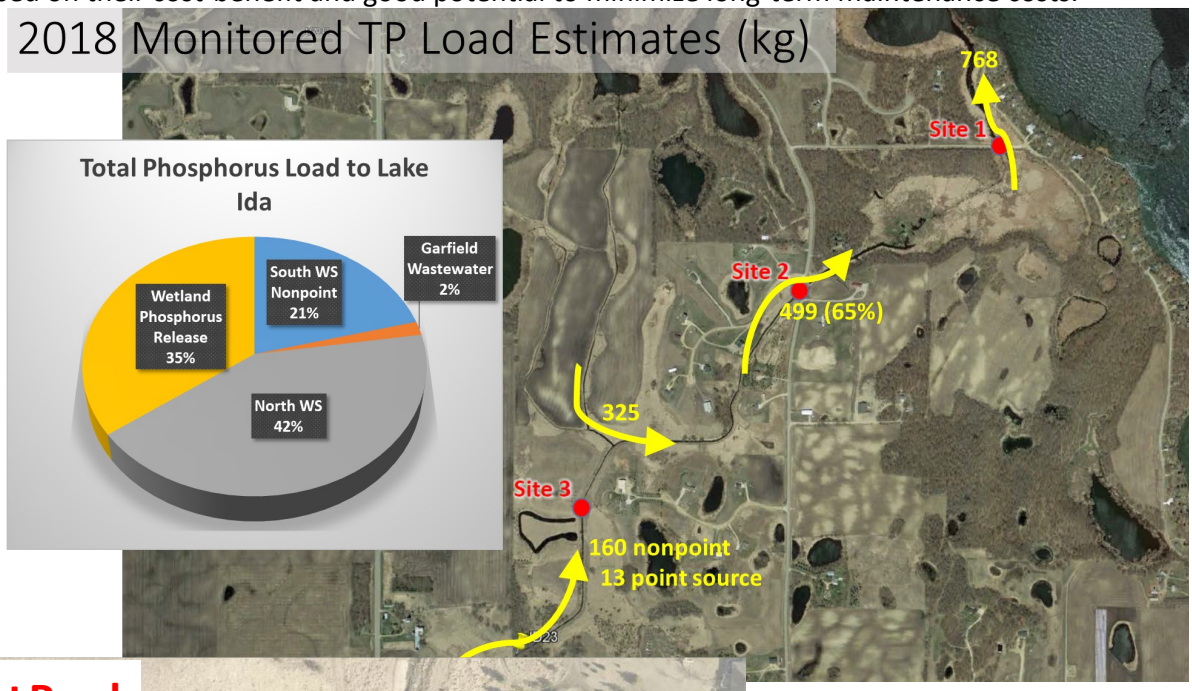
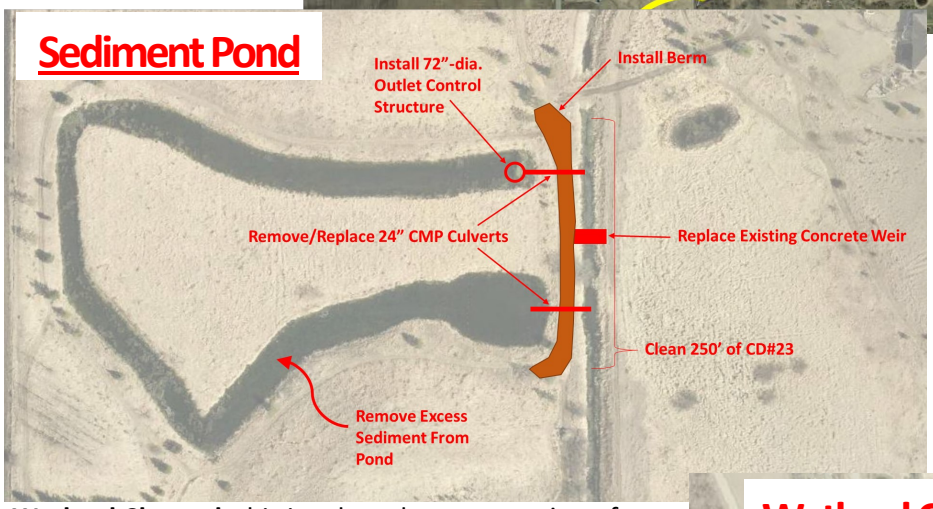
Lake Ida & County Ditch 23 Project Summary

5/28/2021

Longitudinal monitoring conducted during the 2018 growing season confirmed, similar to historical grab sampling, that the wetland sediment is releasing large amounts of phosphorus (approximately 590 pounds in 2018) that becomes entrained in the watercourse flow that is carried immediately downstream to Lake Ida, which is nearly impaired for excess phosphorus.

Several improvement options that primarily involved upstream treatment or minimizing sediment phosphorus release were evaluated as a part of the feasibility study. The most promising improvement options were compared for feasibility, cost-effectiveness and permit considerations. The following options were specifically recommended for project implementation based on their cost-benefit and good potential to minimize long-term maintenance costs.





Sediment Pond: this portion of the project involves the retrofit of an off-line pond a short distance upstream of the wetland. It is recommended for implementation because it restores a project that was previously implemented, but is not functioning due to a diversion weir that has failed. This option has the added benefit of reducing peak flows in the CD#23 system. It is expected that fixing this sediment pond will reduce the downstream phosphorus load by 40 pounds, based on the 2018 monitoring conditions.

Wetland Channel: this involves the construction of a new channel around the north and west edges of the wetland that is intended to minimize contact between most of the flow and the wetland sediments that are currently releasing phosphorus. This has the added benefit of providing more assurance that the long-term channel integrity can be maintained, including maintenance access, while minimizing contact with ponded wetland water. It will also convey all of the low flows and minimize the risk of settling that would otherwise happen with a channel cut through the middle of the wetland. It is expected that implementation of this channel will reduce the phosphorus load to Lake Ida by at least 200 pounds, based on the 2018 monitoring conditions. The existing ditch channel will remain unaltered and still provide drainage.