Systematic Approach to Natural Channel Designs and Agricultural Stewardship

Sarah Fleischhauer
Stewardship Project Lead
Maitland Valley Conservation Authority
Watershed Assessment

- After snowmelt and prior to any tillage
- Walked 50 KM of natural watercourses, open and closed municipal drains, private drains and low draws.
- Over 3000 Geo-referenced photos.
Project Goals

• Systems approach
• Increased watershed resiliency
• Improve soil health & water quality
• Create a demonstration site
Landowner Concerns

- Soil erosion
- Storm water management

- “Streams have become more flashy”
- “Rates of erosion have increased”
Monitoring

Garvey Glenn Watershed Water Sampling Sites

Water Sampling Sites
Systematic Method

1. **Step 1**: Avoid / Prevent
2. **Step 2**: Control/Trap/Treat Water
   - In Field
   - Edge of Field
3. **Step 3**: Riparian Management

Modified from Tomer et al. 2013
Step 1: Avoid/Prevent

- 4 R’s – Right Source, Right Rate, Right Time, Rate Place
Step 2: Control, Trap, and Treat
Step 3: Riparian Management
Municipal Drains and the Drainage Act
Municipal Drains and the Drainage Act
Standard Drain Cleanout
Glenn-B Municipal Drain
Erosion Control Structures

Before

After

Maitland Conservation - Garvey-Glen Project
Erosion Control Structures
Erosion Control Structures
Modified Drain Cleanout

Before
Before
After
After
Protecting Infrastructure
New Municipal Drain
Thank You!

Sarah Fleischhauer
Restoration Technician
519-335-3557 ext. 239
sfleischhauer@mvca.on.ca