



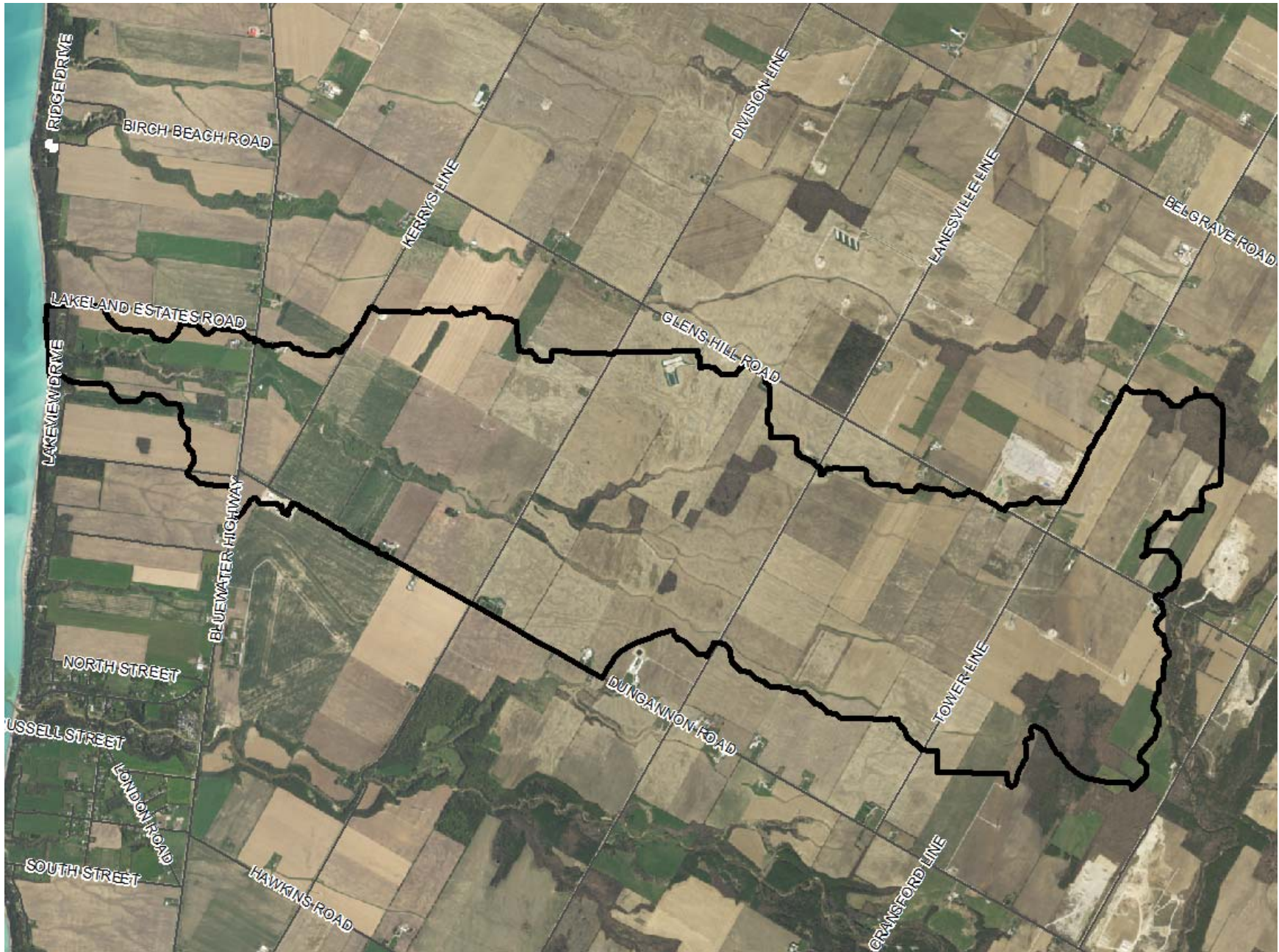
Systematic Approach to Natural Channel Designs and Agricultural Stewardship

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



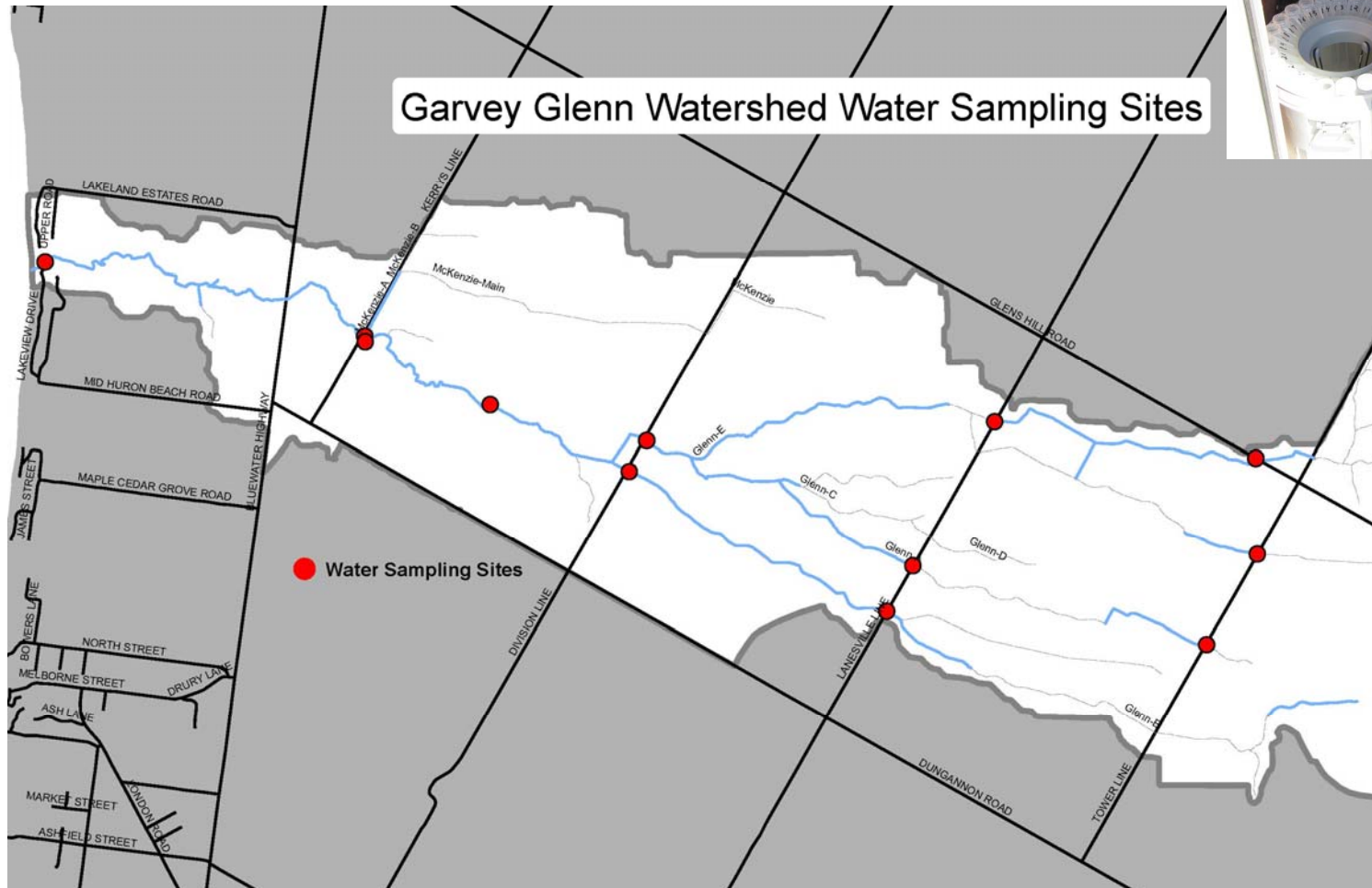
Landowner Concerns



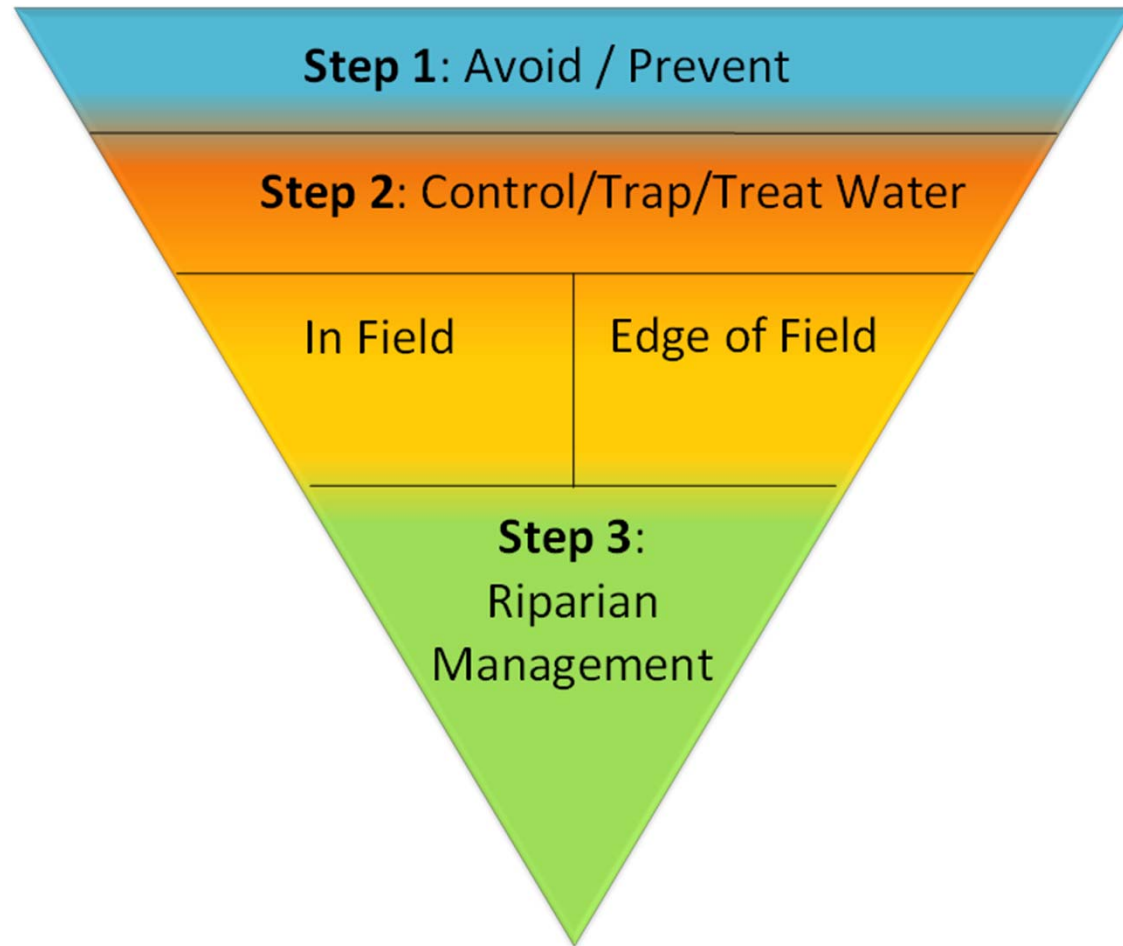
- **Soil erosion**
- **Storm water management**

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

Monitoring



Systematic Method



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



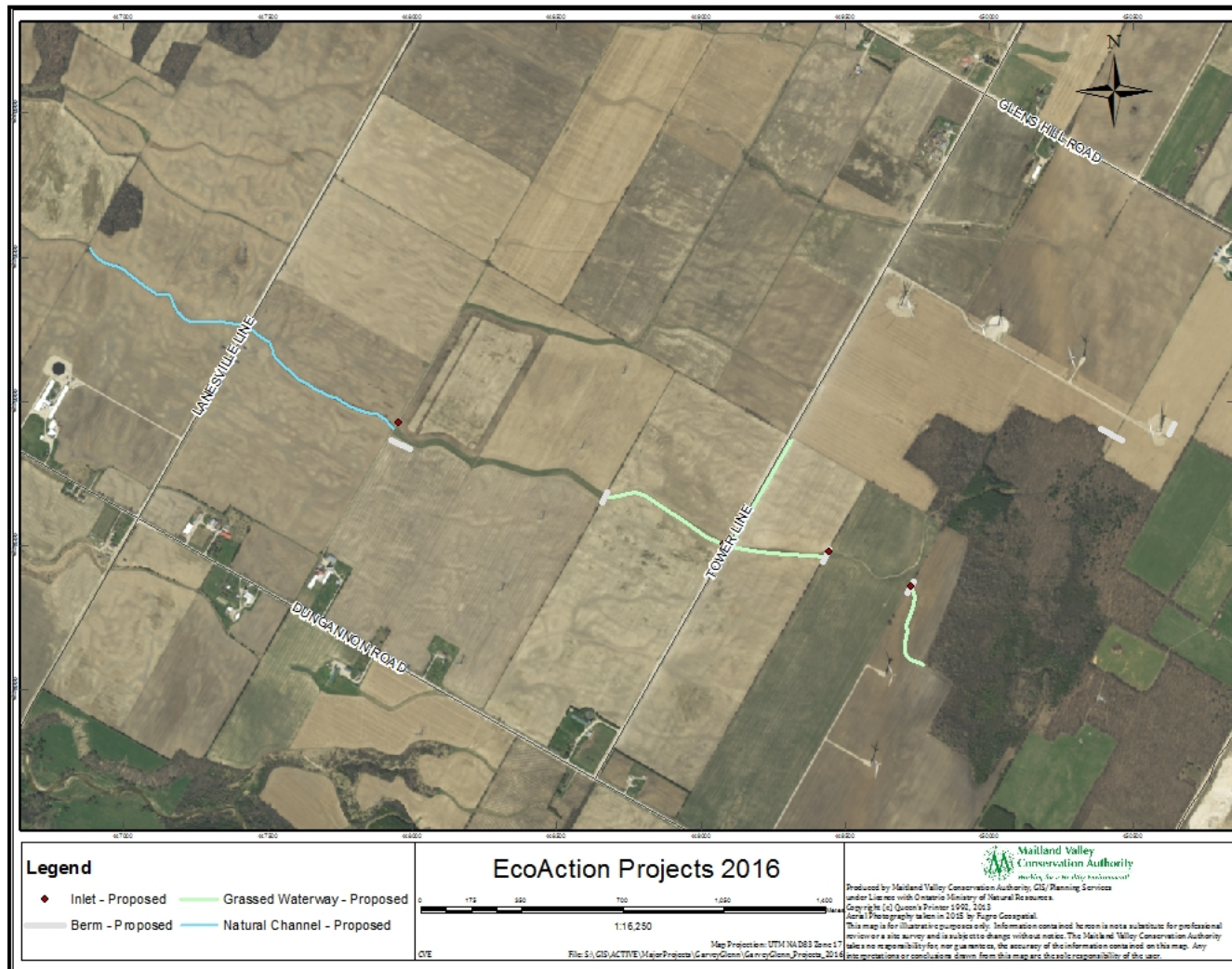
Municipal Drains and the Drainage Act



Standard Drain Cleanout



Glenn-B Municipal Drain



Erosion Control Structures



← Before

After →



Erosion Control Structures



Erosion Control Structures



Modified Drain Cleanout



Before



Before

Before





After



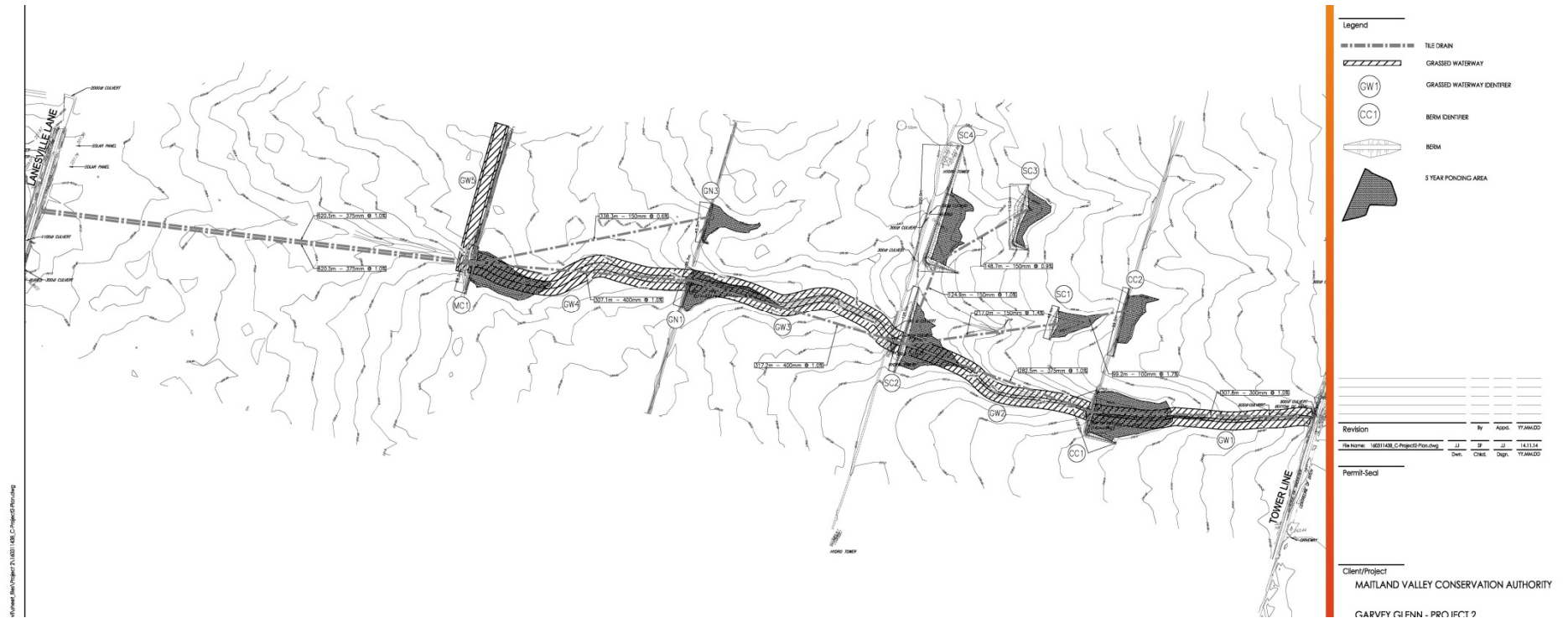




Protecting Infrastructure



New Municipal Drain



Thank You!

Canada 



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