

Wetland Mapping Pilot Project Town of Dryden

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Funded by

The Cayuga Lake Watershed Network

Tompkins County Soil and Water Conservation District

Existing Wetland Maps

National Wetlands Inventory (NWI)

US Fish and Wildlife Service

- Map all wetlands in United States

NYS Article 24 Freshwater Wetland Maps

NYS Department of Environmental Conservation

- Map approximate boundaries of all NYS jurisdictional wetlands (>12.4 acres)

New Wetland Map for Tompkins County

Data Resources

NYS Digital Orthoimagery Program

- 2002 - color-infrared (0.5ft and 1ft pixel resolution)
- 2007 - natural color (0.5ft and 2ft pixel resolution)
- 2012 - 4-band (0.5ft and 2ft pixel resolution)

LiDAR Elevation Data for Tompkins County

- Collected in 2008
- Funded by TCSWCD

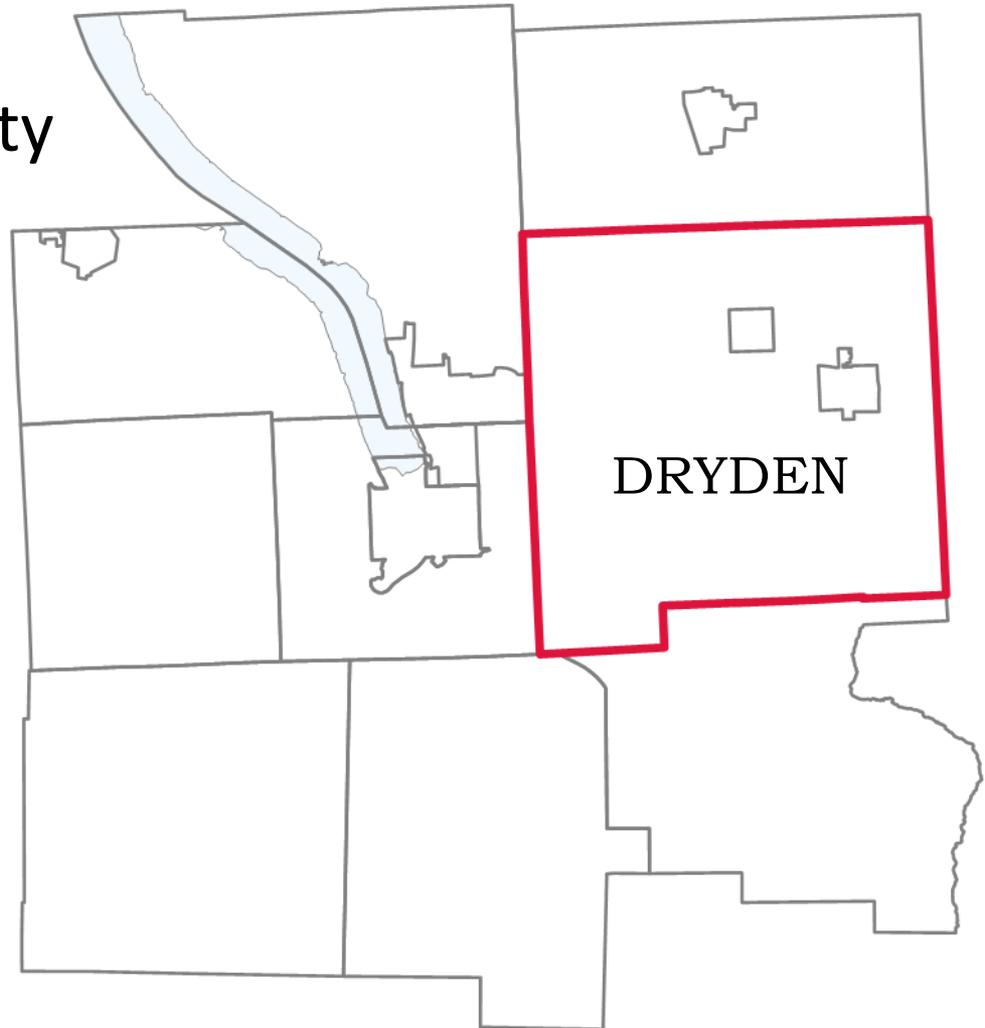
Oblique Aerial Imagery

New Wetland Map for Tompkins County

Pilot Project for the Town of Dryden

94 square miles

20% of Tompkins County



New Wetland Map for Tompkins County

Pilot Project for the Town of Dryden

Wetland Characterization

- Cowardin Classification System

System	Class (vegetation)	Hydrologic Regime	Modifiers
Marine	Pond/Lake	Temporarily Flooded	Beaver activity
Estuarine	Bottom	Saturated	Drained/ditched
Riverine	Shore	Seasonally Flooded	Farmed
Lacustrine	Emergent	Permanently Flooded	Impounded
Palustrine	(grasses) Scrub-Shrub Forested		Artificial

New Wetland Map for Tompkins County

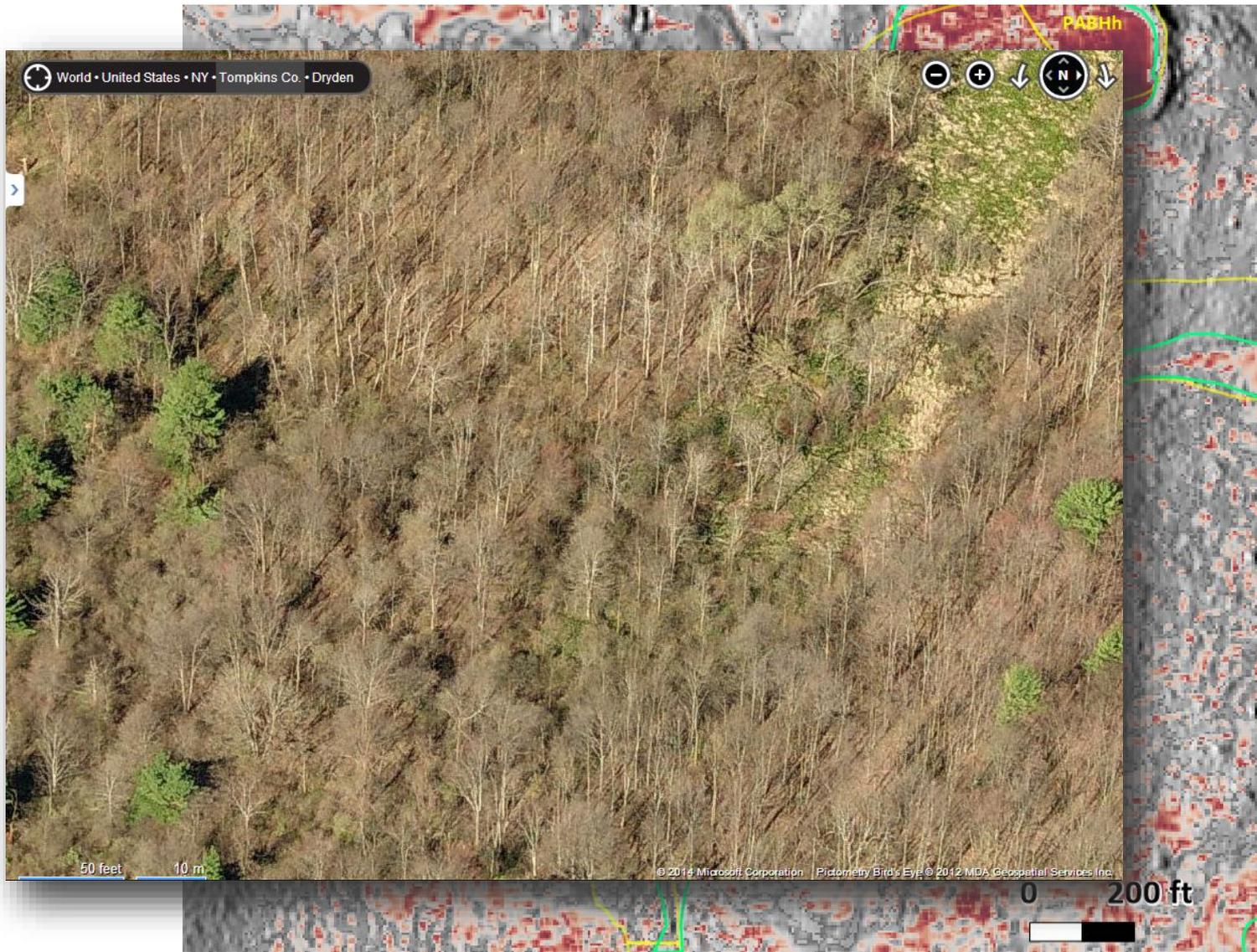
Pilot Project for the Town of Dryden

Wetland Characterization

- Cowardin Classification System
- Additional data
 - Artificial vs. natural
 - Mapping indicators
 - Likelihood of being a wetland
 - Wetland complex identification

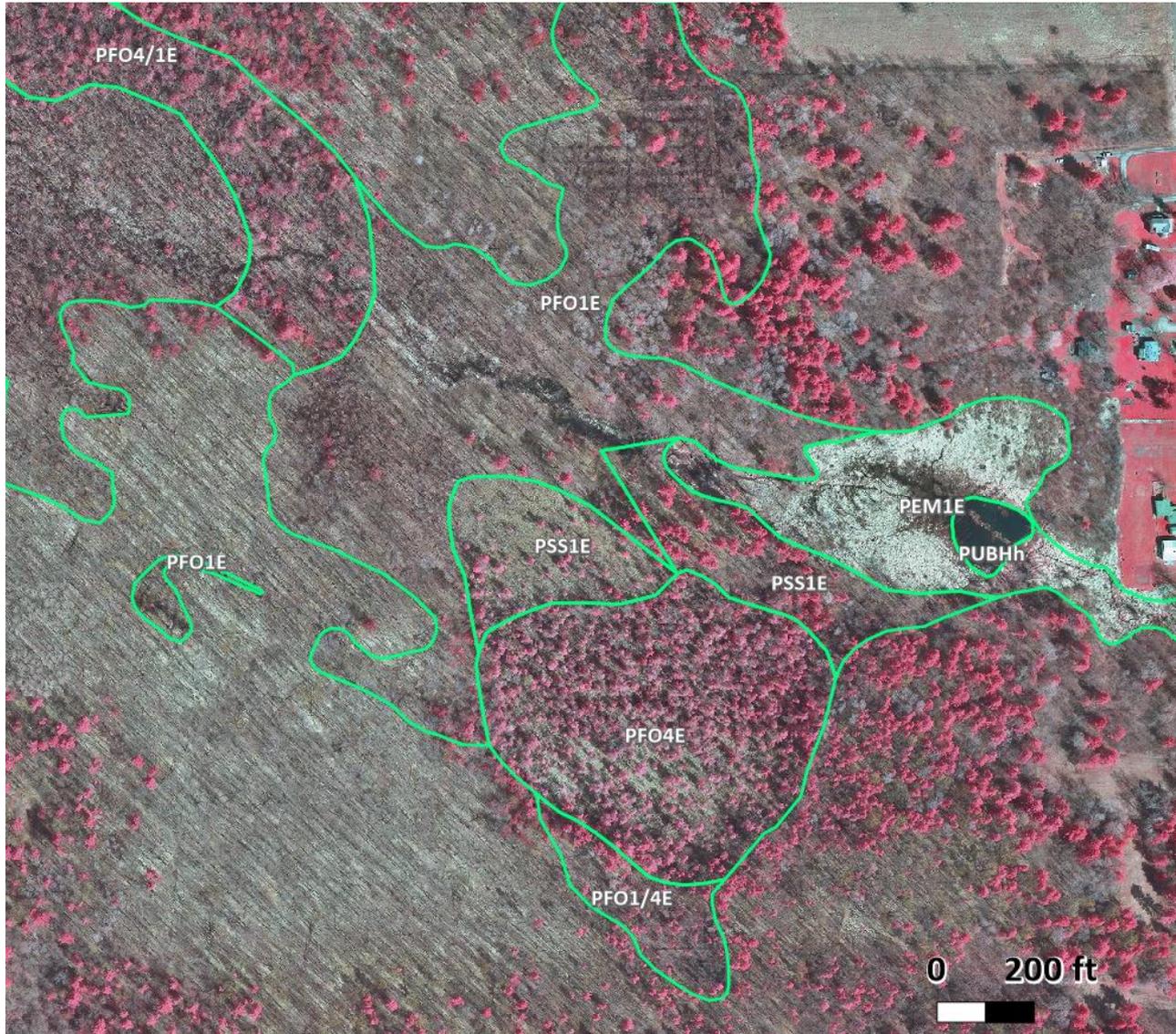
New Wetland Map for Tompkins County

Pilot Project for the Town of Dryden



New Wetland Map for Tompkins County

Pilot Project for the Town of Dryden

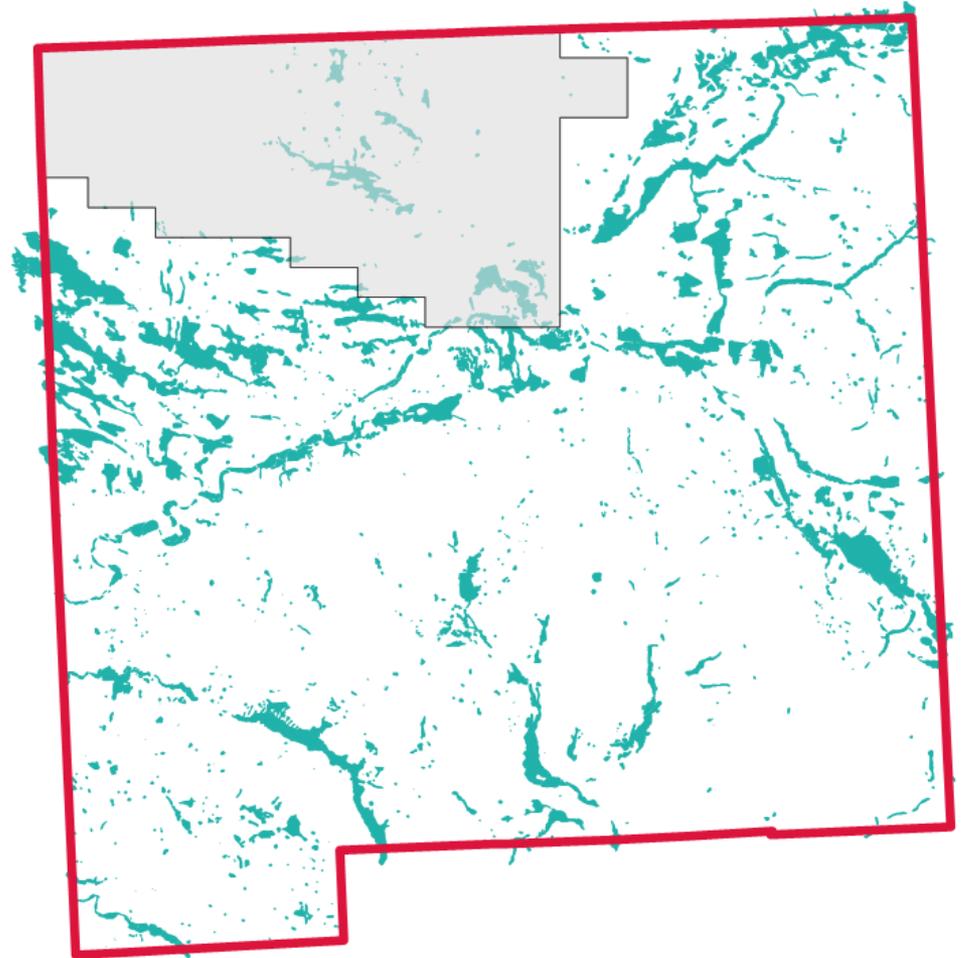


New Wetland Map for Tompkins County

Results

Mapping in progress...

Completed mapping for
50,520 acres (84%)



New Wetland Map for Tompkins County

Results

Wetland Type	Area (acres)		
	Dryden	NWI	DEC
Emergent	1,124	500	
Forested	1,475	949	
Lake	138	131	
Pond	27	15	
Riverine	32	49	
Scrub-shrub	1,066	768	
Grand Total	3,861	2,413	1,407
		62%	36%
Artificial Ponds	223	132	

New Wetland Map for Tompkins County

Results

Agreement between datasets

Dryden	Both	NWI	Agreement
1,971 ac	2,114 ac	431 ac	47%

Dryden	Both	DEC	Agreement
3,061 ac	1,024 ac	384 ac	23%

New Wetland Map for Tompkins County

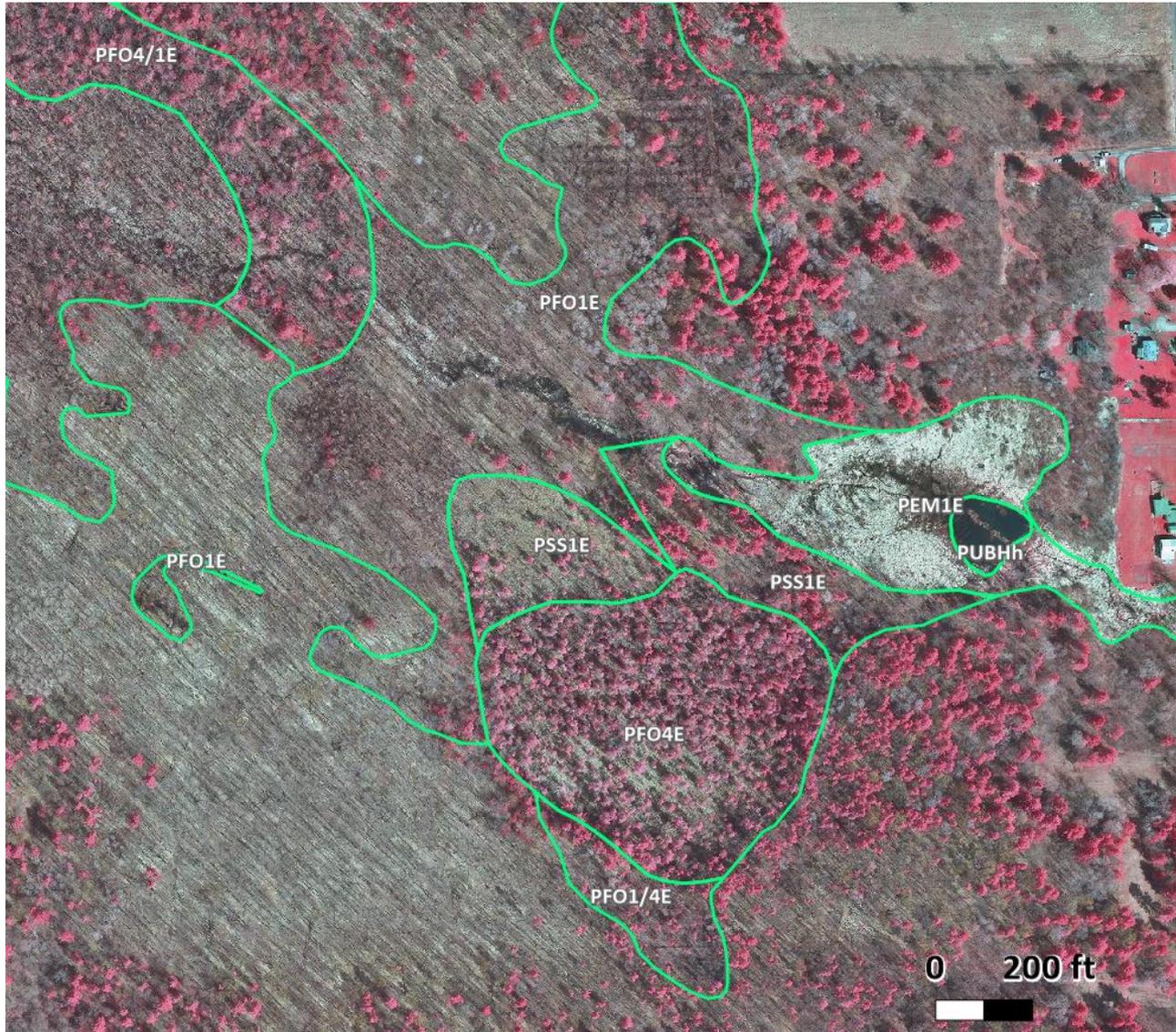
Results

Comparison to DEC Map

	< 2 ac	2-12.4 ac	> 12.4 ac	TOTAL
Dryden	826	53	90	969
DEC		3	18	21

New Wetland Map for Tompkins County

Pilot Project for the Town of Dryden



New Wetland Map for Tompkins County

Results

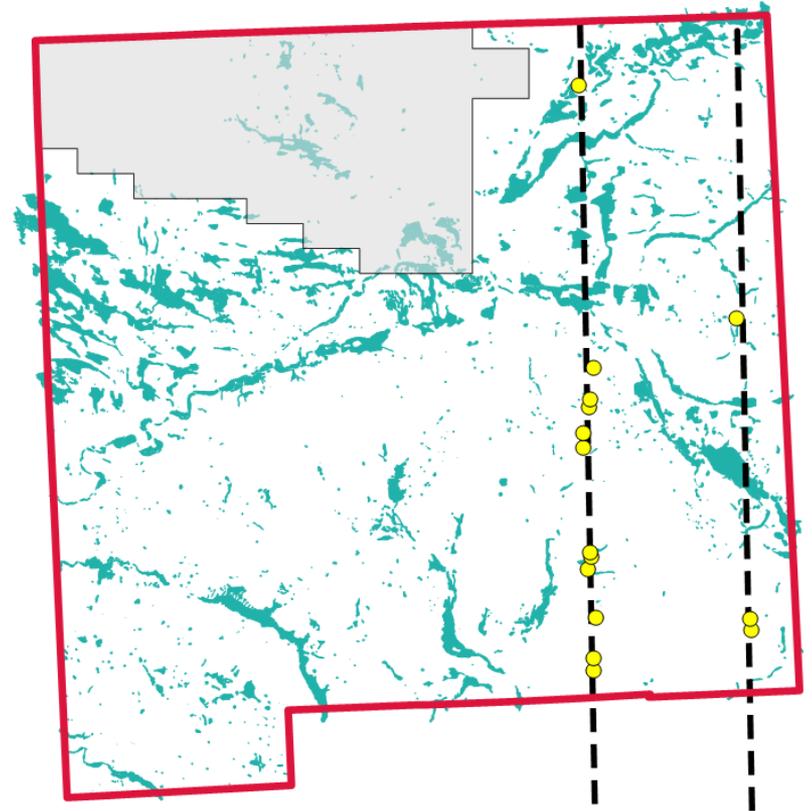
Comparison to NWI

NWI	< 0.5 ac	0.5-1 ac	1-2 ac	2-12.4 ac	> 12.4 ac	TOTAL
Mapped	208	53	37	50	51	399
Missed	421	65	42	40	2	570
TOTAL	629	118	79	90	53	969
	33%	45%	47%	56%	96%	

New Wetland Map for Tompkins County

Accuracy Assessment

	Count	% Correct
Field Survey	23	
Dryden Project	18	78%
DEC	9	39%
NWI	6	26%



New Wetland Map for Tompkins County

Final Products

- GIS dataset
- Metadata
- Digital Map Series (PDFs)
- Final Report
- Accuracy Assessment

Next Steps

- Park Foundation Proposal
- Accuracy Assessment on Cornell Natural Areas

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