

# Naganna Waterway

## **Background:**

The Naganna waterway was constructed to connect the stormwater management facility on the Naganna property to the stormwater management facility on the Hoff property. The waterway was designed by Carroll Land Service with assistance from Carroll Soil Conservation District. The construction of the waterway was implemented to convey heavy run-off from Bethel Road. Over the years damage has been done to both private and public property from the uncontrolled run-off.

## **Scope of Work:**

The site was analyzed by Carroll Soil Conservation District in conjunction with Carroll Land Service to determine the dimensions of the waterway. It was determined that the waterway should be sized 40" wide x 1" deep. An application was submitted to Maryland Department of Agriculture for cost-share through the Maryland Agricultural Cost Share Program (MACS). A temporary construction easement was established to gain access to the property for design and construction. The design for the waterway included grading a parabolic swale from the facility constructed along Bethel Road to the facility at the Hoff property. The waterway was designed to meet all current Natural Resource Conservation Service (NRCS) regulations. Construction of the waterway was done in a very efficient manner.

## **Sequence of Construction:**

The landowners was contacted concerning construction of the proposed waterway, staff members meet with them to discuss the proposed projects in the watershed. The engineering for this project went out to bid in January 2009. The waterway went out to bid for construction on July 30, 2009 with bids due back by August 12, 2009.

The job was awarded to Stambaugh's, Inc. and was slated to begin the Spring of 2010. The contractor began working in May. The contractor completed the project in November 2010, but had to return after the Hoff facility was completed to construct the concrete portion of the waterway in the field road. All disturbed areas were stabilized. The project received a final sediment control inspection on February 17, 2011. The as-built was accepted on December 15, 2010.

## **Project Details:**

Watershed:	Liberty Reservoir
Drainage Area:	101.8 acres
Impervious Surface Treated:	12.98 acres
Costs: Engineering	\$ 5,108.00
Construction	\$ 97,304.00
Time Frame:	26 Months

## **Submitted By:**

Janet O'Meara, Watershed Management Specialist







