

Guidance for Wetland Related Elements - Planning Proposals

Background

Prior to European settlement, the State of Michigan contained an estimated 11 million acres of wetlands, approximately 30 percent of the state's land mass. Michigan has lost approximately 5.5 million acres of those original wetlands, an overall loss of 50 percent (Dahl 1990). The primary reasons for wetland losses have been drainage for conversion to agriculture and urban development. Watersheds are significantly influenced by their wetlands. Wetlands provide many valuable water quality related functions including storing floodwaters, trapping sediments and nutrients, and protecting erodible stream banks and shorelines. Wetlands also contribute to groundwater recharge and provide valuable fish and wildlife habitat. Despite providing these critical functions, wetlands are seldom integrated into local watershed plans.

Project Details

All watershed plans should include a wetlands component which results in the identification of wetland areas in need of protection and restoration. Methodologies to conduct a Landscape Level Wetland Functional Assessment (LLWFA) of all existing and historically lost wetlands have recently been developed by the United States Fish and Wildlife Service. This methodology allows watershed groups to inventory their existing wetlands, determine the functions they are performing, and prioritize them for protection and preservation. This methodology will also allow watershed groups to identify historically lost wetlands, determine the functions they once provided, and to prioritize which wetlands should be restored in order to obtain the most significant water quality improvements.

Elements for Inclusion in Watershed Management Plans

The following wetland related elements should be considered for watershed planning projects:

- 1) Compile wetland information on a watershed basis.
- 2) Assess local wetland protection capacity.
- 3) Identify wetland partners and roles.
- 4) Define wetland goals and objectives for the watershed.
- 5) Create an inventory of existing wetlands and potential wetland restoration sites within the watershed using GIS wetland related data layers (e.g. Updated National Wetlands Inventory, MIRIS Wetlands layer, MNFI Pre-Settlement Wetlands layer, USDA Hydric Soils layer, Urbanized Area layer).
- 6) Conduct a Landscape Level Wetland Functional Assessment (LLWFA) of the watershed to produce an inventory and analysis of both historic and present day wetlands and their functions. The results are used to estimate the cumulative effect of historic wetland losses on the watershed and water quality. The results will assist the grantee in setting goals to replace wetland functions that have been lost since pre-settlement. The results will also be a critical source of information for developing procedures to prioritize existing wetlands for protection and preservation, and prioritizing historically lost wetlands for restoration.
- 7) Develop a wetland restoration strategy. The strategy should identify the tools that will be used to accomplish the physical restoration as well as a system to prioritize which historically lost or degraded wetlands should be restored.
- 8) Develop a wetland protection/preservation strategy. The strategy should specify the methods or tools that will be used to increase the protection of existing wetlands and to prioritize the preservation of the highest quality wetlands.
- 9) Screen "priority" wetlands for further assessment and field evaluation.
- 10) Coordinate Implementation of Wetland Elements.

Projected Environmental Improvement

The short-term outcomes of this effort will be that grantees will gain an increased knowledge of where their wetlands are located, the specific functions that wetlands perform, and the overall importance of wetlands in the watershed. The expected transitional outcomes will be changes in practices that impact wetlands and local decisions that can protect or preserve wetlands. The anticipated long-term outcomes will be improved water quality as a result of existing wetlands that are protected and the restoration of wetlands that improve water storage and pollution removal capabilities.