Site Selection and Suitability For Conservation Drainage

Paul Sweeney

Director of Conservation Planning

Ecosystem Services Exchange

www.ecoexch.com

Conservation Drainage
Site Selection

Basic Field Suitability Criteria:

1. Soils
2. Topography
3. Other – Existing Tile, Wetlands, etc.

ESE
Ecosystem Services Exchange
Valuing Conservation

Site Selection - Tiled Fields

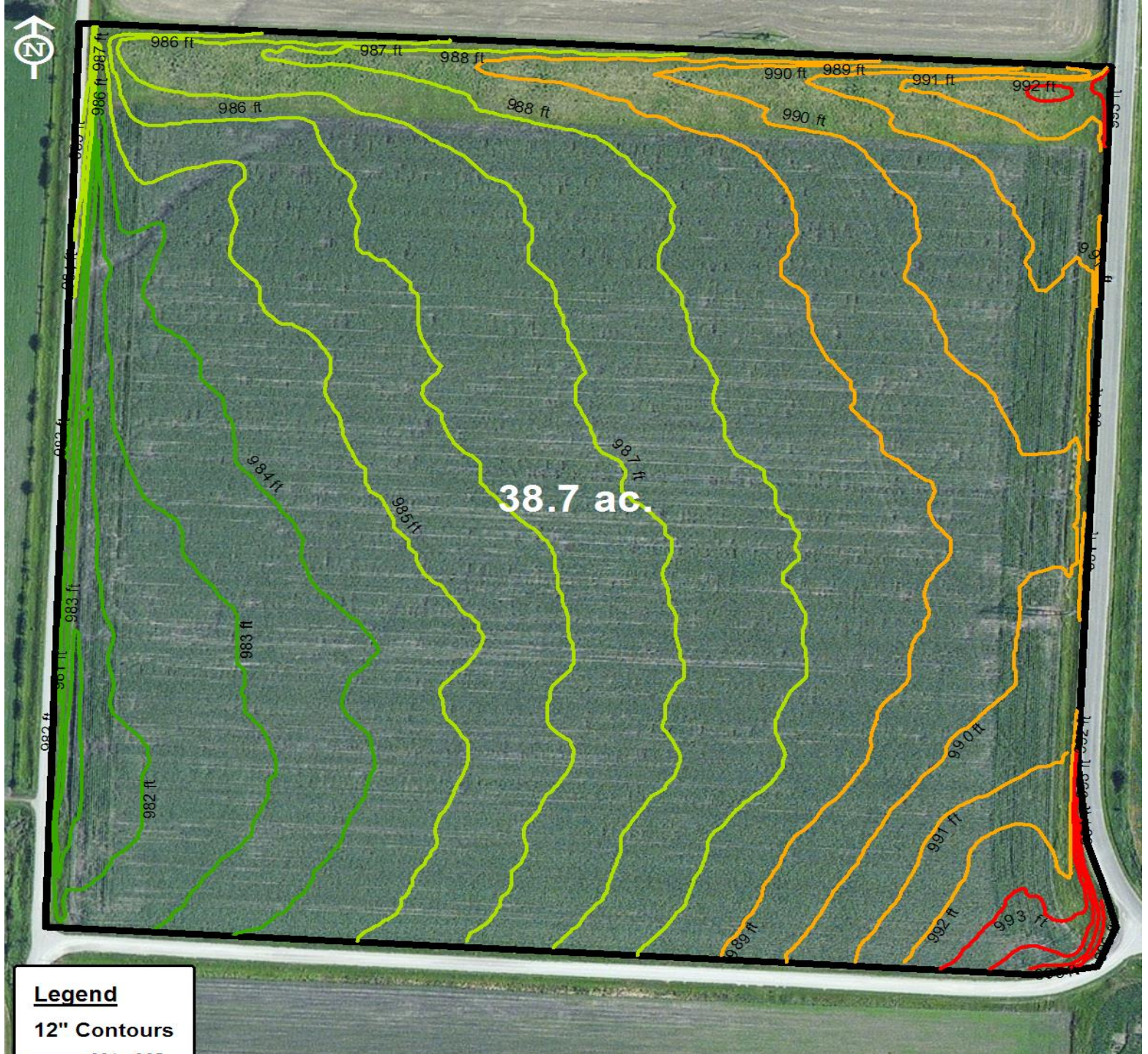
- Why are these criteria important?

ESE
Ecosystem Services Exchange
Valuing Conservation

Example Field

Topographic Map

11’ of Drop in 1320 feet < 1%



Site Selection

Two Basic Field Situations:

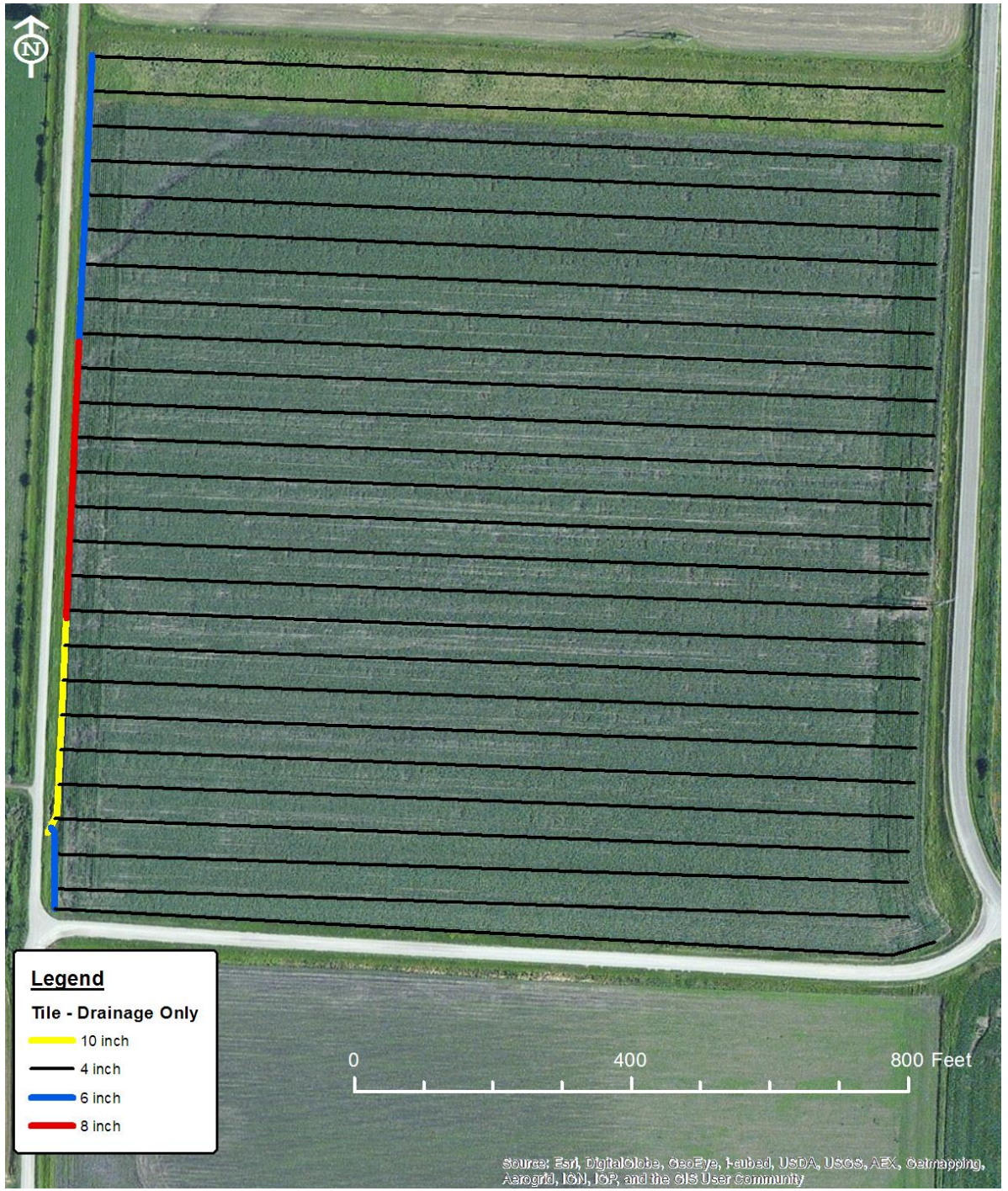
1. Previously Tiled – lots of restraints
2. Untiled – an blank canvas

ESE
Ecosystem Services Exchange
Valuing Conservation

Conventional Drainage System Design

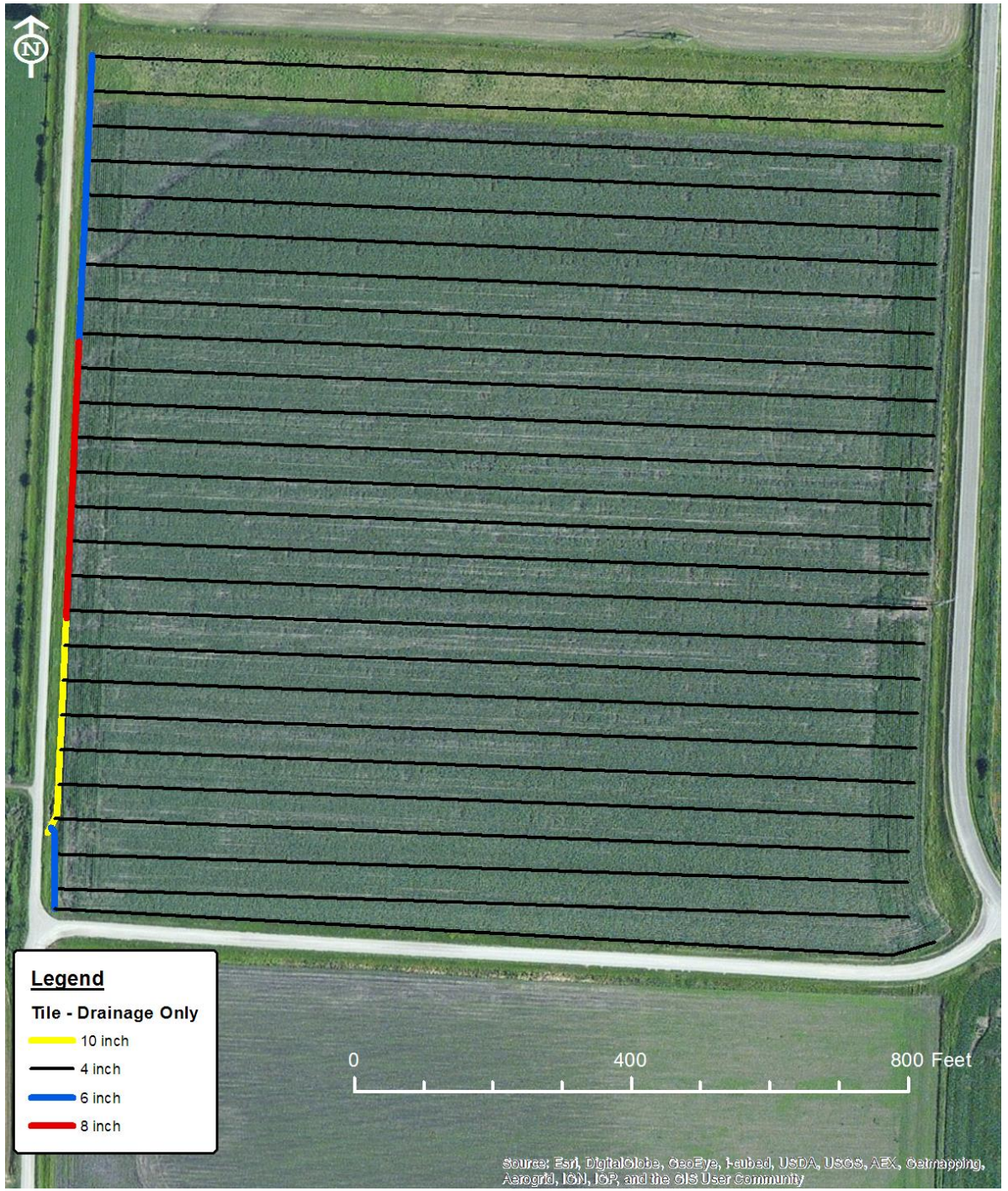
Up and down slope
Perpendicular to topographic lines

Easiest to design and install



Conventional Drainage System Design

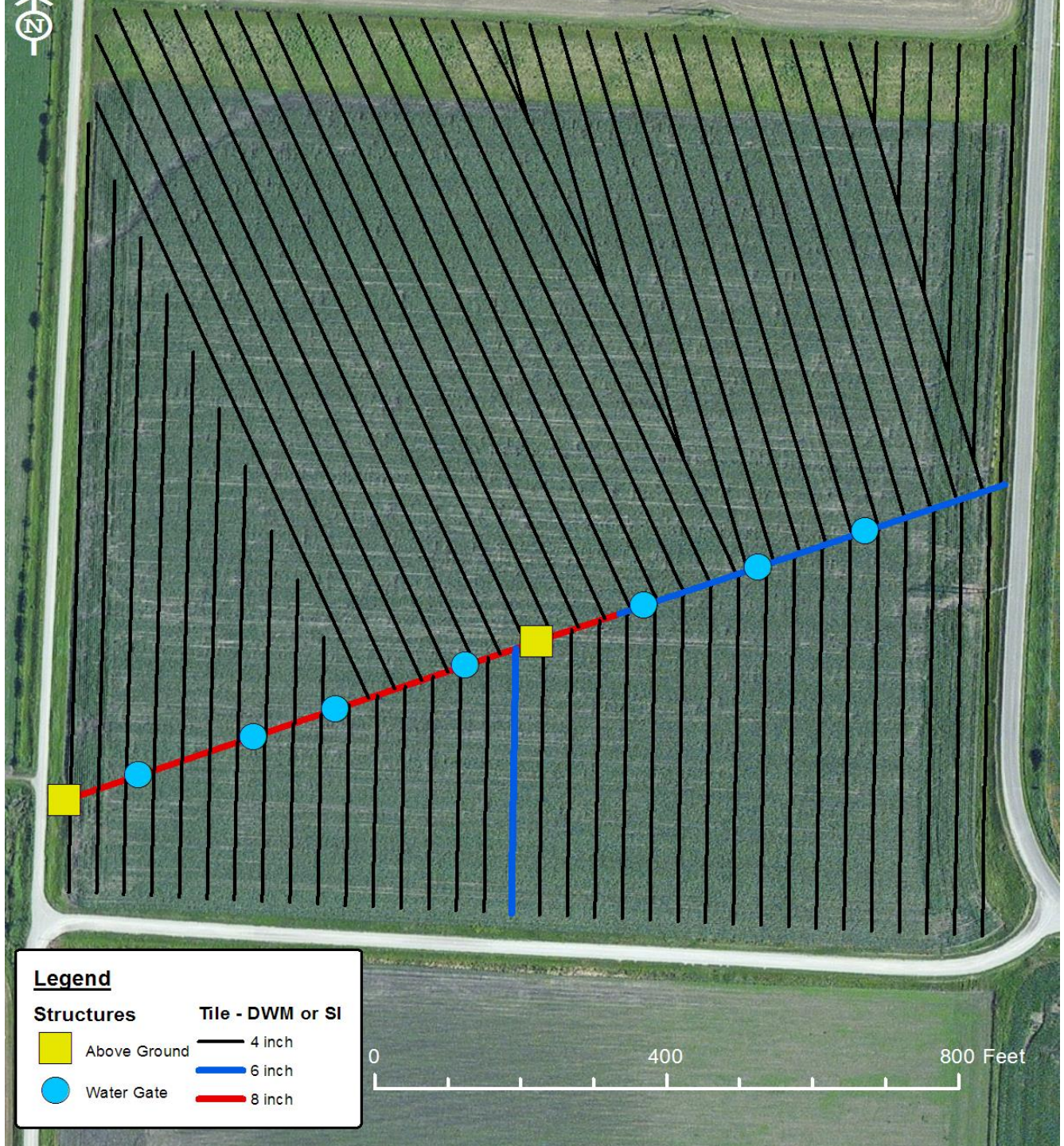
Approx. 15 to 20% Manageable under Conservation Drainage



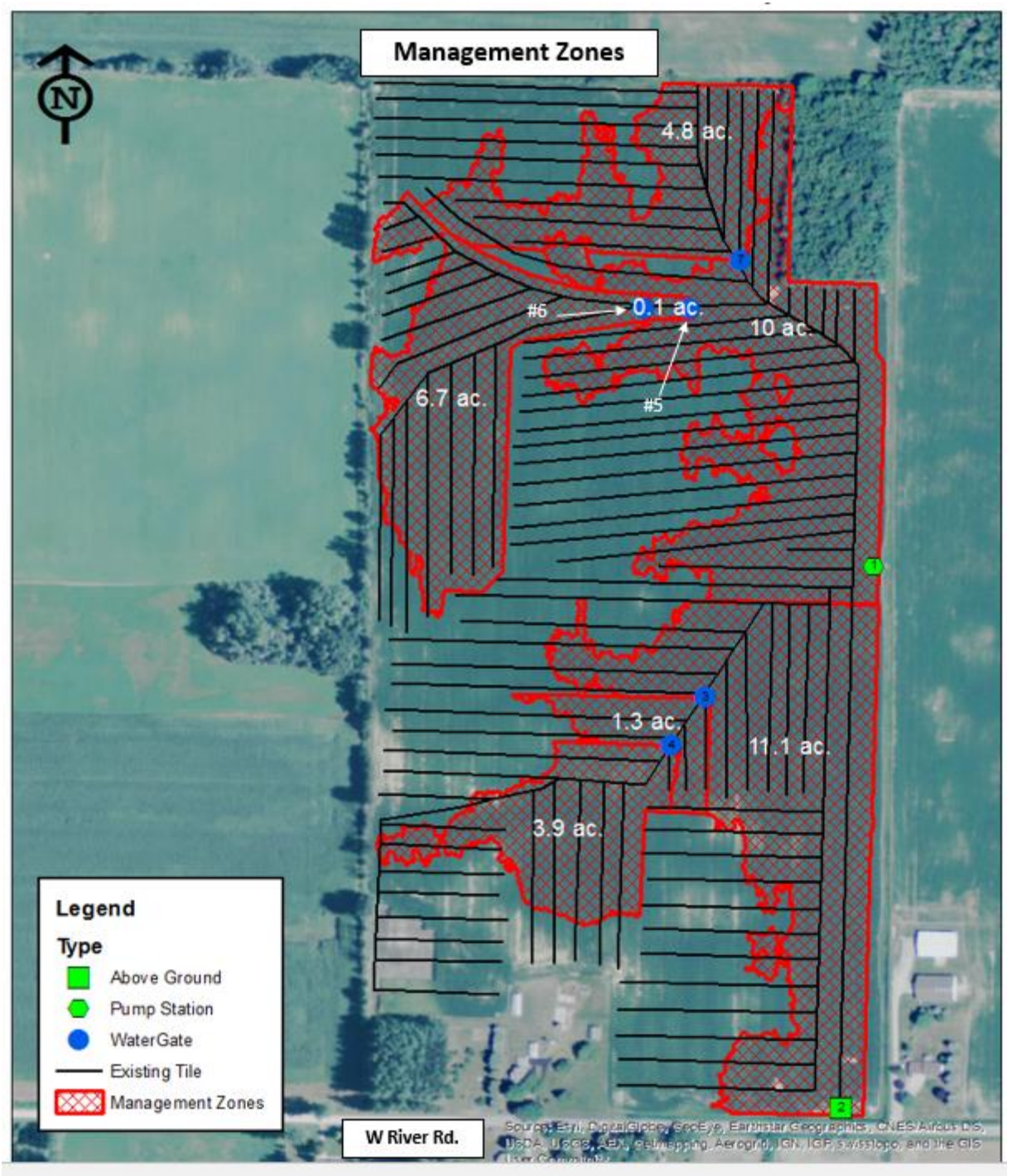
Same Field

Conservation Drainage System Design

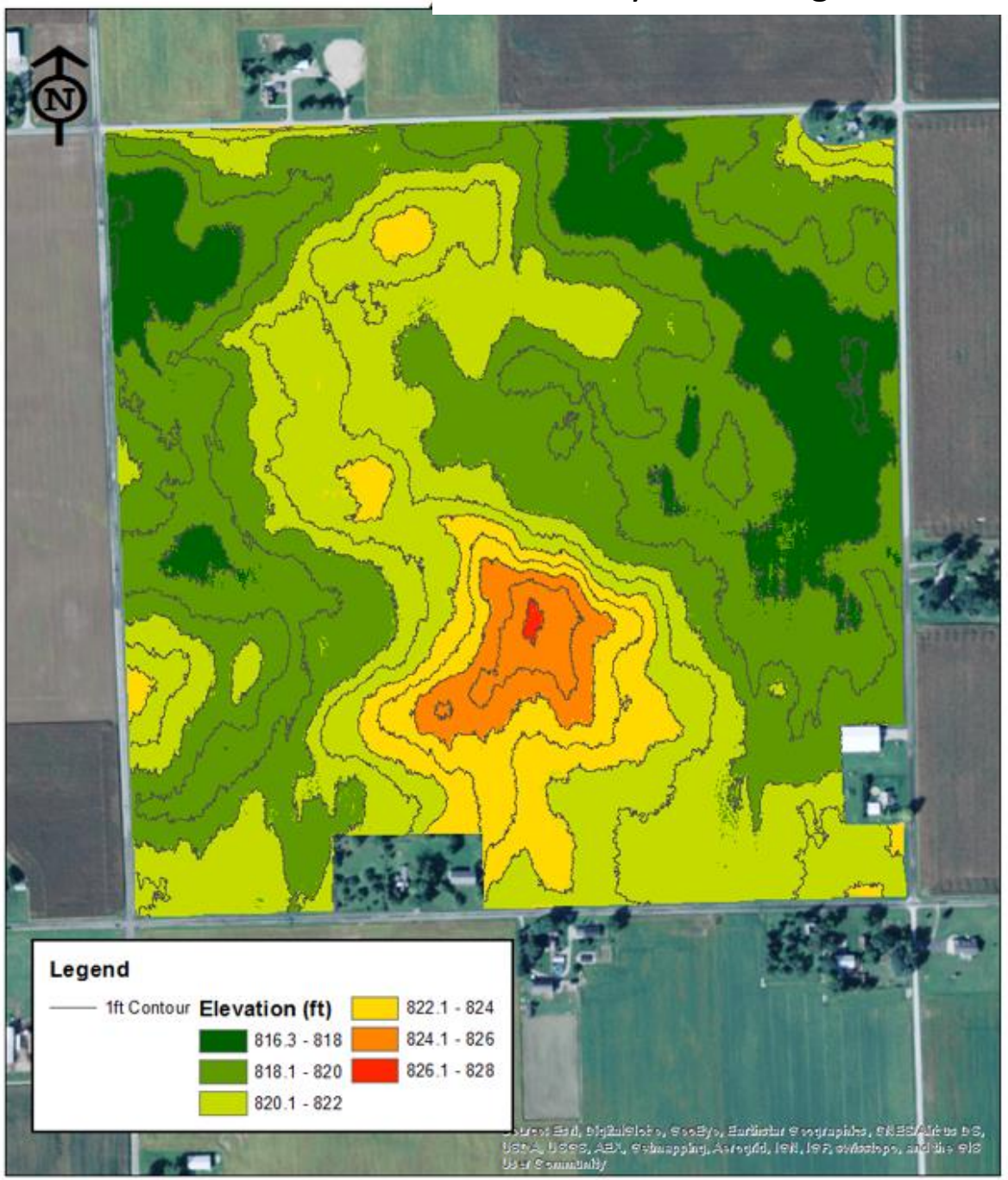
Nearly 100% of acres managed under Conservation Drainage

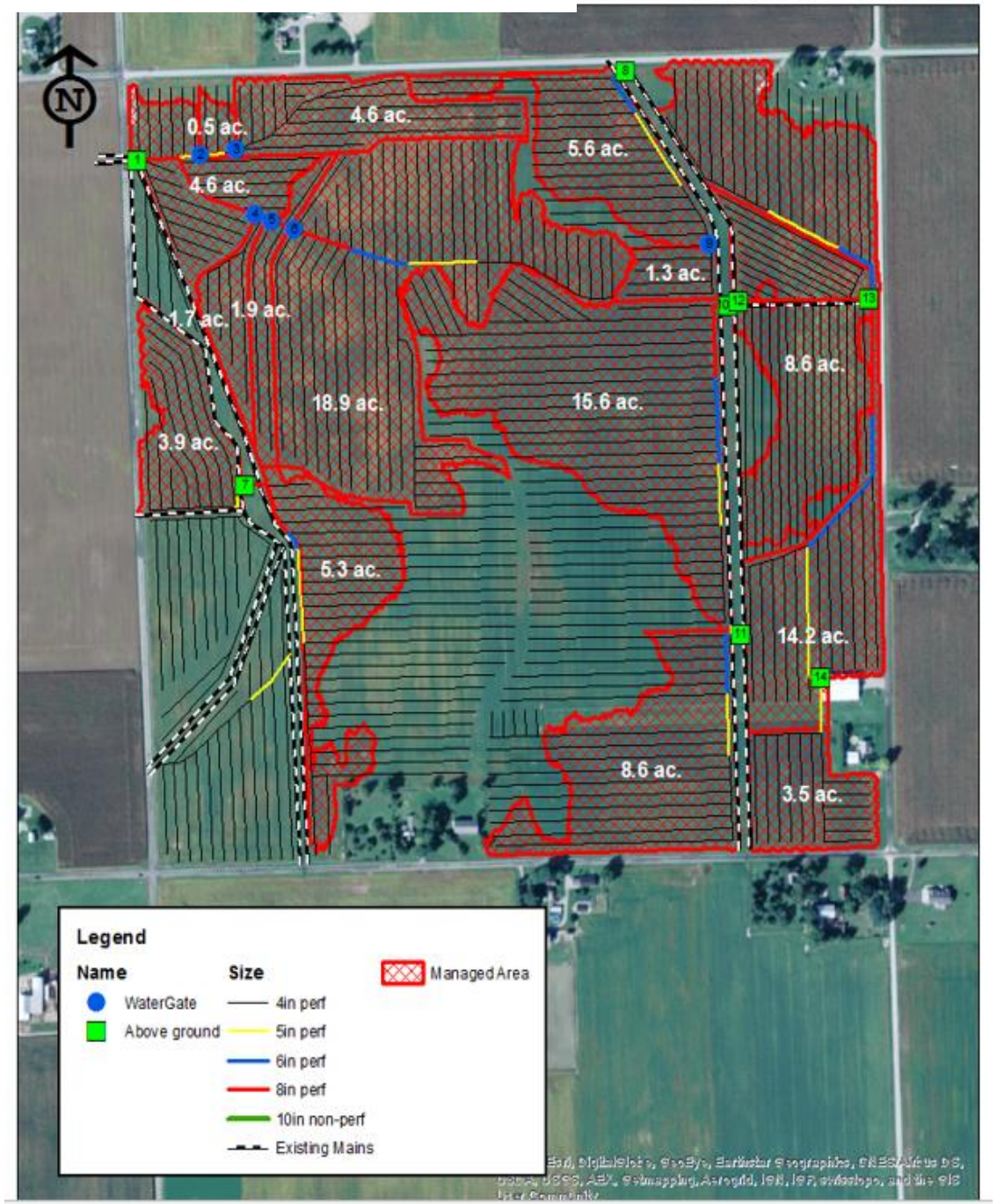


Existing Tile System Retrofitted for Conservation Drainage



New System Design on Rolling Land – 12’ of elevation change





Site Selection - Tiled Fields

Why is it important to design and install a conventional tile drainage system for future management?

- 100 year investment of funds
- 100 year life of tile system
- Opportunity to manage water resources in the future
- Potential for sub-irrigation

ESE
Ecosystem Services Exchange
Valuing Conservation

Site Selection

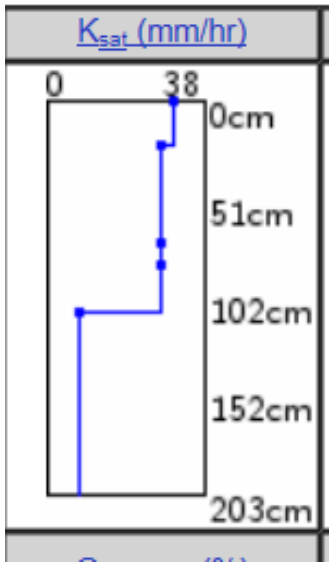
Soils Assessment:

1. Best - Impervious layer at or below 3 feet or a perched water table
2. Good – uniform soil that will hold soil moisture in root zone
3. Bad/No Go – sand lens or layers that would drain water away and prevent management

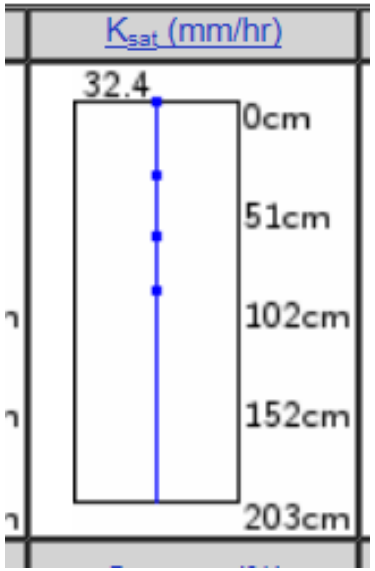
ESE
Ecosystem Services Exchange
Valuing Conservation

Site Assessment - Soils Assessment

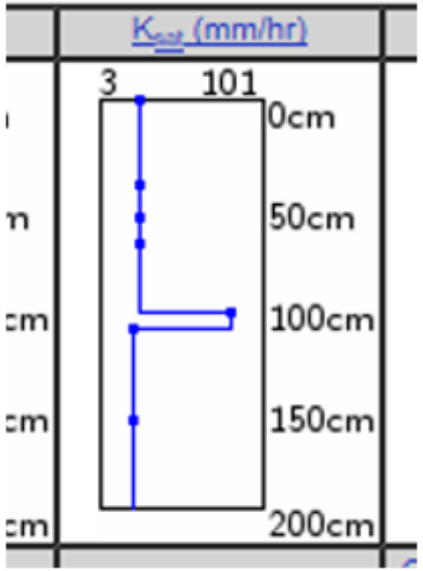
BEST



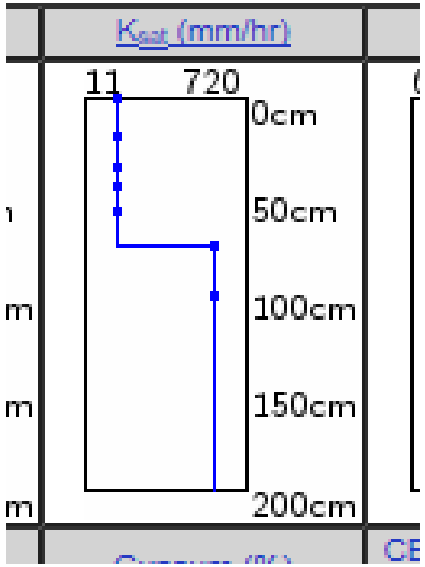
Good



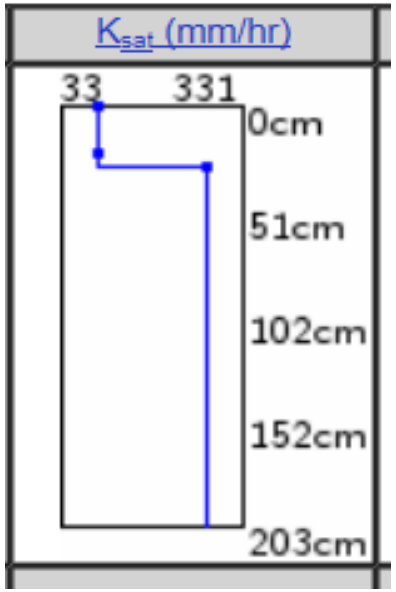
Maybe



Bad



Bad



Conservation Drainage
Site Selection

ESE Free 1 Page Site Review for Suitability for Conservation Drainage System

1. Soils – general tile spacing
2. Topography – number of management zones
3. Other – Wetlands, Outlets, etc.

ESE
Ecosystem Services Exchange
Valuing Conservation

Conservation Drainage Site Selection

What ESE Needs for a Free Site Review for Suitability for Cons. Drainage System

1. Field delineation map – FSA, Google earth…
2. Topographic survey if not available
3. Existing Tile if not a new system

Send to Paul@ecoexch.com

ESE
Ecosystem Services Exchange
Valuing Conservation

ESE

Ecosystem Services Exchange

Valuing Conservation

Thank You

Paul Sweeney

Director of Conservation Planning

Ecosystem Services Exchange

www.ecoexch.com

303-718-2889