

## MOORE FARM WETLAND MITIGATION SITE LYCOMING COUNTY, PENNSYLVANIA

WHM Solutions, Inc. (WHM) offers comprehensive solutions to difficult environmental problems, streamlining the business endeavors of our clients while preserving our country's environmental assets. From permitting to design to erosion and settlement controls, we handle every aspect of the mitigation process.

WHM was contracted to develop compensation for several proposed projects in north central Pennsylvania that would result in wetland damage. WHM was responsible for the execution of the deed restriction on the property, for acquiring all necessary permits and dealing with regulatory agencies, and for the design, construction, and monitoring of the project.

WHM completed a desktop analysis within the appropriate geographic service area to determine potential locations. These sites were initially reviewed through a GIS desktop analysis outlining: aerial photography, LIDAR topographic contour data, floodplain boundaries, hydric soils, and tax parcel data. Landowners with suitable property to conduct mitigation activities were contacted and several landowners with favorable properties were approached throughout the site selection process. Ultimately, due to site suitability, landowner cooperation, and the non-attaining status of the waters, a farm located in Piatt Township, Lycoming County was chosen to accomplish compensatory mitigation for the proposed project impacts.

The design of the mitigation site consists of wetland enhancement and the installation of a forested riparian buffer. The mitigation area is a contiguous land feature that will be expanded by future projects leading to an overall benefit to functions and values. The work plan will enhance functions of the existing wetland which is in a degraded state due to the current land use as a cattle pasture, resulting in considerable nutrient inputs. The purpose of the project is to offset function and value losses resulting from impacts associated with the proposed pipeline project. The design will incorporate wetland and stream fencing to remove cattle from the areas proposed for mitigation. It will include a meandering flightway to create and enhance habitat for waterfowl, wading birds, and migratory songbird species. The flightway will be paralleled by an emergent and scrub/shrub fringe. The vegetative design of the site will incorporate a diverse planting plan consisting of herbaceous seeding followed by a clumped distribution of tree and shrub plantings. Once the mitigation areas are established, increased nutrient and sediment sequestering will be provided within the areas resulting in an improvement of water quality and habitat enhancement.

The result of the project has provided 11.82 acres of native wetland community and 6.58 acres of forested riparian buffer that fit naturally into the landscape. The site is self-sustaining with little to no long-term management needs because no mechanical structures were incorporated into the design of the site.

WHM's design-built and innovative approach to wetland mitigation proves that industrial development doesn't have to come at the risk of our aquatic resources or at the hassle of our clients working towards the future of industrial projects.



BEFORE



DURING



AFTER