

Otter Lake Watershed
Initiative: *Addressing Non-
Point Source Pollution and
Invasive Species*

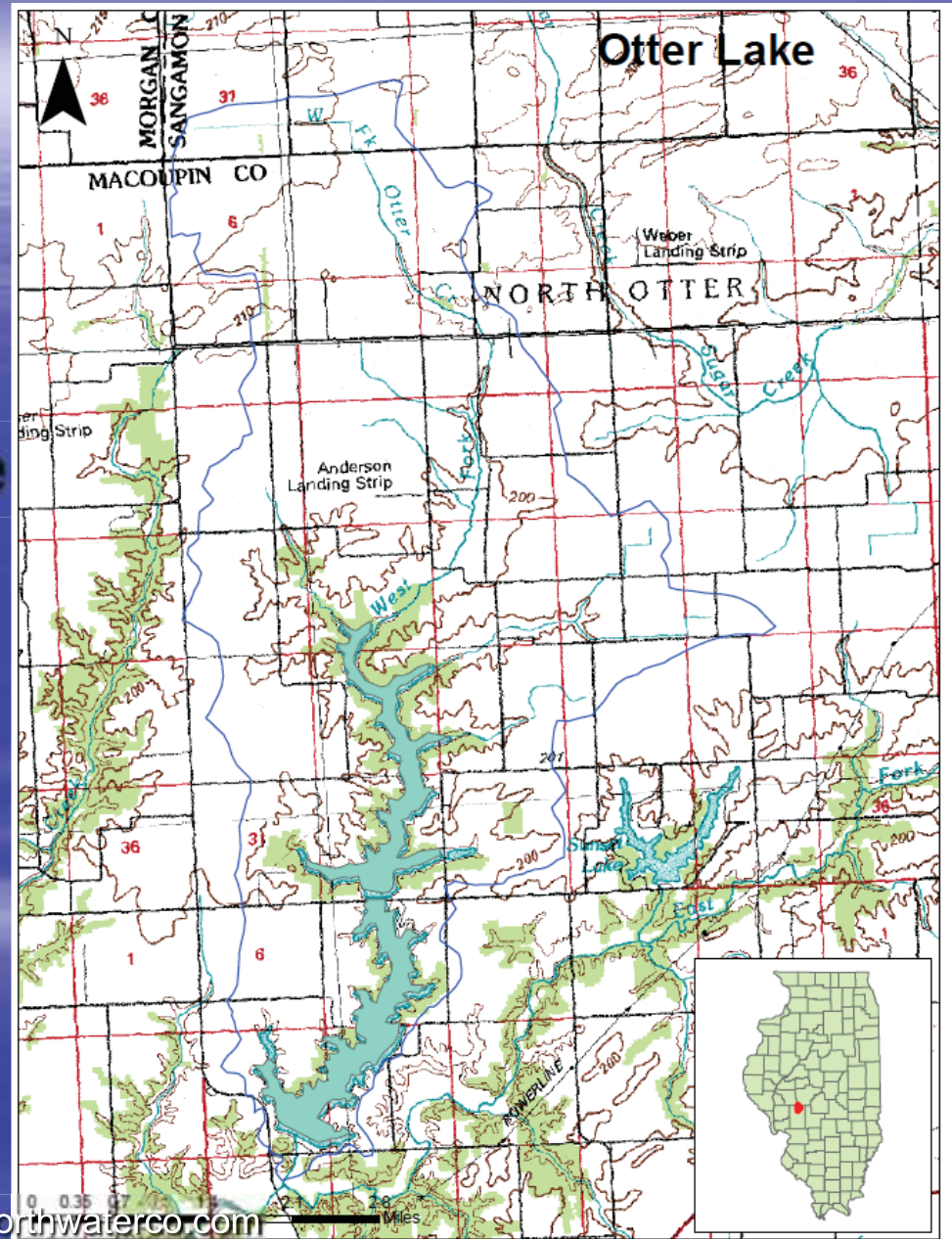
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Otter Lake

- Located in Macoupin County
- 770 surface acres
- 13,000 ac watershed; 10,000ac in Agriculture
- Public water supply and recreation resource
- Water Quality Issues =
 - sediment
 - nutrients
 - pesticides



Otter Lake Watershed Initiative

- Enhances work done in the 90's to address pesticides and recent work to control sediment
 - In-lake sediment dam
 - Shoreline stabilization
- Current work (2007-Present) includes:
 - Aggressive shoreline stabilization
 - Upland sediment and nutrient control on adjacent crop ground
 - Invasive species removal and Timber Stand Improvement (TSI)
 - Conversion of cool season to warm season prairie grass

Shoreline Stabilization

- IEPA Section 319 grant
 - \$394,316
- 16,090ft bank stabilization
 - 14,657ft using Rip-Rap
 - 1,433ft using hardwood tree planting
- 370 tons/yr reduction in sediment loading







Upland Sediment and Nutrient Control

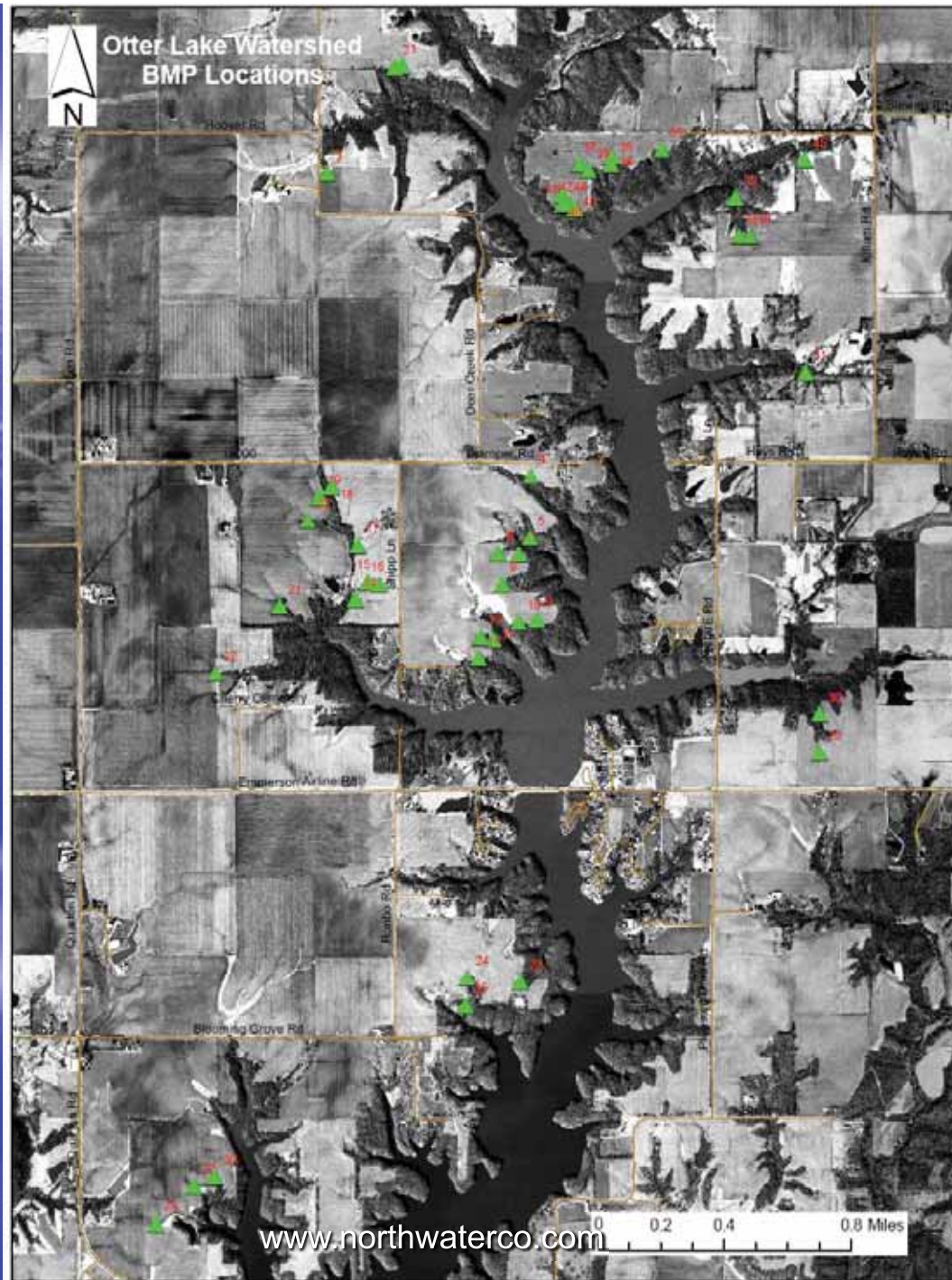
- Evaluated adjacent crop ground
 - Using GPS, Identified areas of erosion and Best Management Practices (BMPs)
 - Developed nutrient and sediment loading models using GIS to quantify pollution
 - Applied for Section 319 funding to install needed BMPs

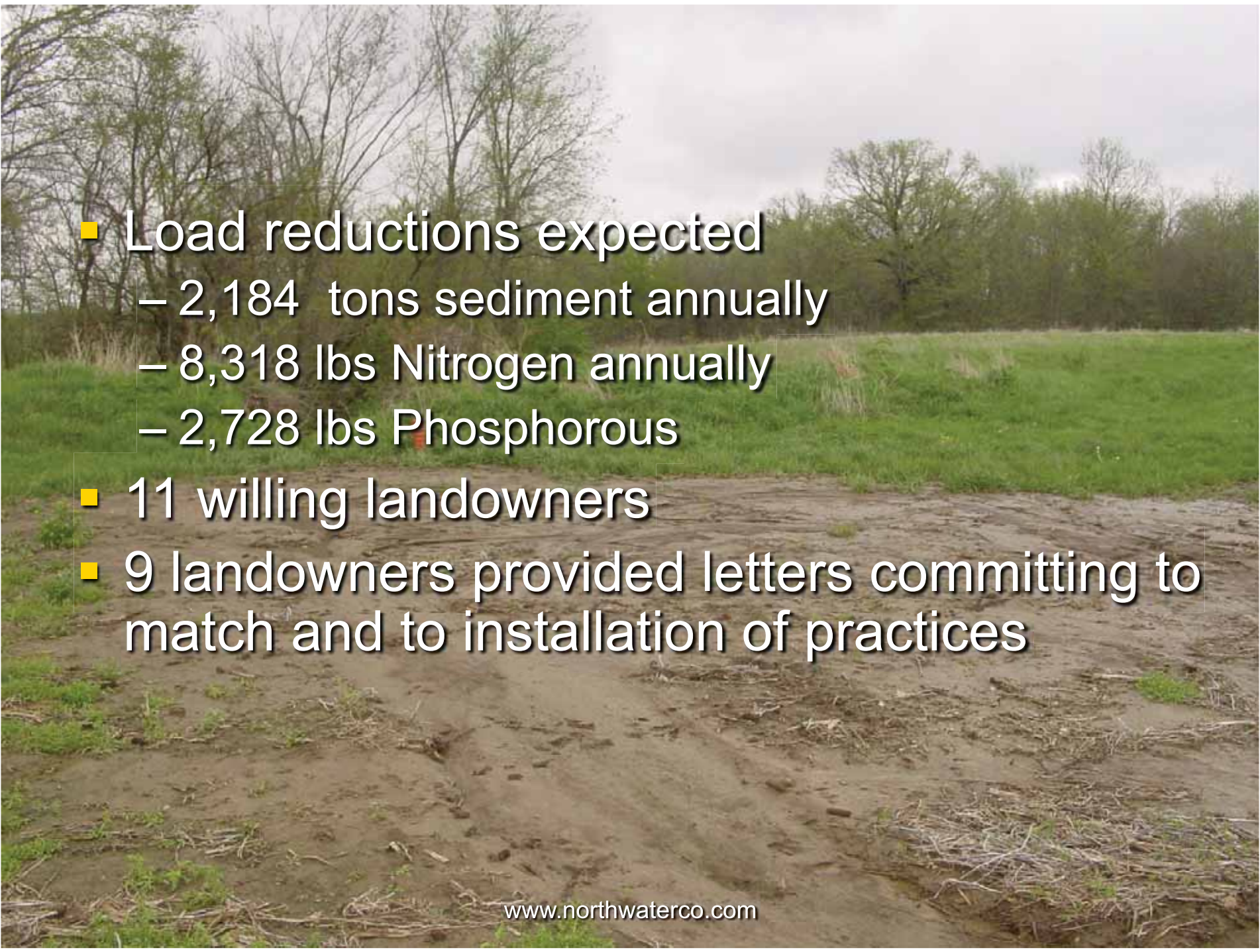


Practices Submitted for Funding

- 25 Water and Sediment Control Basins
- 3 Terraces (1,600ft)
- 4 Grass Waterways
- 5 Retention Basins
- 2 Modified Retention Structures
- Maintenance of 15 existing structures

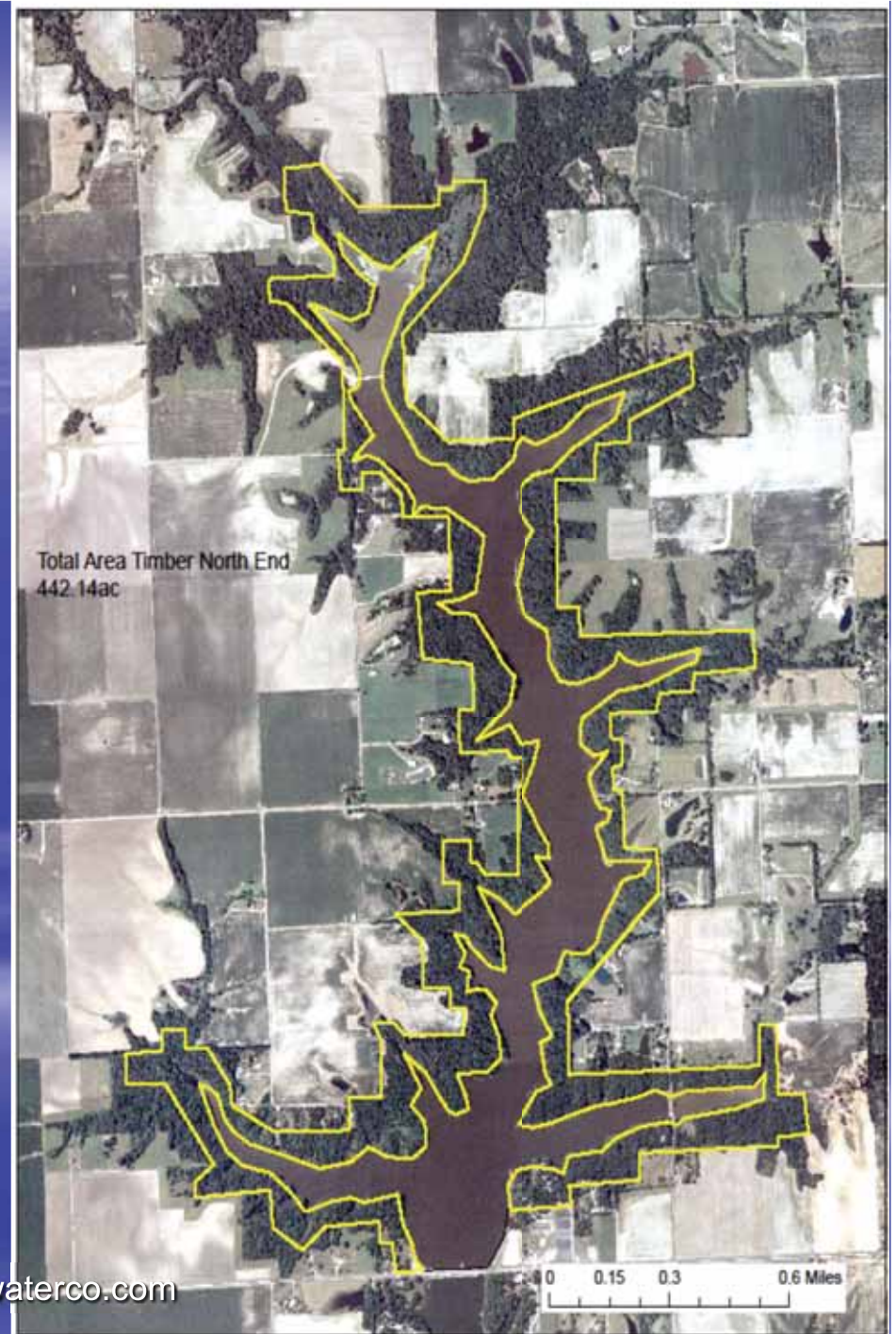
Best Management Practice Locations



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- Load reductions expected
 - 2,184 tons sediment annually
 - 8,318 lbs Nitrogen annually
 - 2,728 lbs Phosphorous
 - 11 willing landowners
 - 9 landowners provided letters committing to match and to installation of practices

TSI and Invasive Species Removal

- 175 acres of invasive species removal; NE section of the lake
- Enhance forest understory, reduce and filter runoff to the lake
- Bush Honeysuckle, locust, and hedge removal





Before



After



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Prairie Conversion

- Approximately 500ac of prairie restoration
 - Converted cool season to warm season grasses on ground within the watershed
- Will enhance habitat diversity



Fully restored prairie



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Next Steps

- Complete additional shoreline stabilization
- Complete construction of upland BMPs
- Approach landowners about installing additional buffer strips
- Complete prairie conversion
- Implement additional components of the Forest Management Plan

Questions??

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