains
 - Change detection stands to disincentive wetland stream restoration.
- Non accounting of regulatory actions is now affecting state's ability to incentivize wetland/stream restoration banking industry deployment to address multiple programmatic needs





Codorus Creek Wetland and Stream Project

- Work completed in 2019
- 51 acres were acquired by RES for a mitigation bank
- 11,416 linear feet of stream channel were restored, rehabilitated, and enhanced
- 7+ acres of wetlands restored
- 10,000+ trees and shrubs were planted in Fall 2019
- Excavation volume:
 - 34,500 CY
 - 103,500,000 lbs
- Reduction Calculations, resulting in:
 - TSS reduction = 661,564 lbs/year
 - TP reduction = 391 lbs/year
 - TN reduction = 1,605 lbs/year





PRE-CONSTRUCTION – EXISTING CONDITIONS



PRE-CONSTRUCTION – EXISTING CONDITIONS



POST-CONSTRUCTION – AS-BUILT

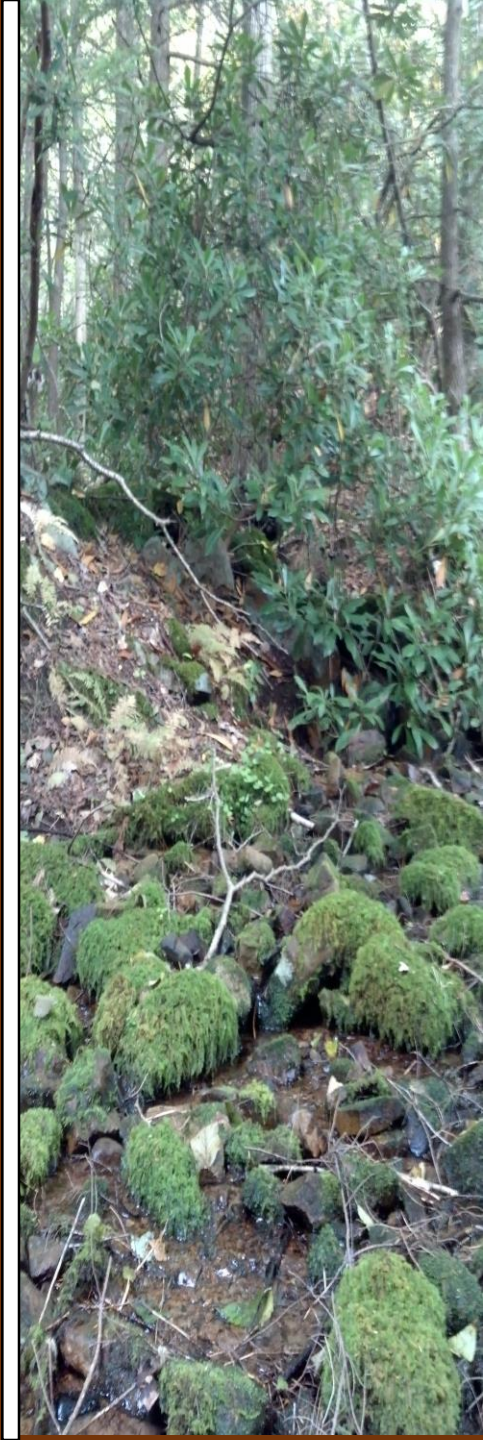


POST-CONSTRUCTION – AS-BUILT



<https://vimeo.com/370082863>

Drone Footage in October 2019



Ad Hoc Committee Proposal

- Review the Ad hoc Wetland and Stream Mitigation Proposal
 - Background
 - Scope of Work
 - Proposed Group Composition and Operations



Questions?

