This project treats storm water from a 2.7-acre urban site in the Malletts Creek watershed. The goal is to reduce sediment, phosphorus, and peak flow velocities, with innovative storm water management techniques consistent with the MDEQ-approved Huron River watershed plan. These innovative techniques include a "green roof," overland flow, vegetated bioswales, and a retention basin. The bioswales are vegetated with native plants, which require no additional phosphorus. They are a key component of the system, because they slow runoff velocity, allow sediment to settle out, reduce erosion, and allow infiltration.
Runoff from the asphalt parking lot is directed to two bioswales, which are heavily vegetated with native forbs, grasses, and shrubs.

Water that falls on the green roof flows through a 3.5" mat planted with various species of sedum.

Funding provided by:
Federal Clean Water Act
Section 319

Grant: $236,000
Match: $ 144,750
Total: $380,750

Bioswales slow water velocity, allowing suspended sediment to settle out. Runoff infiltrates into the ground and is taken up by the vegetation.

Close-up of vegetation in bioswale.
Rock riprap inlet to bioswale. Inlet slows runoff velocity and traps larger sediment particles.

Downstream end of retention basin. In the foreground, the outlet riser pipe is visible, with low-flow and high-flow outlets on the left side. The emergency overflow is through the top of the riser pipe. The retention basin discharges to Malletts Creek, which is piped through this area.