

Operation and Maintenance Requirements for Low Velocity Grassed Waterways

Many grassed waterways in Indiana are designed which have large watersheds and flat grades. The result of the large watershed is a large amount of flow, which even on flat grades causes gully erosion and a need for vegetation to control erosion.

The Operation and Maintenance (O&M) section of the Grassed Waterway (412) Standard contains the following language for low velocity waterways:

*Velocities that are less than 1.5 feet per second require special attention. The waterway shall be mowed to maintain a maximum grass height of 6 inches. Sediment deposits shall be removed as quickly as possible to maintain the capacity and integrity of the waterway.*

In many cases, due to program requirements which limit mowing due to nesting season dates, it is not possible to maintain a maximum vegetation height of 6 inches.

The following statement shall be added to the engineering plans if the vegetation height cannot be maintained:

**“Due to low velocities, siltation may occur and maintenance may be required. It is the landowner’s responsibility to maintain the waterway at design depth for the contracted period and maintain adequate vegetative cover.”**

These grassed waterways shall be designed using the “C” retardance for capacity to reflect the vegetation height.

NRCS staff should work with the landowner to address erosion issues in fields adjacent to the grassed waterway. The implementation of reduced tillage or no-till will help to reduce the O&M needs for the project.