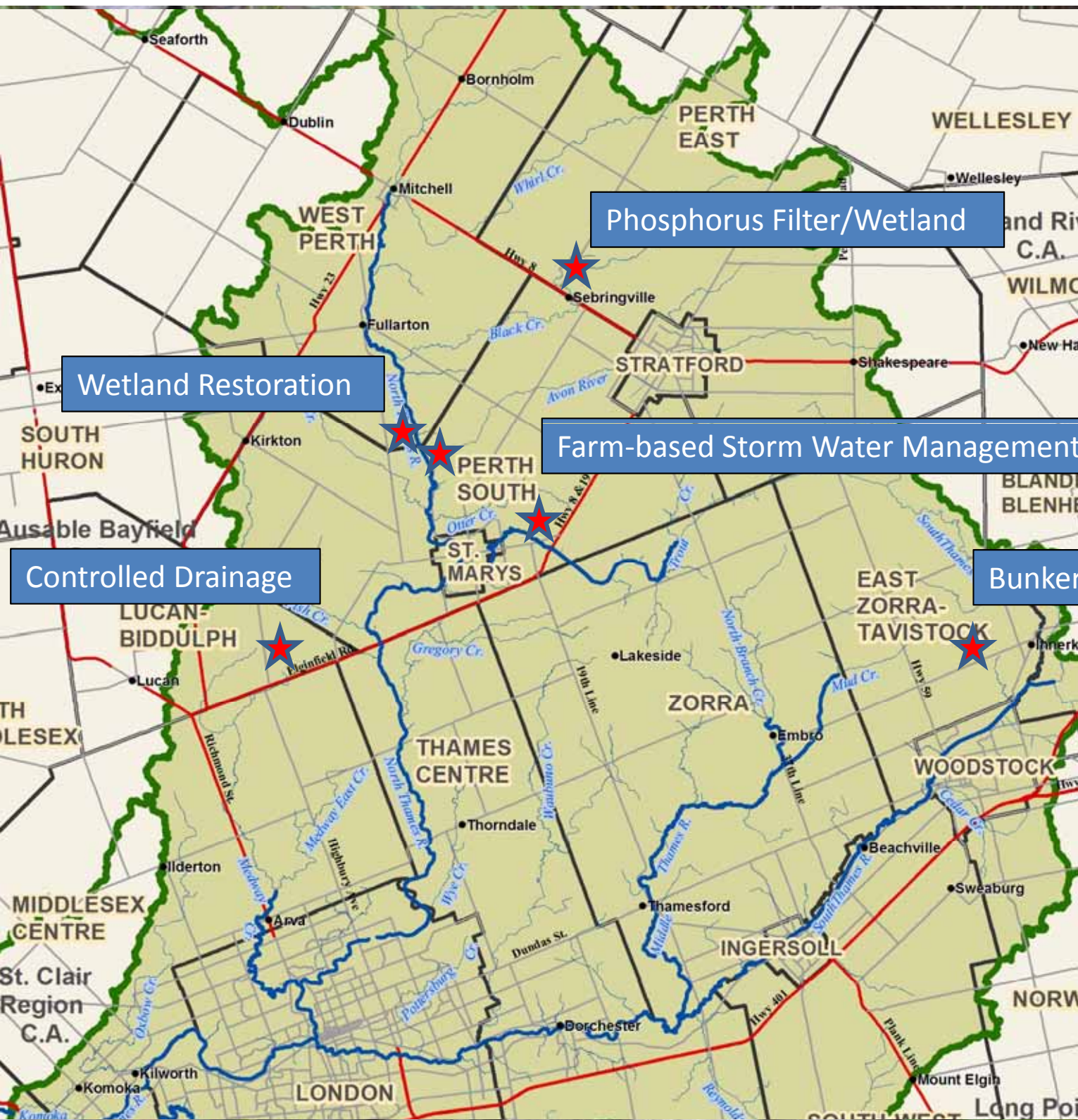


A photograph of water flowing over a series of grey, rounded rocks in a stream. The water is captured with a slight motion blur, creating a sense of movement. Green grasses and other vegetation are visible along the banks of the stream.

# Developing and Demonstrating Innovative Best Management Practices

- Phosphorus Filter/Wetland
- Farm-based Storm Water Management
- Bunker Silage Leachate Treatment
- Wetland Restoration
- Controlled Drainage

Brad Glasman  
Craig Merkley



Phosphorus Filter/Wetland

Wetland Restoration

Farm-based Storm Water Management

Controlled Drainage

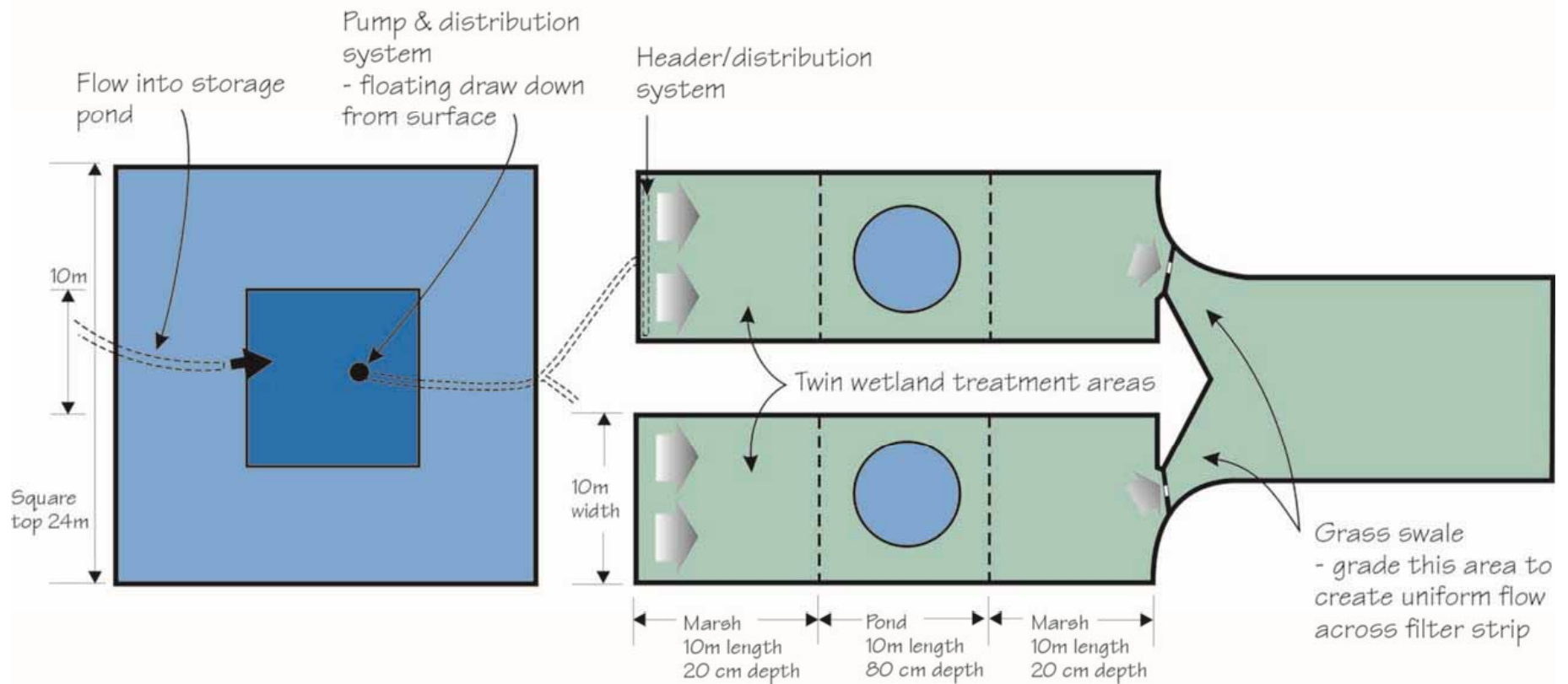
Bunker Silage Leachate Treatment



# Phosphorus Filter/Wetland Treatment System



# PLAN OF LAGOON/WETLAND SYSTEM





1998 ...













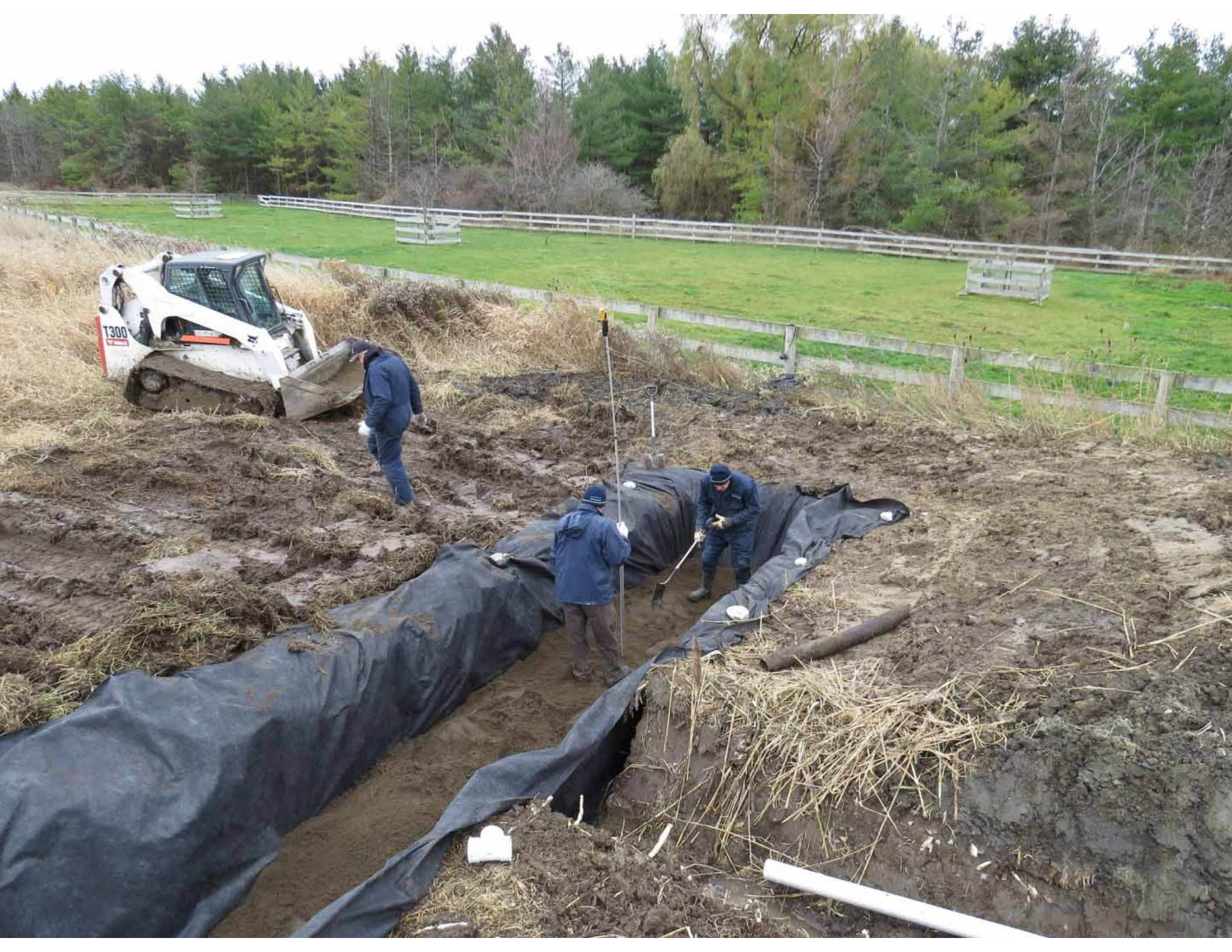
## It's Still Working Well... !

- Nitrate
- Bacteria
- Phosphorous























# Chitosan



# Farm-based Storm Water Management

## *Red Mill Farm*



Before



After



Before





After



# Farm-based Storm Water Management

## *Van Nes Farms*







Stream

Existing ground-line

Proposed ground-line

Gully erosion





Floodplain

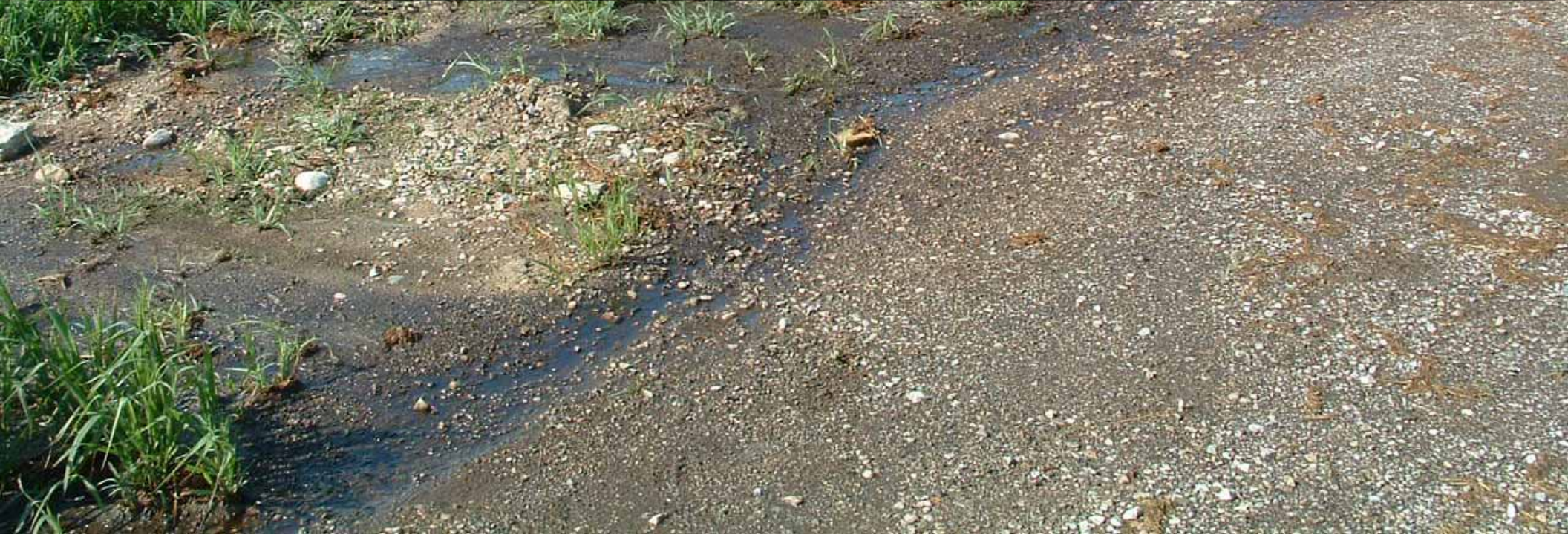
Annual flood

Normal flow

New ground-line



Bunker Silage Leachate Treatment Project

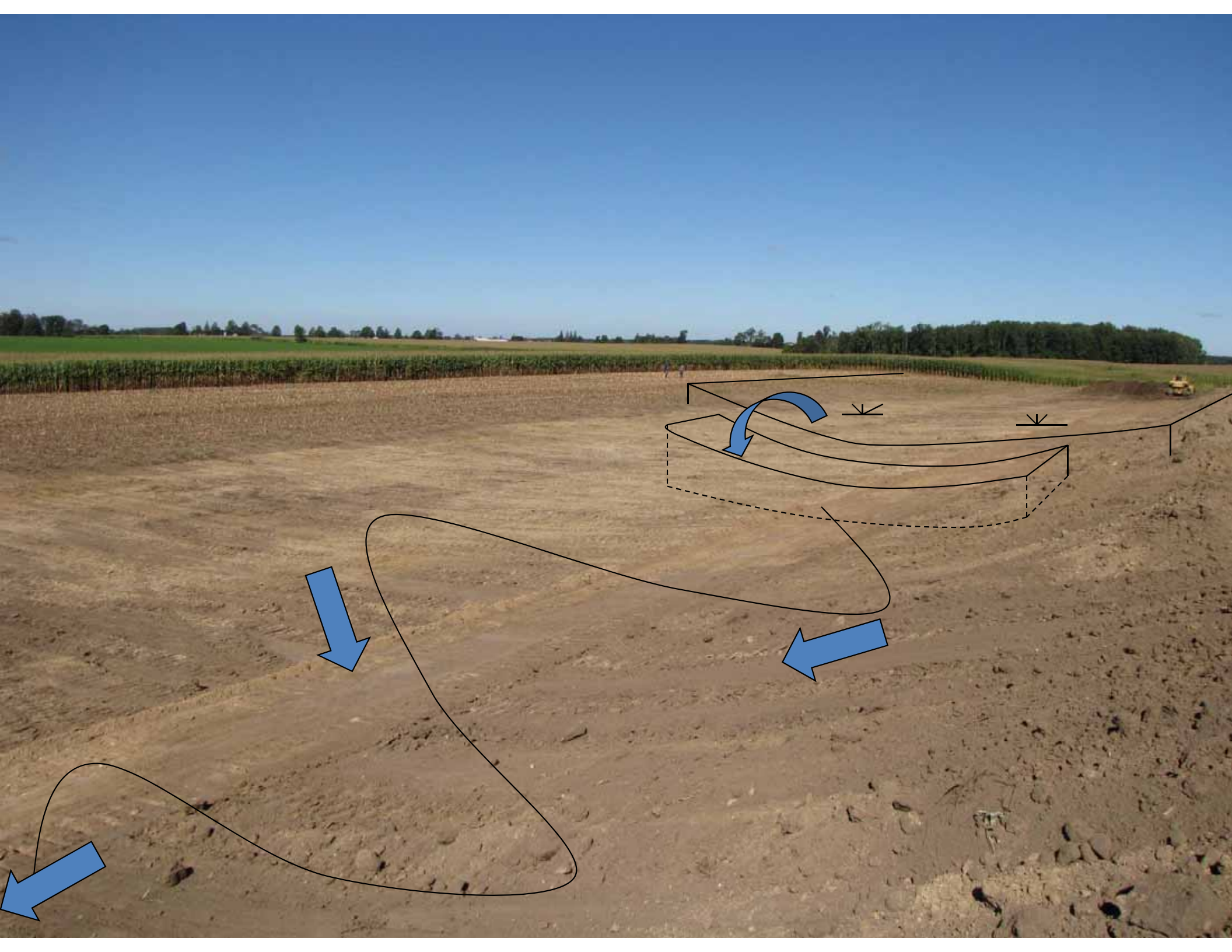














Slag: bi-product from the steel industry













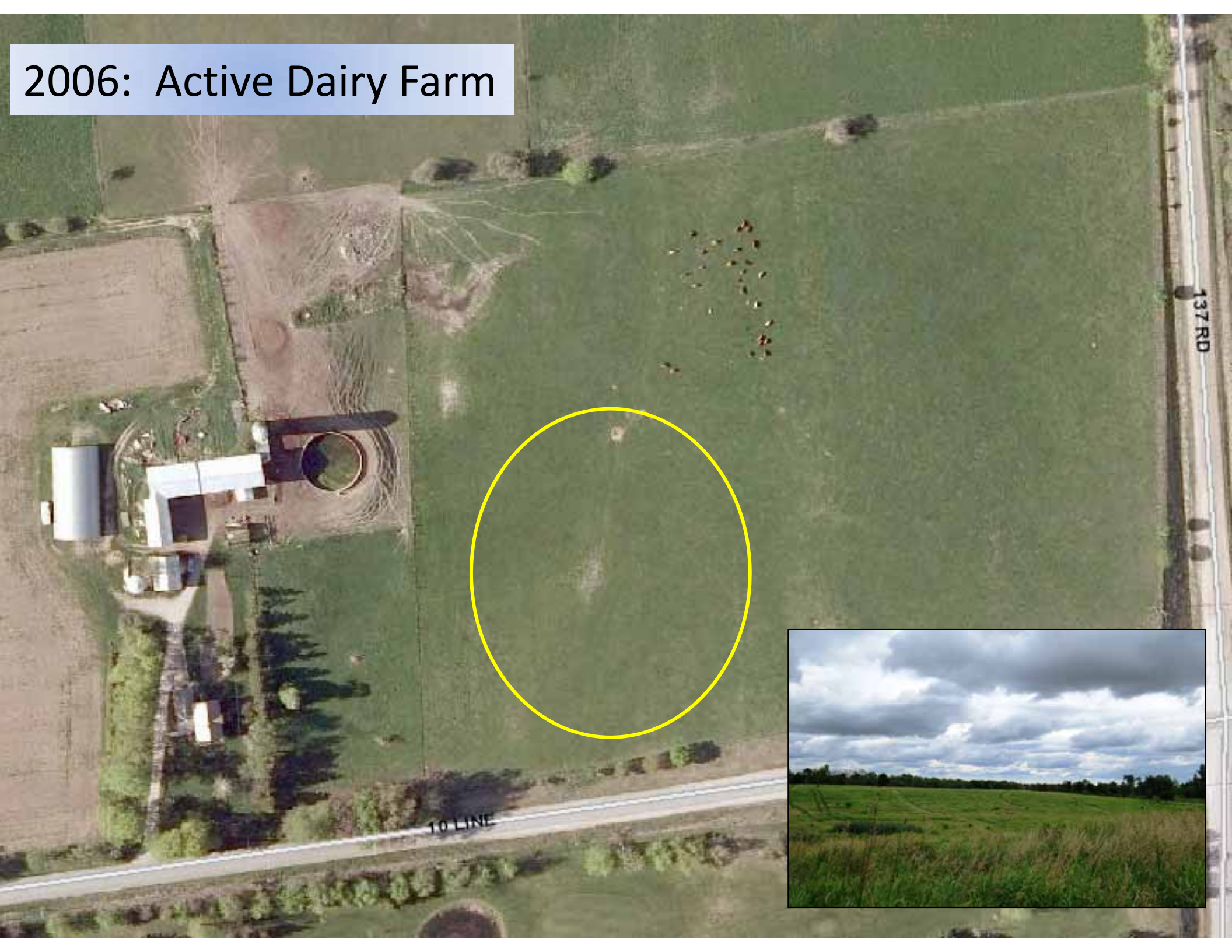




# Wetland Restoration Project



2006: Active Dairy Farm





# In-line flow control structure



In-line flow control structure







# Sub-irrigation ( Controlled ) Drainage Project



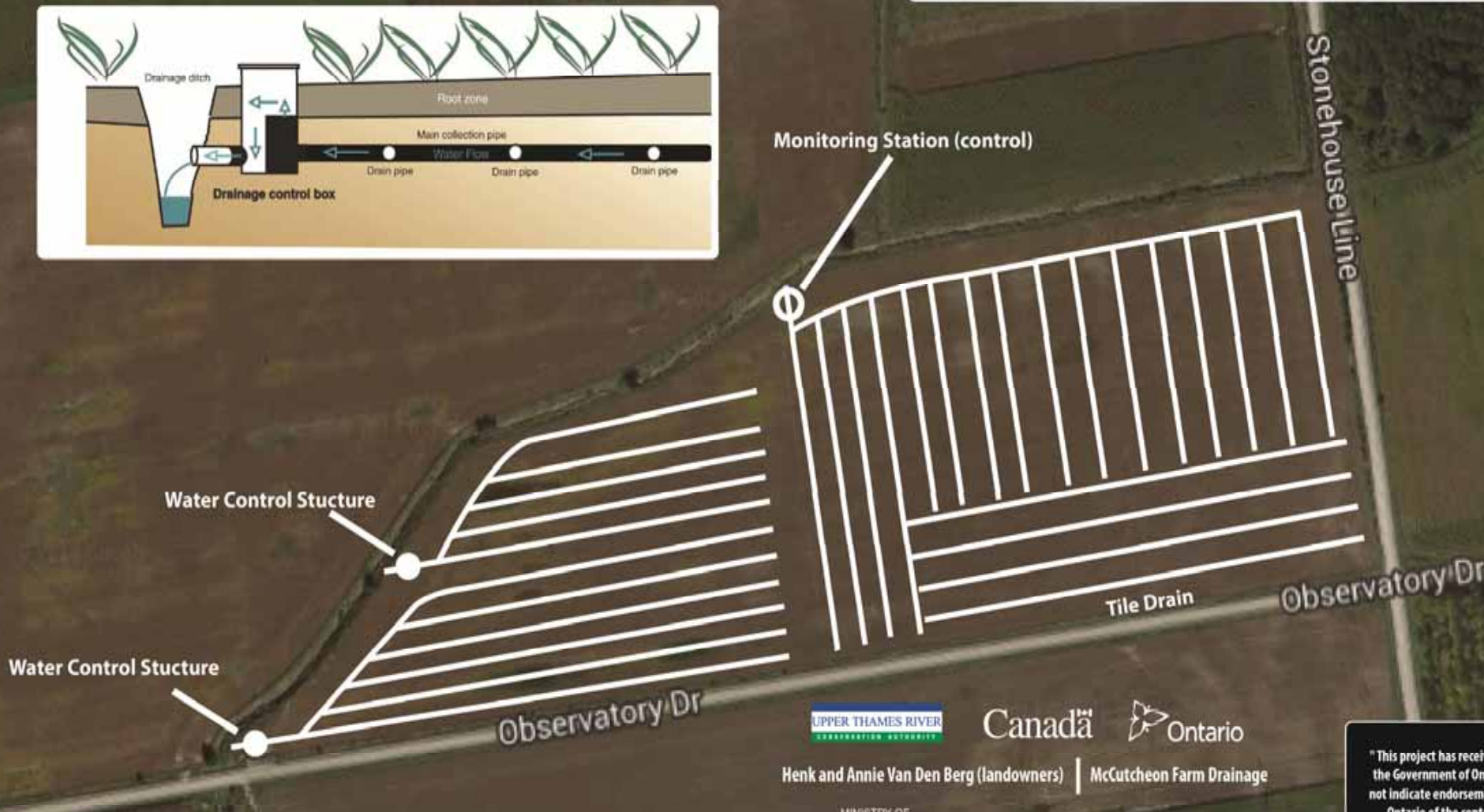
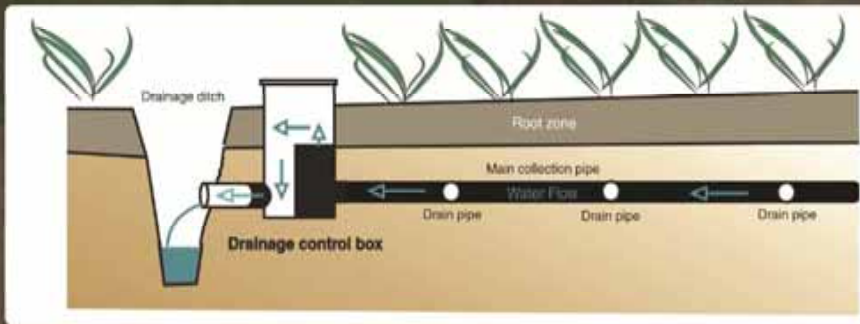


# Controlled Tile Drainage Project

## Controlled Drain Structure - Benefits:

- Keeps nutrients such as phosphorus from reaching waterways
- Retains water in field during dry summer months
- Potential to increase crop yield by up to 15%

Phosphorus has been identified as the number one issue for Lake Erie. The UTRCA and partners are working to reduce phosphorus in the Thames watershed, which drains into Lake St. Clair and, eventually, to Lake Erie.



UPPER THAMES RIVER  
WATER PROTECTION AUTHORITY

Canada Ontario

Henk and Annie Van Den Berg (landowners) | McCutcheon Farm Drainage

MINISTRY OF ENVIRONMENT & CLIMATE CHANGE

"This project has received funding support from the Government of Ontario. Such support does not indicate endorsement by the Government of Ontario of the contents of this material."







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