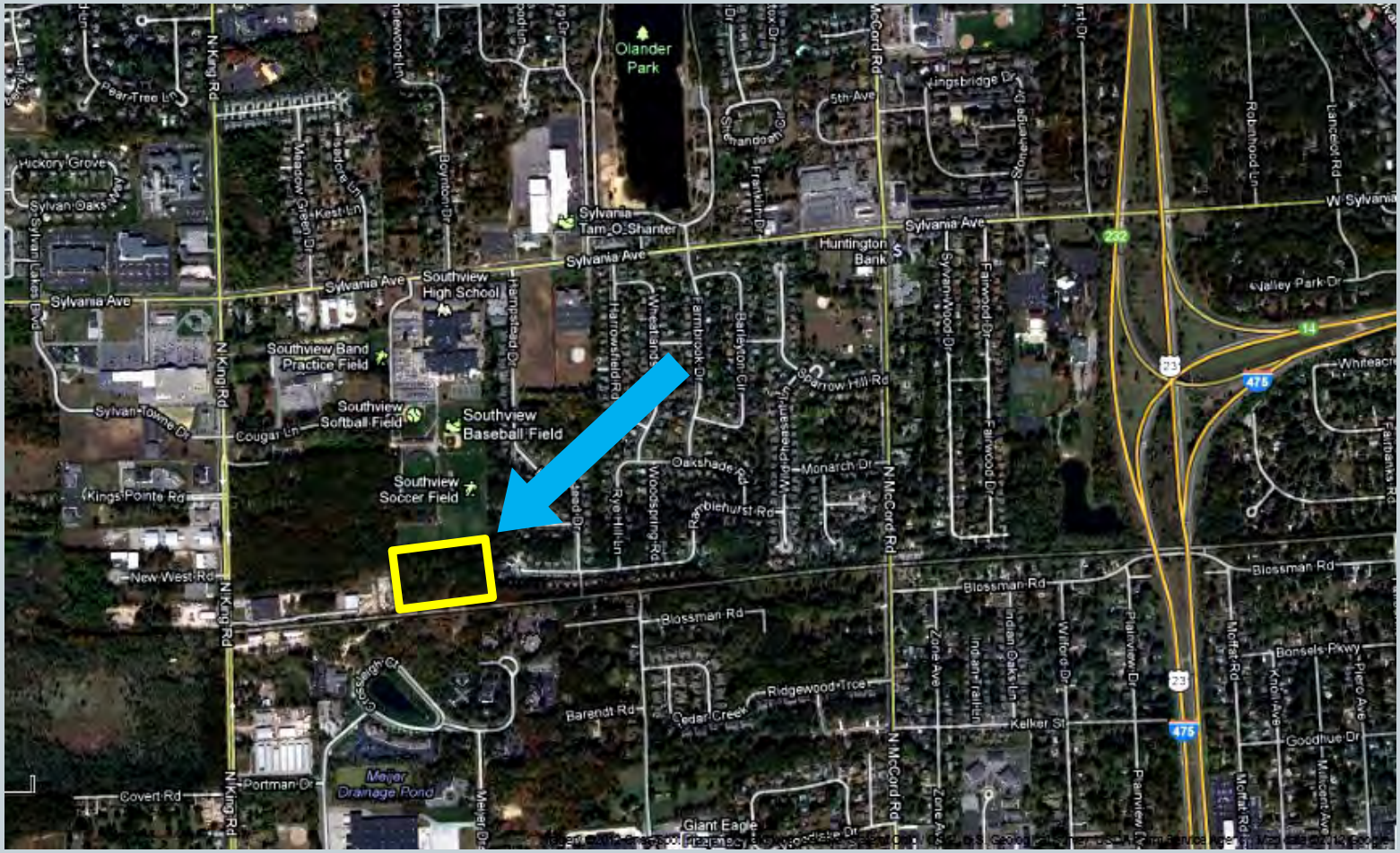
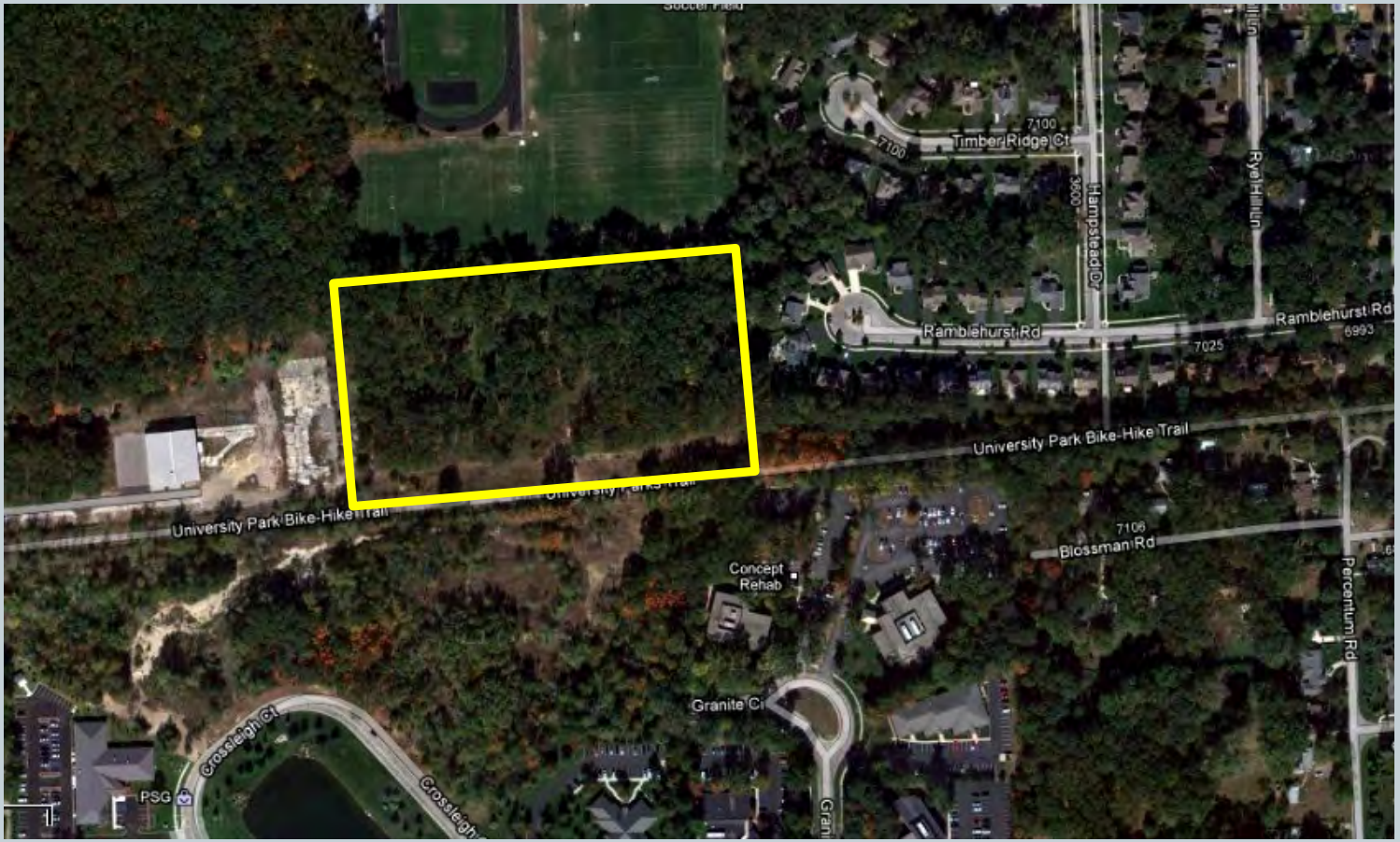
Restoration at The Olander Park System

Erika Buri, Interim Director, The Olander Park System

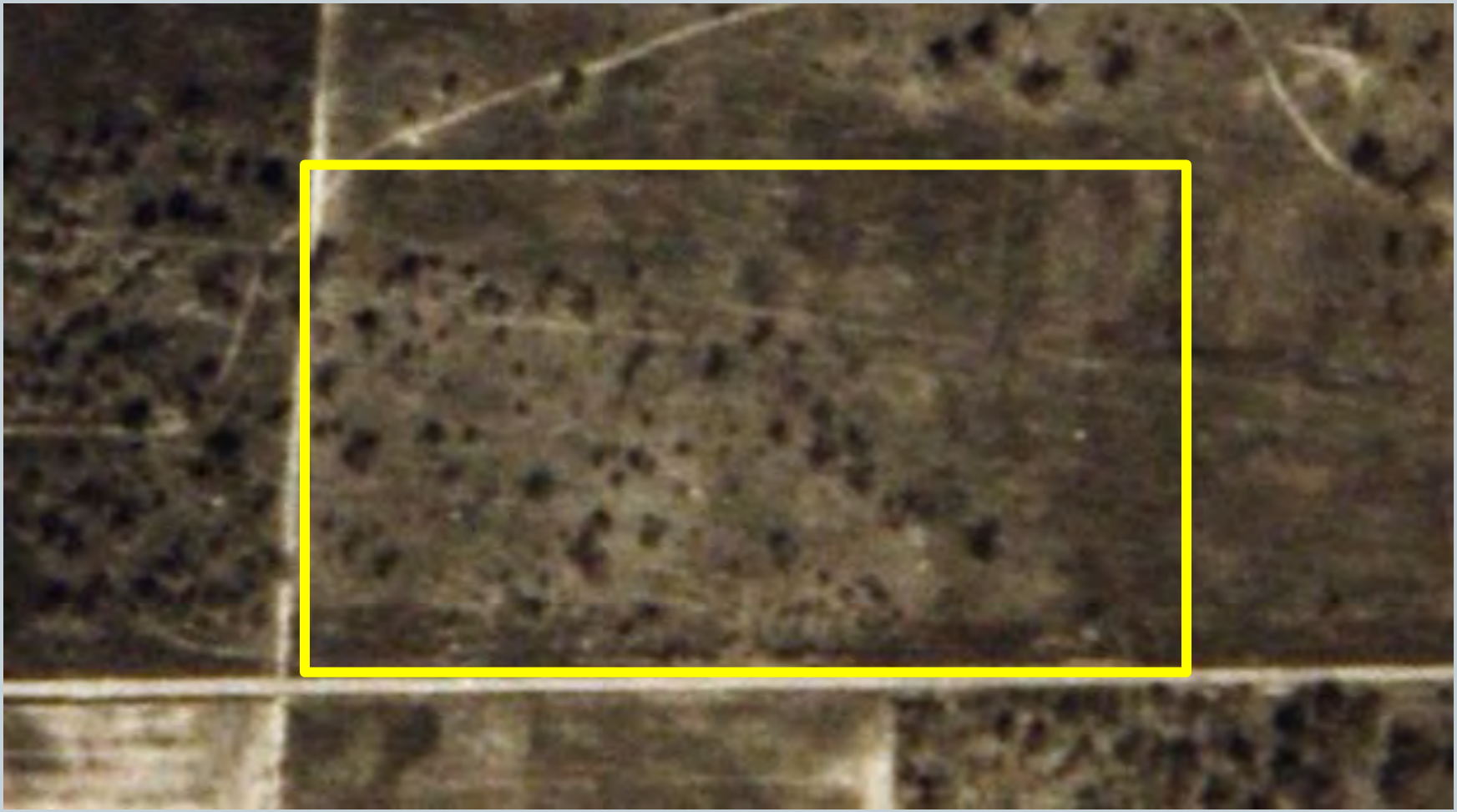
Southview Oak Savanna



Southview Oak Savanna

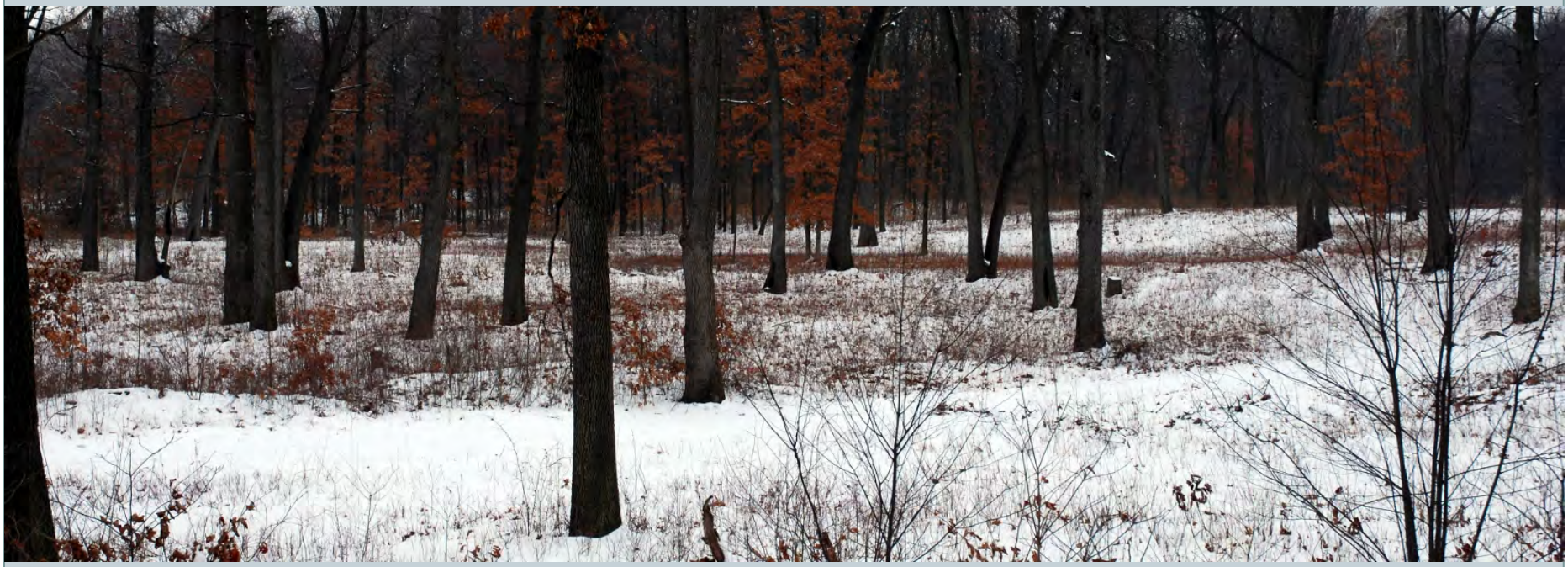


Southview Oak Savanna



1940

Southview Oak Savanna



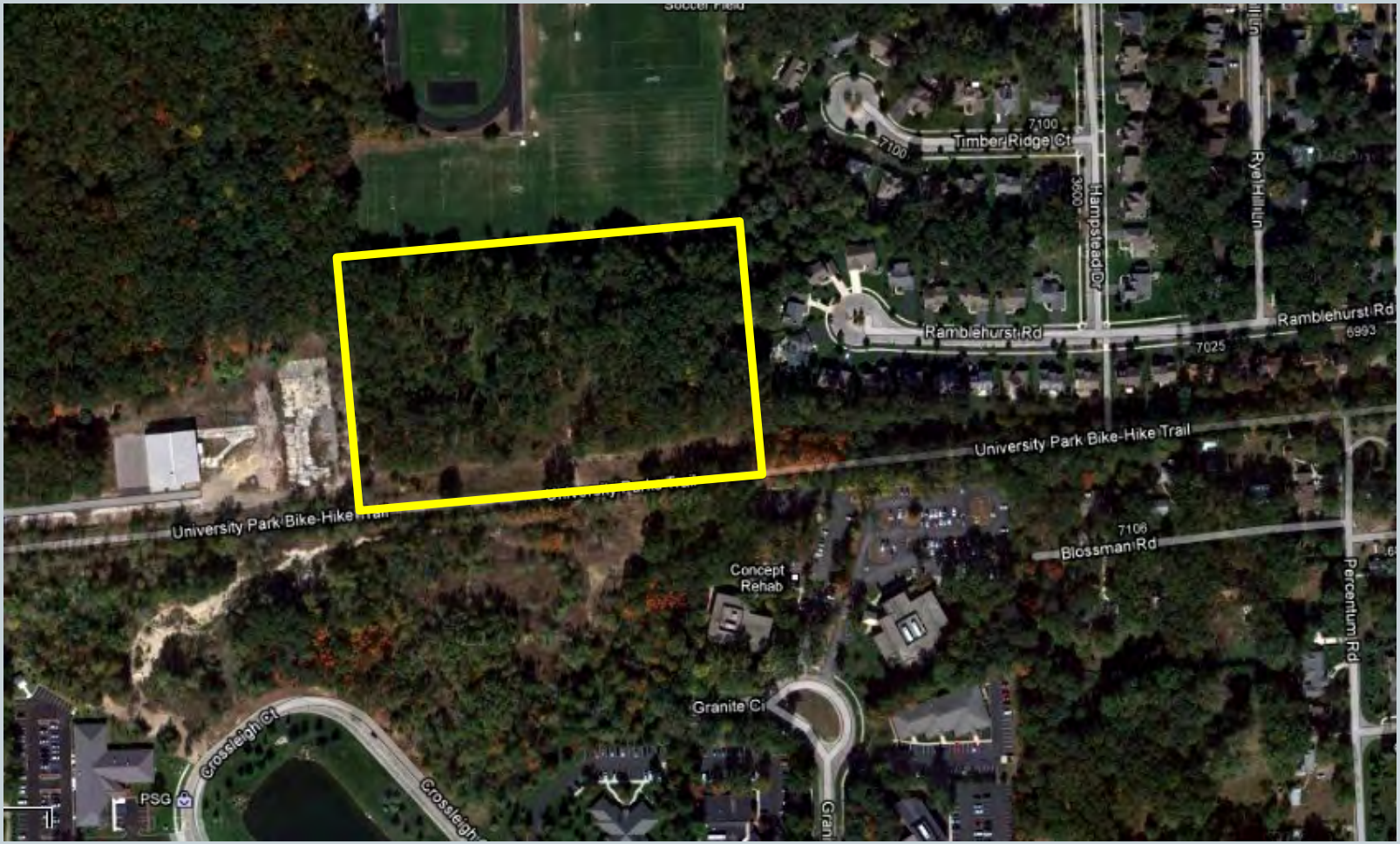
Southview Oak Savanna

State Listed Species on-site 1996

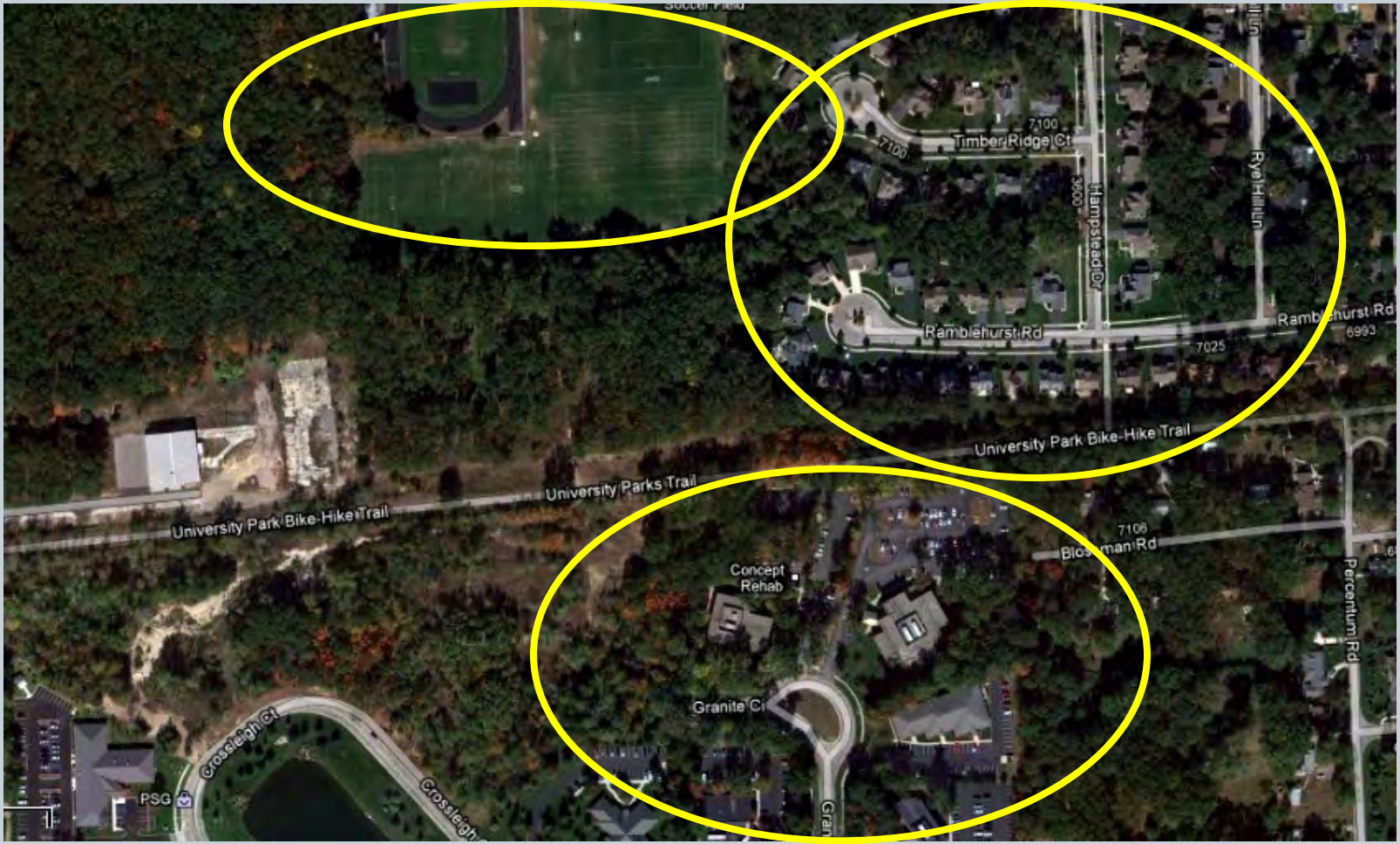
Sweet Fern (*Comptonia peregrinia*)	Hairy Pinweed (*Lechea villosa*)
Lyre-leaf Rock-cress (*Arabis lyrata*)	Sessil Tick-trefoil (*Desmodium sessilfolium*)
Plains Puccoon (*Lithospermum caroliniense*)	Sand Dropseed (*Sporobolus crypandrus*)
Sand Cherry (*Prunus pumila var. cuneata)*	Blue Lupine (*Lupinus perennis*)
Porcupine grass (*Hesperostipa spartea*)	Canada Frostweed (*Helianthemum canadense*)

--Terry Seidel, TNC

Southview Oak Savanna: Restoration



Southview Oak Savanna: Restoration



Southview Oak Savanna: Restoration

Southview Oak Savanna: Restoration

Glove of Death

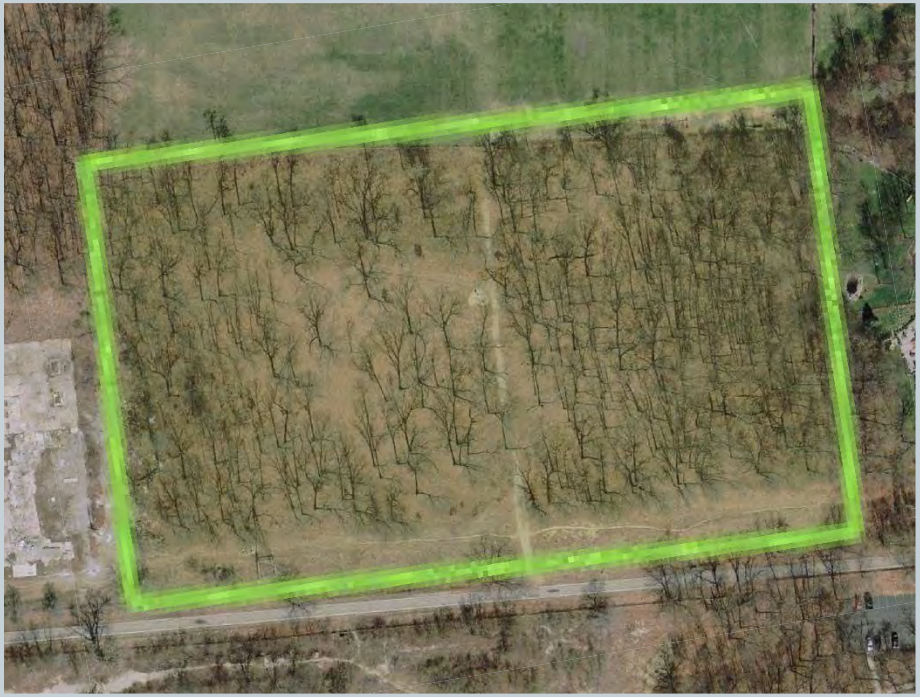
Mowing

Canopy Removal

Southview Oak Savanna: Restoration

1999 Aerial

2010 Aerial



Southview Oak Savanna: Restoration

Leaf removal to reduce soil nutrients and moisture

Southview Oak Savanna: Restoration

Leaf removal

Southview Oak Savanna: Restoration

Leaf removal

Southview Oak Savanna: Restoration

2003

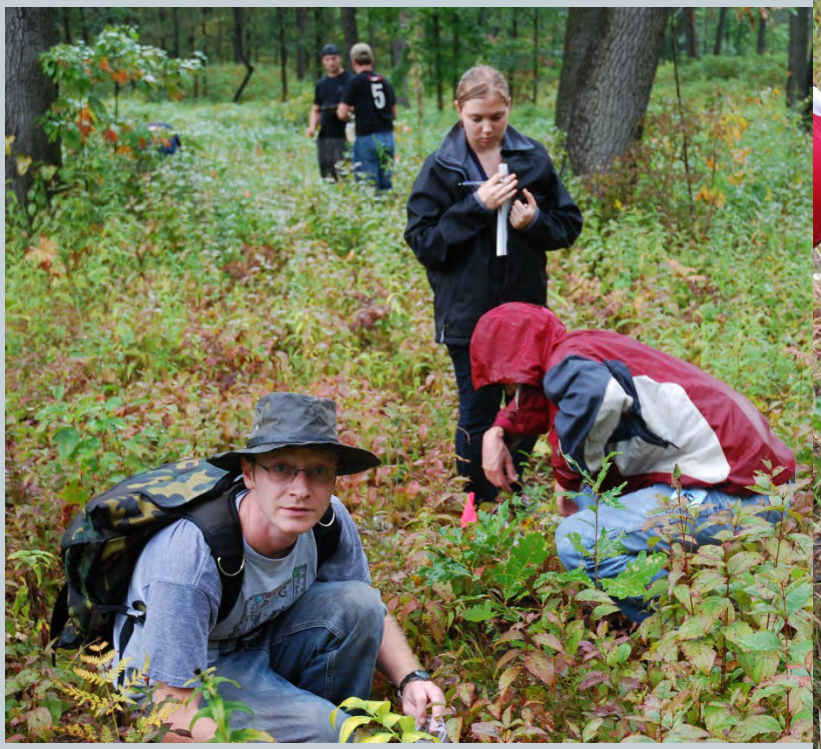
Southview Oak Savanna: Restoration

2012

Southview Oak Savanna: Monitoring

plants emerged since 2001
Prairie Fern-leaf-False Foxglove (*Aureolaria pendicularia var. ambigens)* E
Missouri Rock Cress (*Arabis missouriensis*) E
Dwarf Dandelion (*Kriga virginica*) P
Prairie Thimbleweed (*Aneneome cylidrica*) T
Racemed Milkwort (*Polygala polygama*) T
Yellow Wild Indigo (*Baptisia tinctoria*)
Increased/additional populations of Lupine, Goat's Rue, Prairie Puccoon, Canada Frostweed, Blueberry, Whorled Milkweed

Southview Oak Savanna: Monitoring



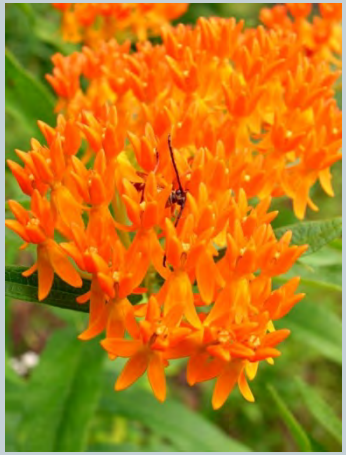
Southview Oak Savanna: Monitoring

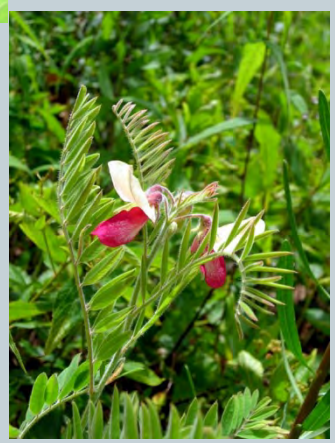
- Sampling Methods
  - 50 cm Hoops randomly thrown
  - Counted morphospecies
  - Counted stems of each morphospecies
  - Counted woody stems
  - Pitfall traps for arthropod collection
  - Soil samples for microbial communities

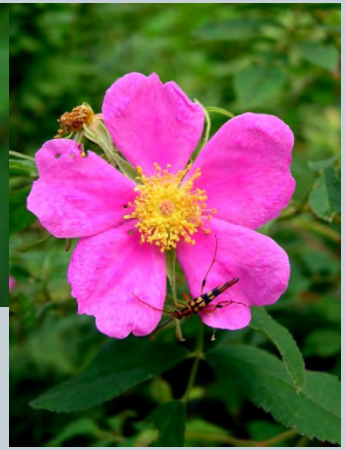
Southview Oak Savanna: Monitoring

	N	Mean Richness		Mean Stem Density		Mean % Woody	
Mowing & Spraying	12	4.4 ± 1.3	p = 0.34	22.2 ± 15.9	p = 0.27	40.4 ± 26.9	p = 0.14
Mowing, Spraying & Blowing	8	4.6 ± 2.4	p = 0.62	19.3 ± 12.3	p = 0.13	35.1 ± 33.0	p = 0.41
Control	11	5.2 ± 2.3		30.5 ± 18.9		23 ± 27.0	

Southview Oak Savanna: 2013







Sylvan Prairie Park

Sylvan Prairie Park

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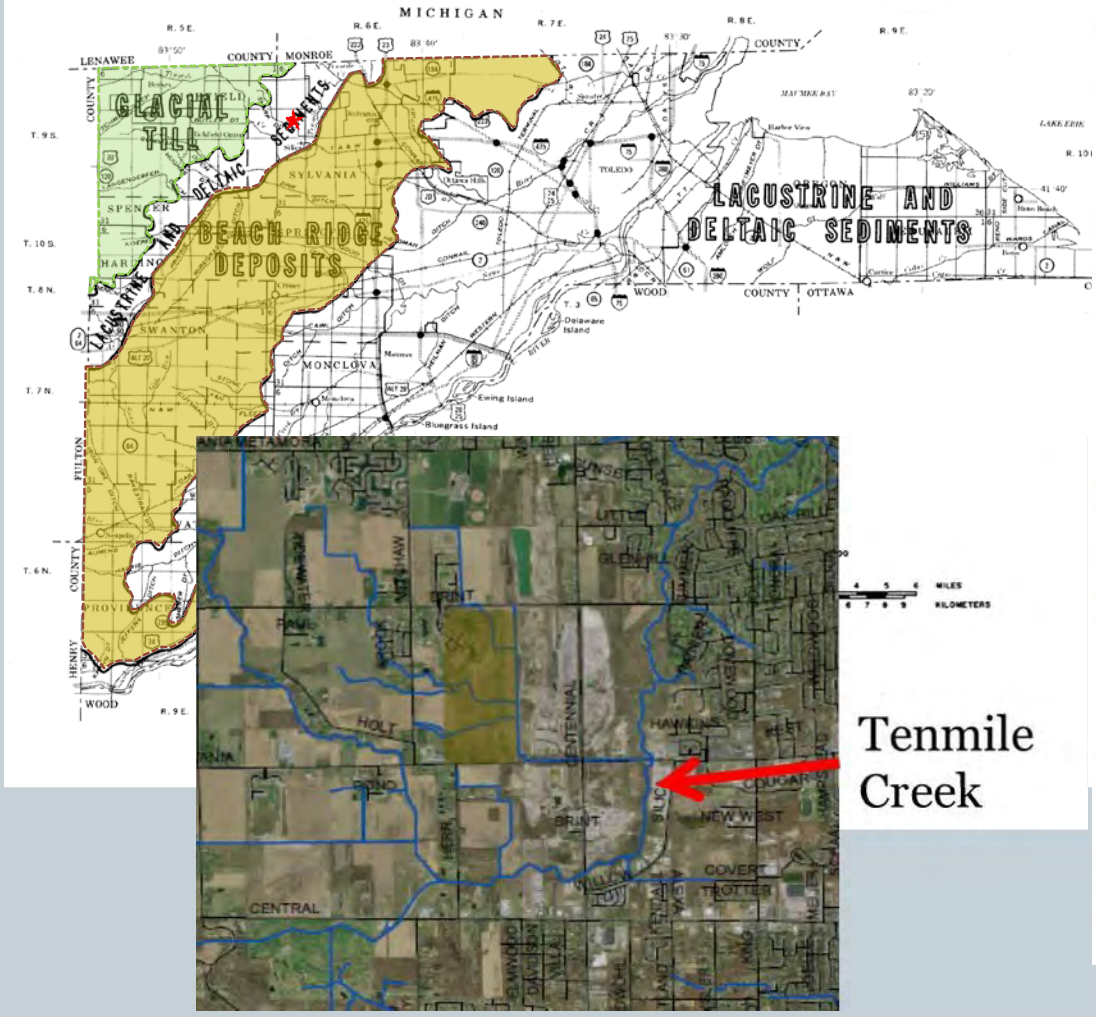
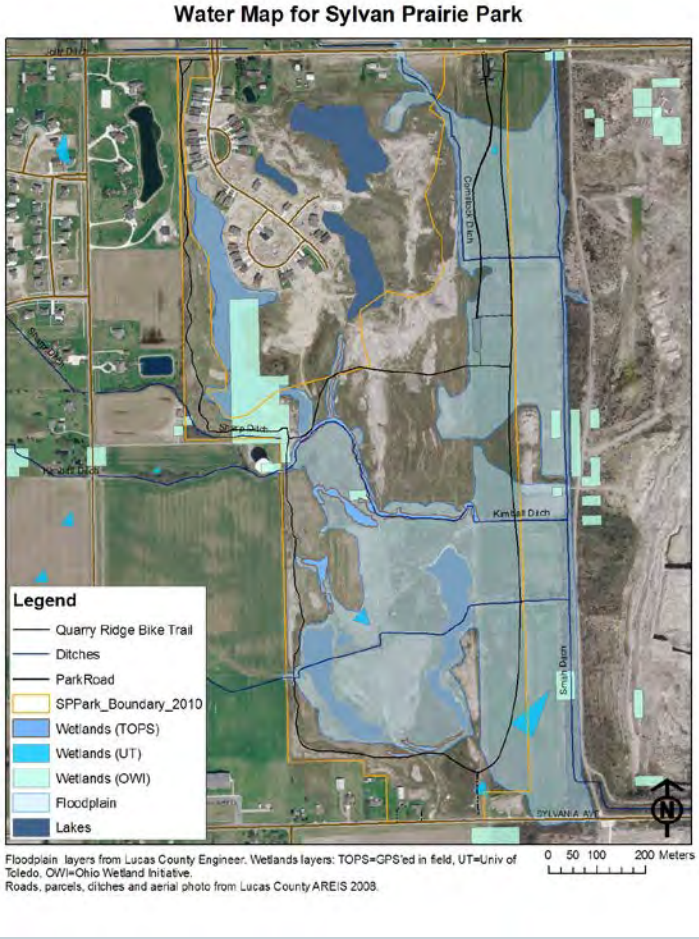
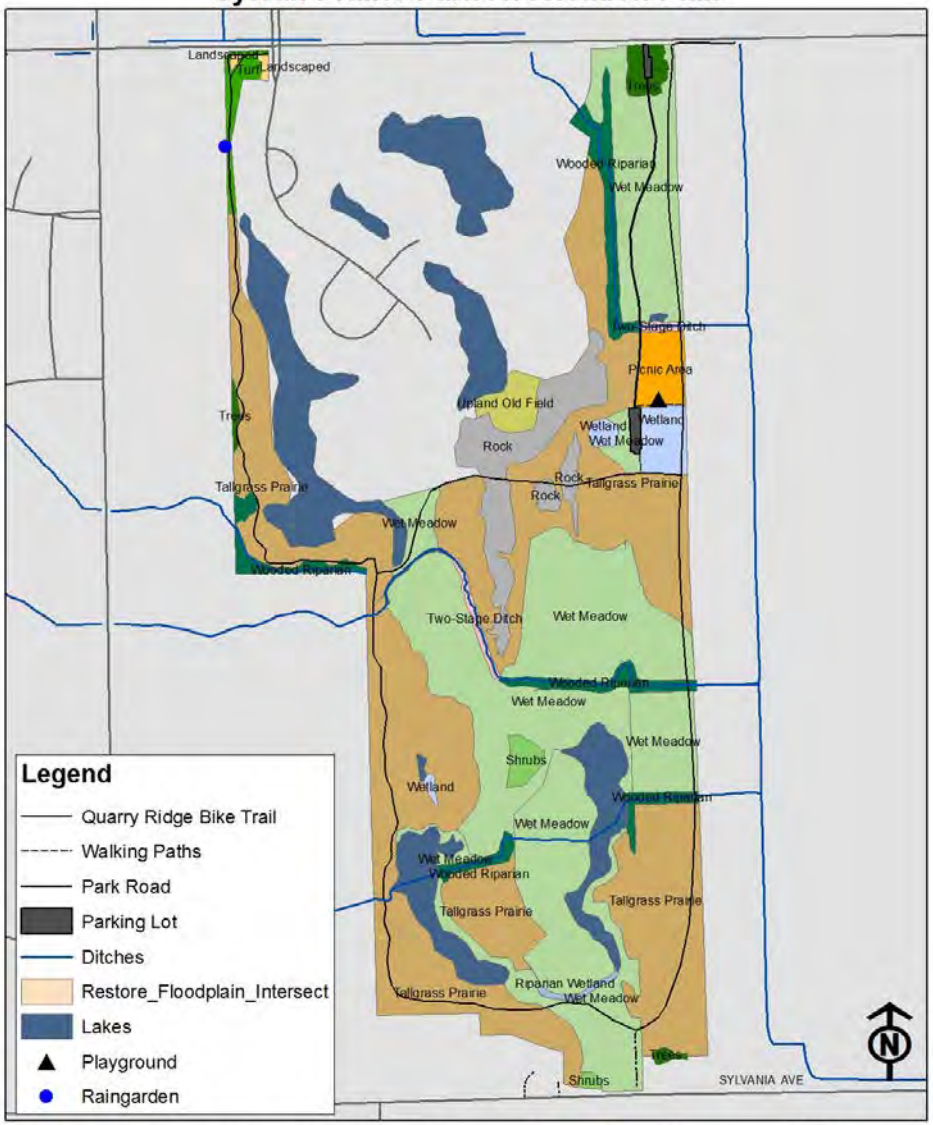




Sylvan Prairie Park Restoration Plan



Restoration plans proposed by Olander staff in January 2009.
Parcel, ditch, and street layers from Lucas County AREIS 2008.

Sylvan Prairie Park: Restoration

Tall Grass Prairie and Wet Meadow Restoration

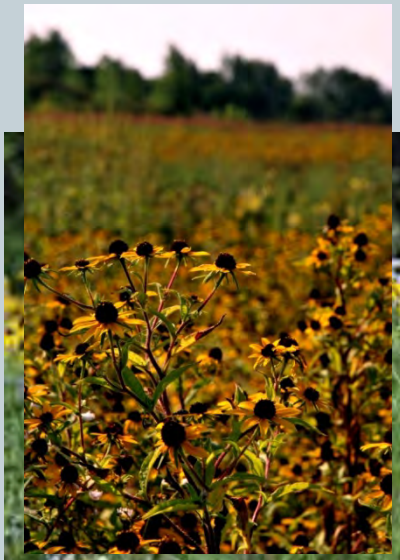
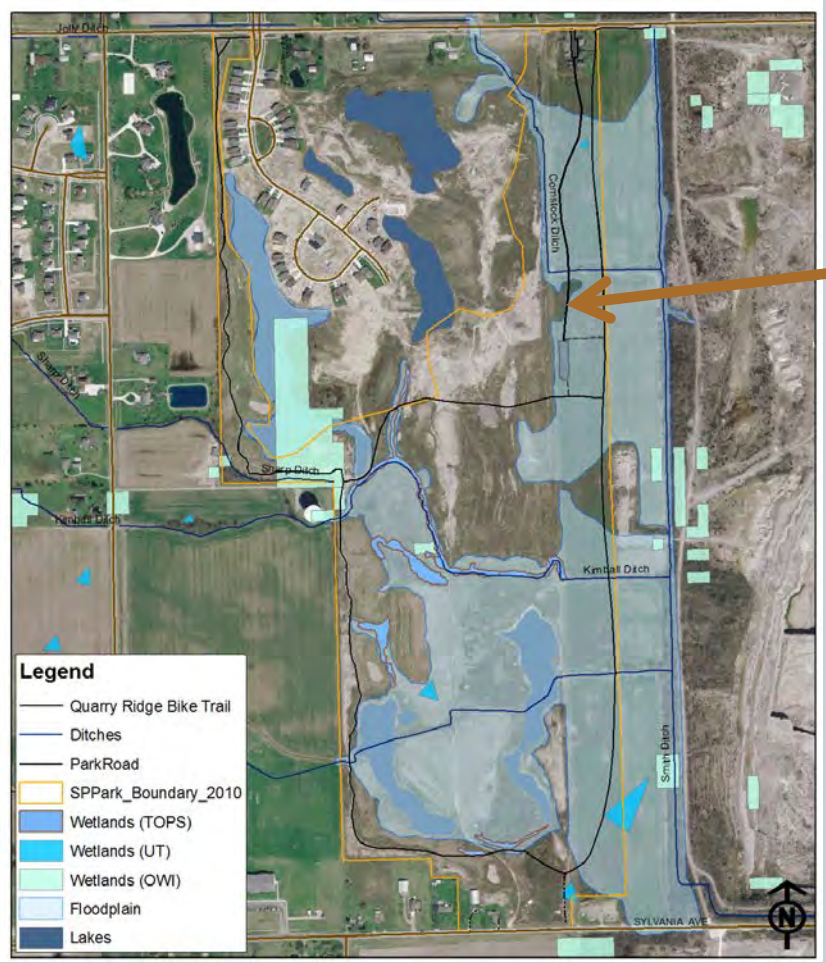


Photo: Sherry Plessner

Sylvan Prairie Park: Restoration



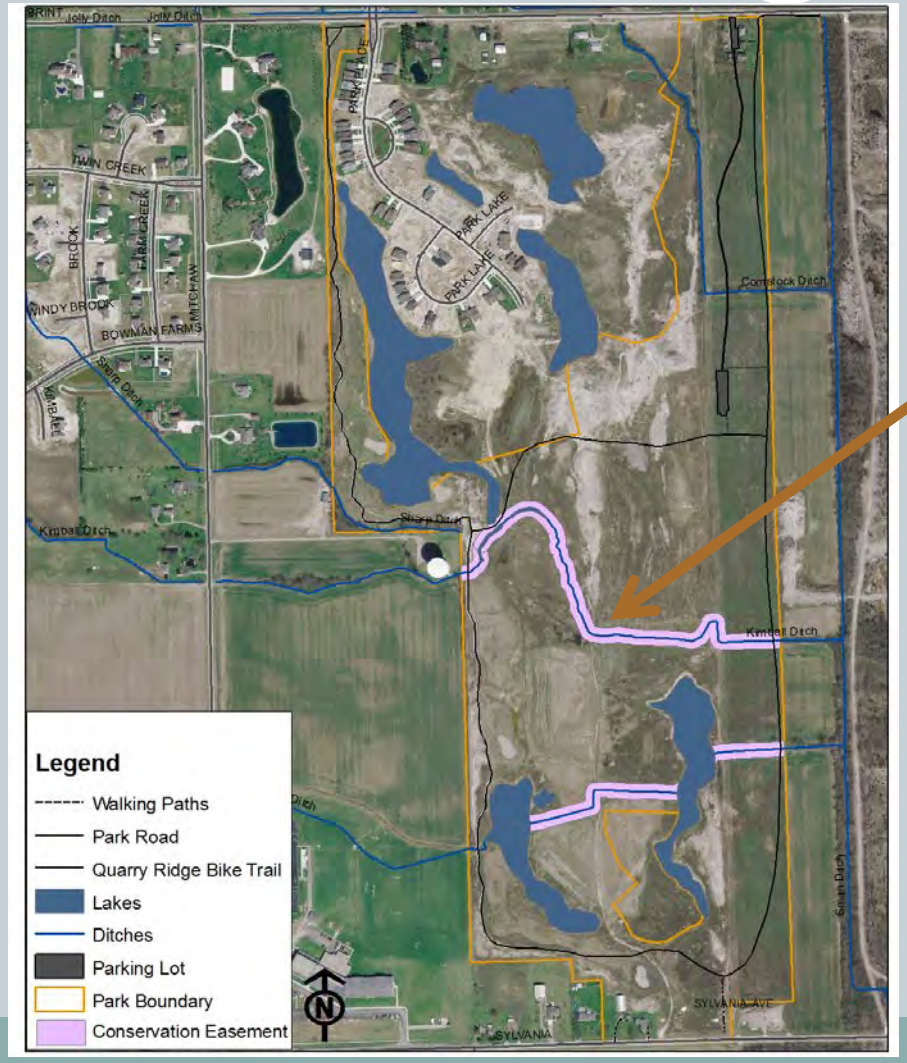
2009 Comstock Ditch—100 feet

Sylvan Prairie Park: Restoration

Before

One Year Later

Sylvan Prairie Park: Restoration

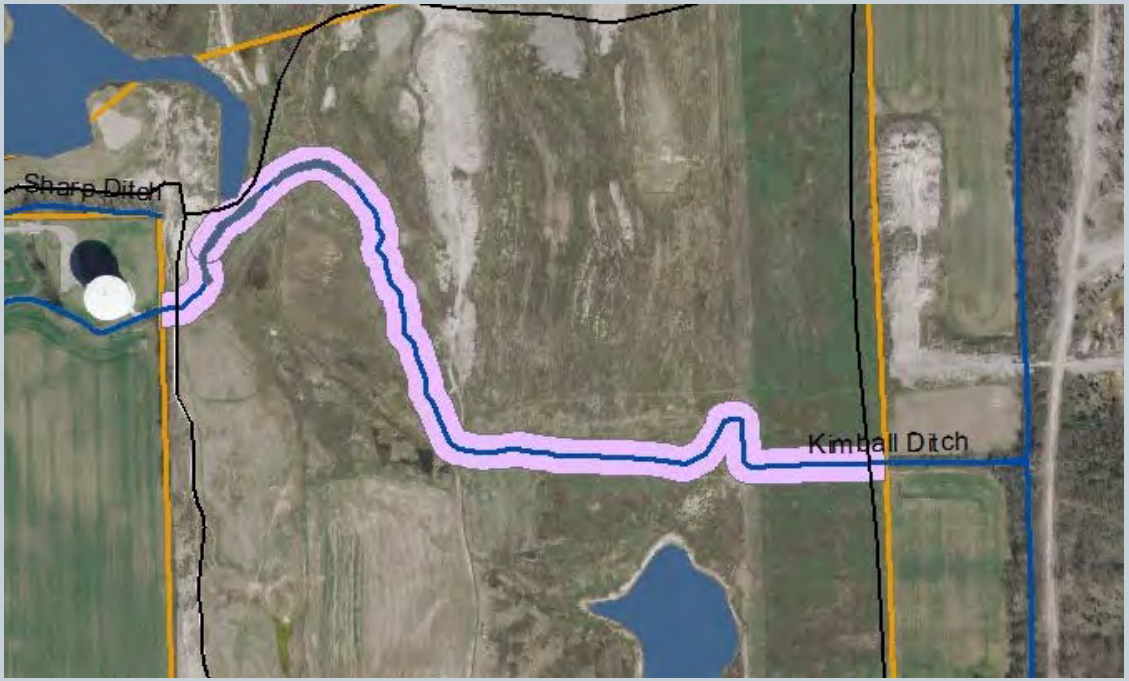


2012
Kimball Ditch--
2400 feet

Sylvan Prairie Park: Restoration

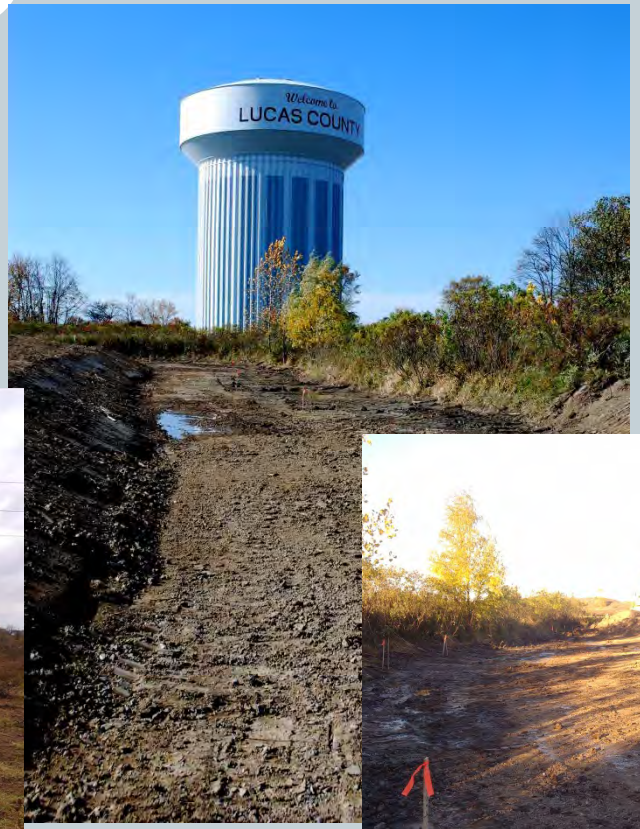
Traditional Trapezoidal Ditch – water not reaching floodplain & moving really fast

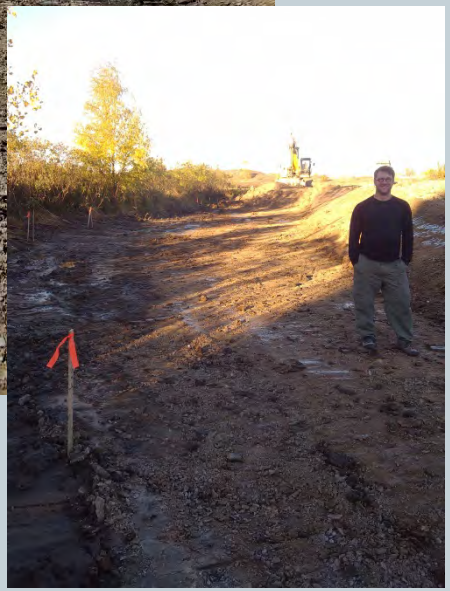
Sylvan Prairie Park: Restoration



OEPA 319(h) Grant funds—Overwide restoration of Kimball Ditch $170,751 project, $100,781 funded through grant

Sylvan Prairie Park: Restoration





Construction October 2012

Sylvan Prairie Park: Restoration




Native Plant Seed, Plug and Tree Installation

438 Trees, 3136 plugs, 1000 willow stakes, 441 volunteer hours

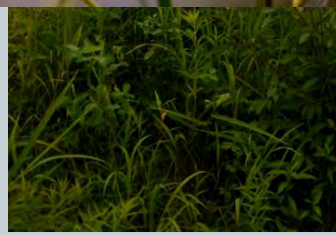
Sylvan Prairie Park: Restoration

November 2012

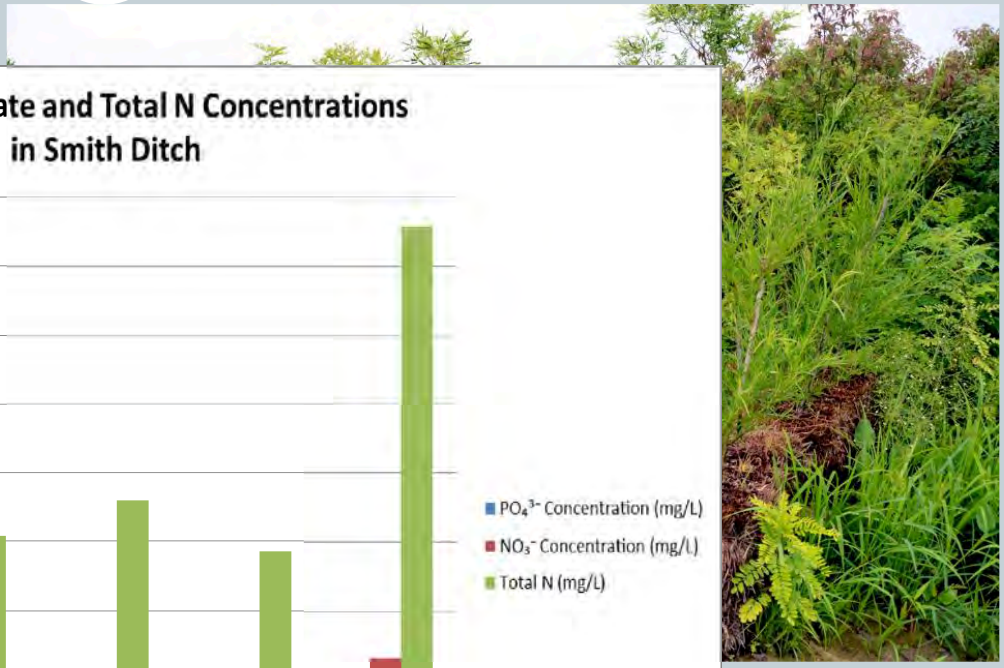
Sylvan Prairie Park: Restoration

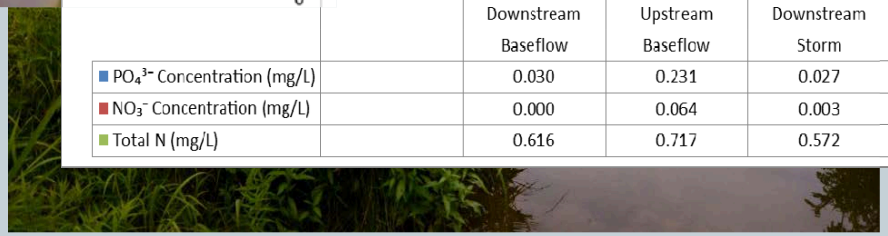
July 2013

Sylvan Prairie Park: Restoration



Sylvan Prairie Park: Restoration

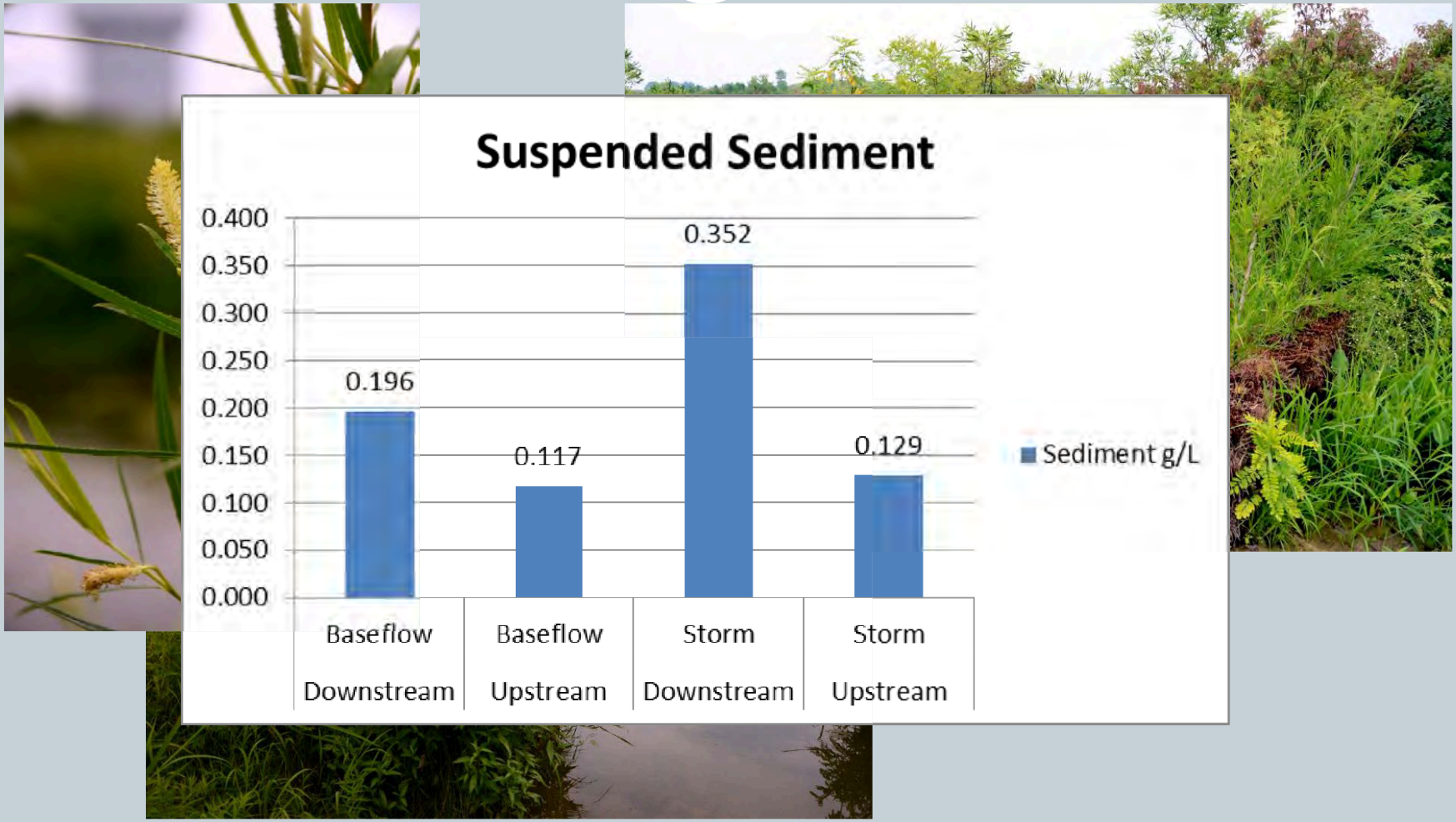




Phospate, Nitrate and Total N Concentrations in Smith Ditch

	Downstream Baseflow	Upstream Baseflow	Downstream Storm	Upstream Storm
PO_4^{3-} Concentration (mg/L)	0.030	0.231	0.027	0.212
NO_3^- Concentration (mg/L)	0.000	0.064	0.003	0.264
Total N (mg/L)	0.616	0.717	0.572	1.514

Sylvan Prairie Park: Restoration



Thanks!

OhioEPA
Ohio Environmental Protection Agency

Partners for Clean Streams

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