



**RESTORING WETLANDS TO THE FLOODPLAINS OF
SEAVEY DITCH AND INDIAN CREEK AT SULLIVAN WOODS
VERNON HILLS PARK DISTRICT BOARD
JANUARY 25, 2018**

**WETLANDS RESEARCH, INC.
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WETLANDS RESEARCH, INC.

Wetlands Research, Inc. is a 501-C3 non profit organization dedicated to the restoration of Midwestern wetlands in order to conduct research on improving flood control, water quality, wildlife habitat, and other ecosystem services.

wetlandsresearch.org

POTENTIAL PARTNERS

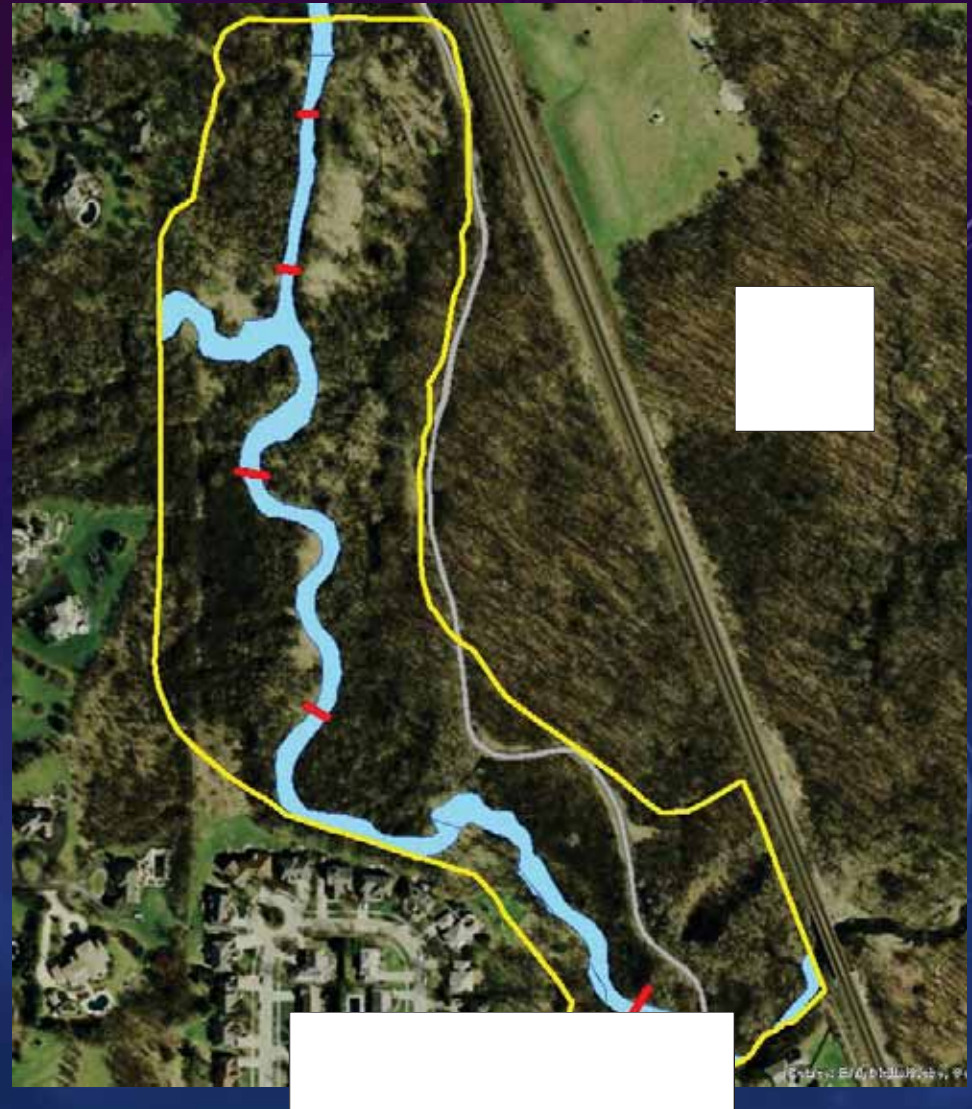
- Vernon Hills Park District
- Vernon Hills Public Works
- Vernon Hills High School
- Lake County Stormwater Management Commission
- Lake County Public Works
- Long Grove Park District
- Des Plaines River Watershed Workgroup

GOALS FOR SULLIVAN WOODS PILOT PROJECT

- Improve surface water quality.
- Restore a diverse wetland landscape to support greater wildlife diversity and pollinator habitat.
- Test potential market where wetlands provide water quality credits to National Pollutant Discharge Elimination System (NPDES) permittees.

OBJECTIVES

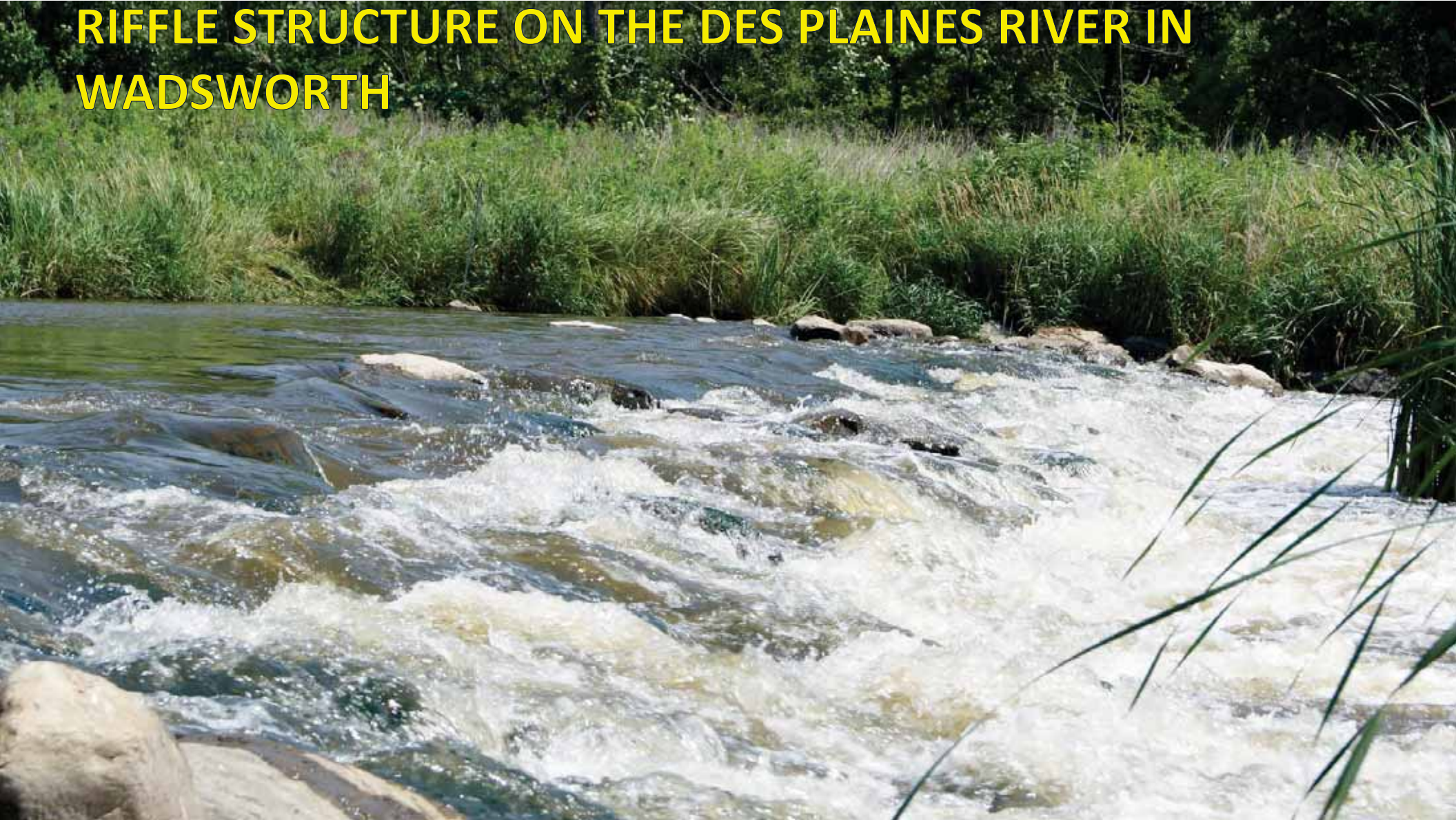
- Restore stream morphology: Reduce flow rates; rehydrate the floodplain, 1.5 miles of stream
- Restore 27 acres of floodplain wetlands using pools and riffles.
- Create educational opportunities at all levels.



RESTORING WETLANDS

- Remove invasive and weedy species.
- Replace existing vegetation with native forbs, grasses, sedges and rushes.
- Construct rock riffles to replicate pre-settlement hydrology.
- Implement restoration and management strategies which will promote a self sustaining ecosystem.

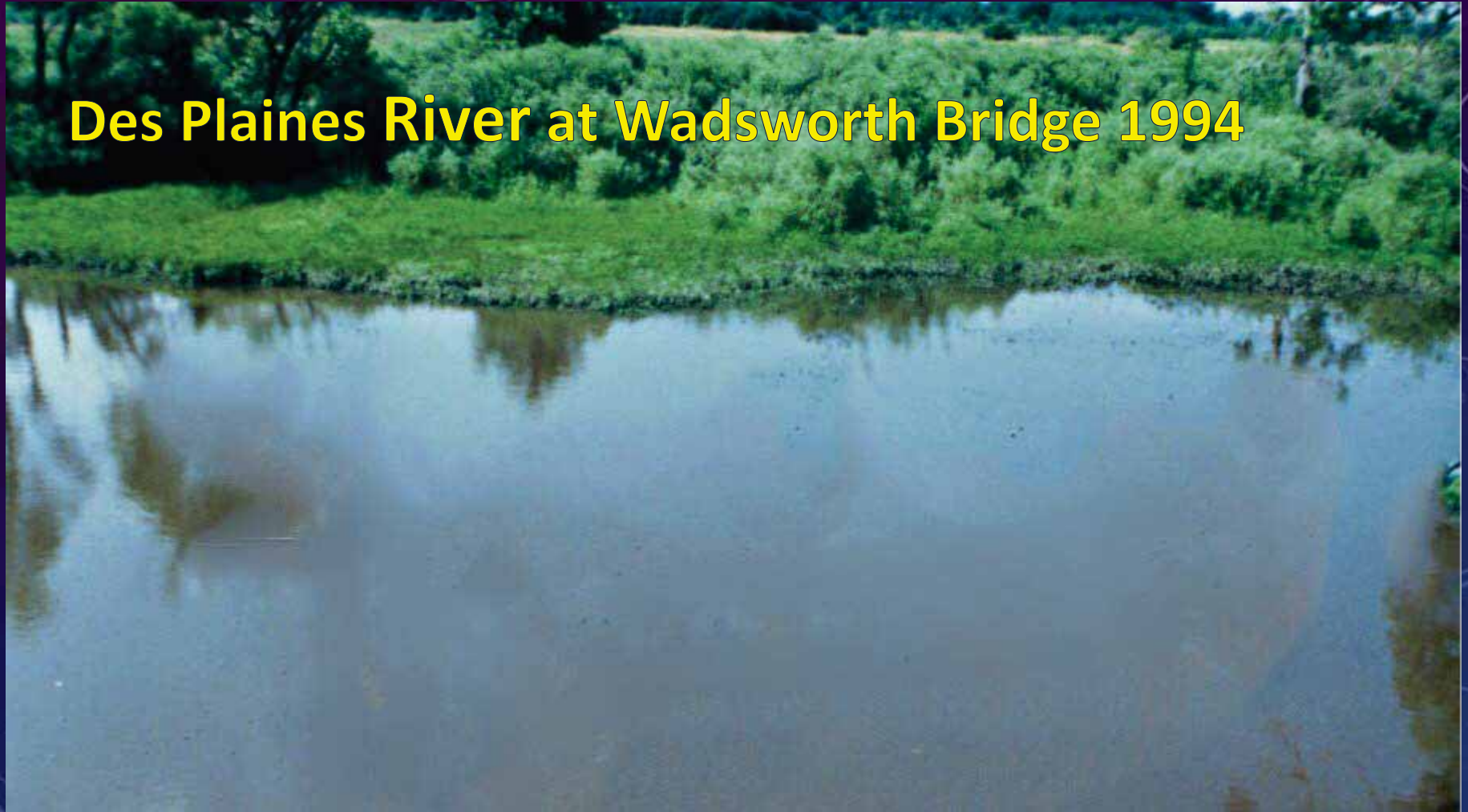
**RIFFLE STRUCTURE ON THE DES PLAINES RIVER IN
WADSWORTH**



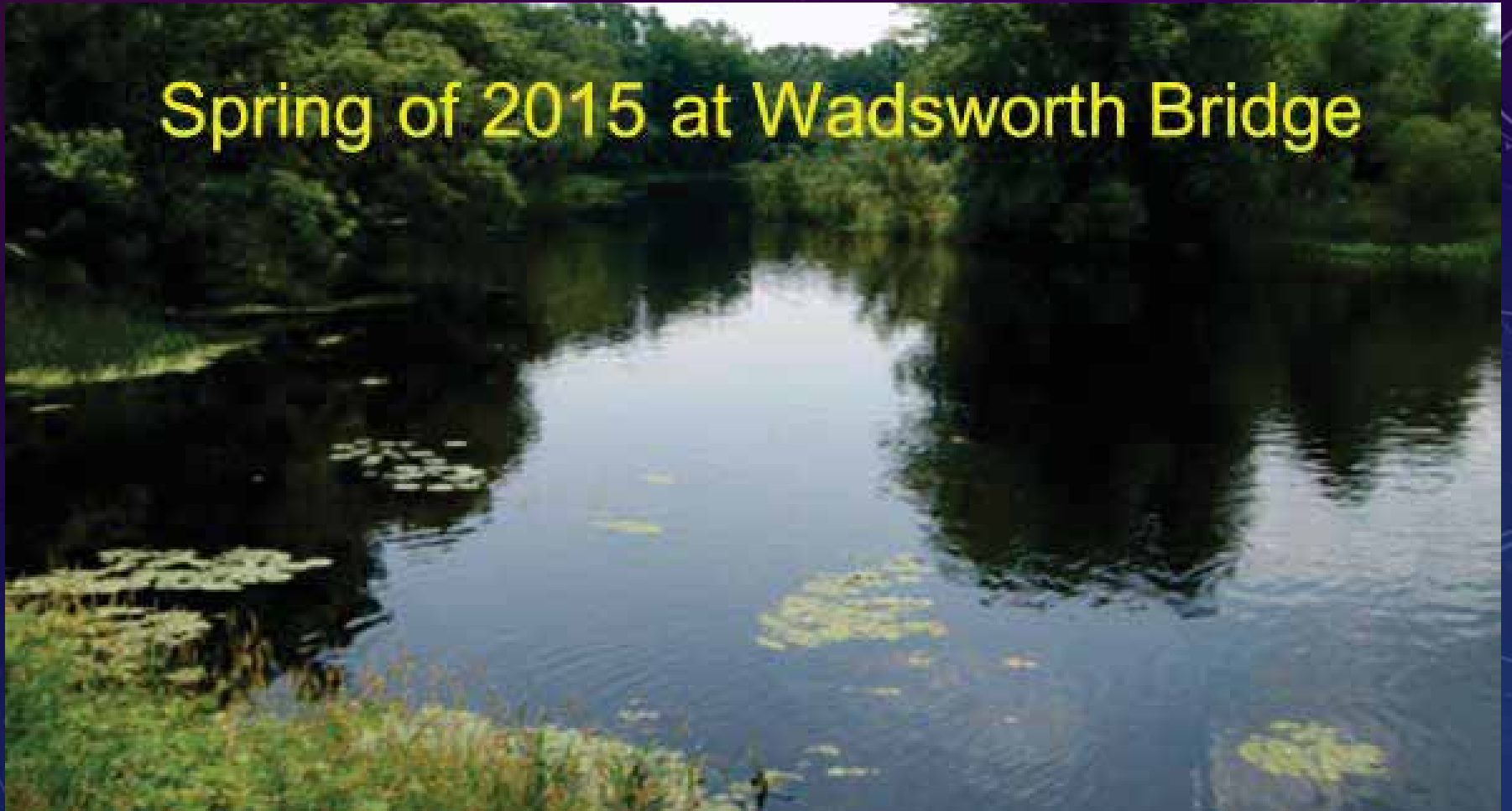
**TUSSOCK SEDGE AND DUCK POTATO WITH SCATTERED OPEN
WATER AREAS FOR WATERFOWL, EGRETS, HERONS AND
SANDHILL CRANE TO UTILIZE**



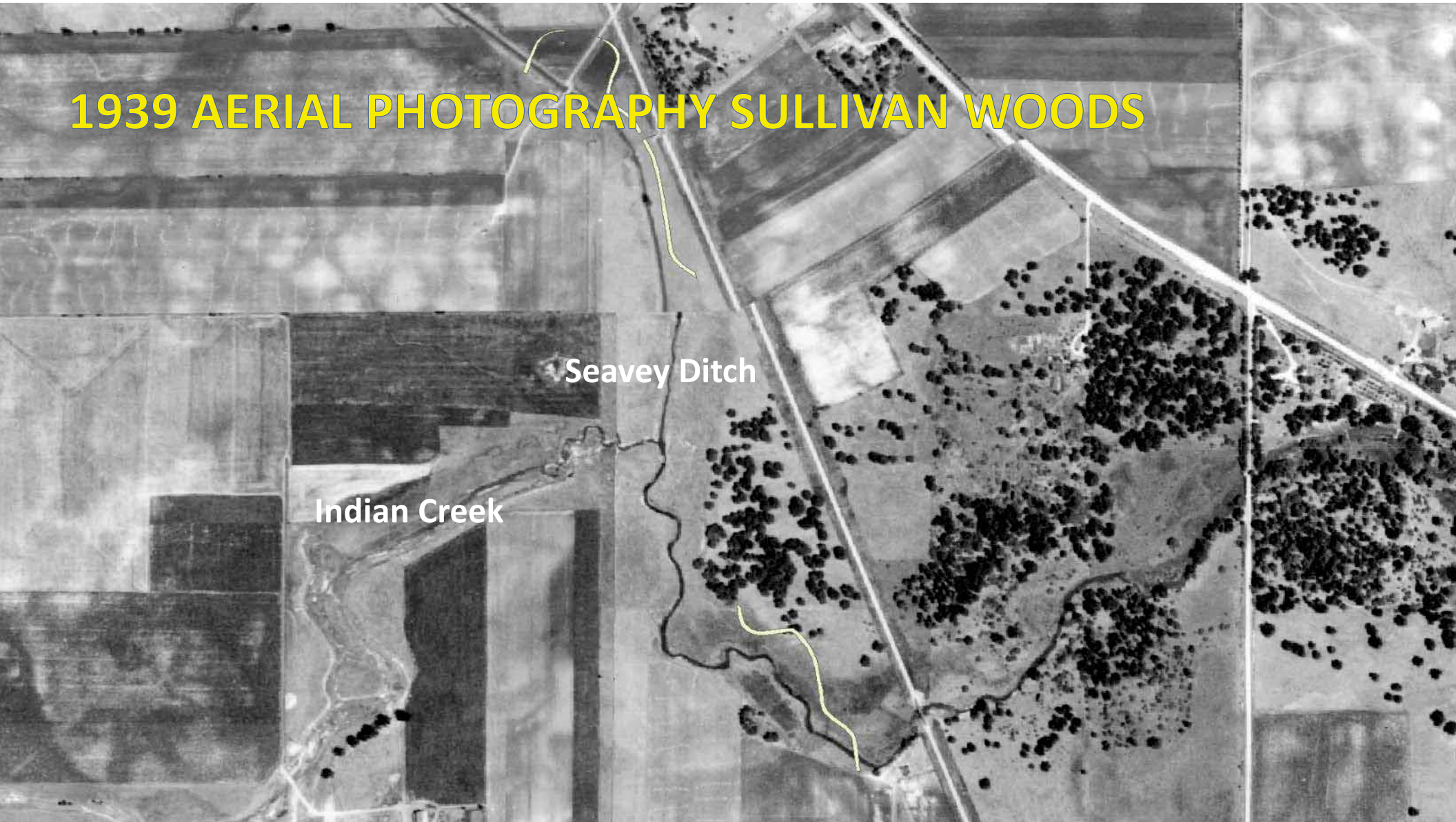
Des Plaines River at Wadsworth Bridge 1994



Spring of 2015 at Wadsworth Bridge



1939 AERIAL PHOTOGRAPHY SULLIVAN WOODS



Seavey Ditch

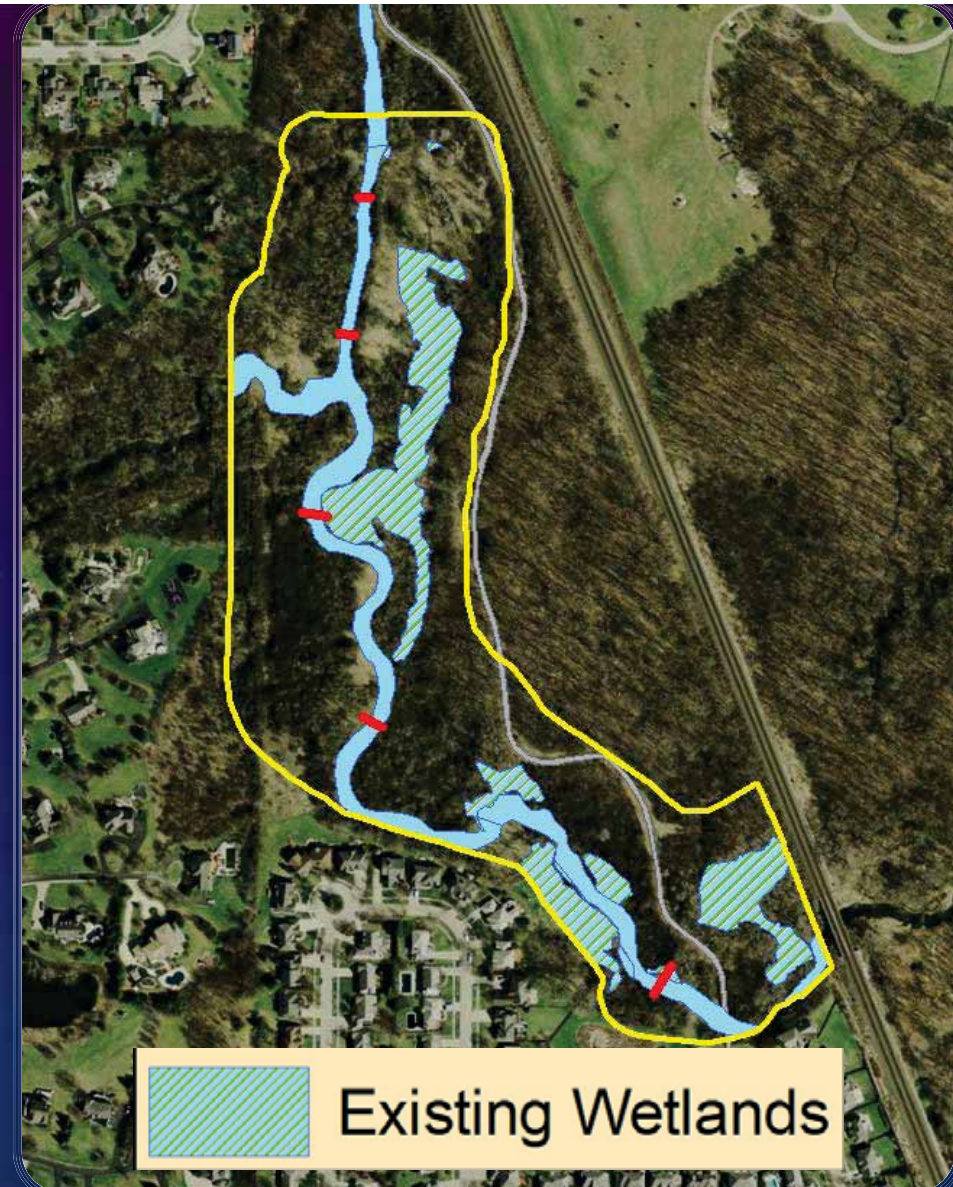
Indian Creek

HYDRIC SOILS



WETLAND DELINEATION

- 7.04 acres of existing wetlands.
- One high quality aquatic resource.
- A wetland is defined by a prevalence of wetland vegetation, hydric soils and hydrology.



NATURAL RESOURCE EVALUATION

- Random transects overlaid on aerial. 96- 100 m² quadrats were sampled.
 - Trees - > 8 inch diameter at breast height (dbh)
 - Shrub - > 3 feet in height; < 8 inch dbh
 - Herbaceous - < 3 feet in height



NATURAL RESOURCE OF SULLIVAN WOODS

Layer	Number of Species	Dominant Species
Tree	15	Boxelder; European buckthorn
Shrub	17	European buckthorn; Honeysuckle
Herbaceous	53	Honeysuckle; reed canary grass; European buckthorn

SILVER MAPLE



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RED OAK



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EASTERN COTTONWOOD

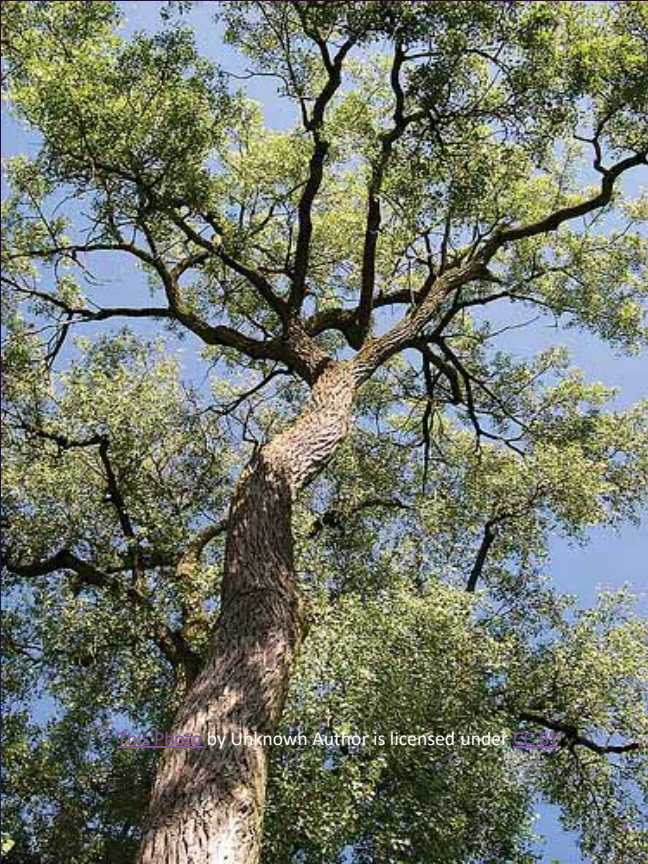


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CRACK WILLOW



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FLORISTIC QUALITY INDEX (FQI)

- FQI for vegetation found during natural resource evaluation and wetland delineation was calculated at 25.23 and “essentially has no significance from a natural area perspective.”
- In 2016, Neal Marsh had an FQI of 55.6; “this is an extremely rare and of paramount importance. These landscapes represent less than 0.5% of the land area in the Chicago region.” (Swink and Wilhelm, 1994)

PROPOSED LANDSCAPE



Tussock sedge with scattered rush and duck potato

EXAMPLE PLANT COMMUNITIES



Hard-stemmed bulrush



Gray headed coneflower, Purple
Coneflower, Bee Balm, Big Bluestem

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