RESOLUTION 2021-119
(11/15/2021)

RESOLUTION OF THE VILLAGE BOARD OF THE VILLAGE OF CALEDONIA FOR THE DESIGN OF THE NOVAK ROAD RAVINE RESTORATION WITHIN TRIBUTARY G REACH 5 (KLEMA DITCH) DESIGNATED IN THE WIND POINT WATERSHED RESTORATION PLAN IN COOPERATION WITH ROOT-PIKE WATERSHED INITIATIVE NETWORK

The Village Board of the Village of Caledonia, Racine County, Wisconsin do resolve as follows:

WHEREAS, the Village of Caledonia is interested in restoring the ravine that outlets to Lake Michigan from the degraded and highly impaired Tributary G Reach 5 (Klema Ditch), to reduce streambank erosion, increase resiliency to flooding events, improve native habitats, and improve fish passage.

WHEREAS, financial aid in the form of grants will be necessary to carry out a project and Root-Pike Watershed Initiative Network will lead in applying for grants to secure the funds necessary to complete the design.

WHEREAS, Root-Pike Watershed Initiative Network is willing to provide grant writing, conduct site tours, facilitate obtaining professional engineering services, act as the project manager to obtain professional services to develop the plans, estimate costs, schedule, and manage grant funds received to complete the stream corridor design and permitting.

WHEREAS, the Wind Point Watershed Restoration Plan was adopted by the Village of Caledonia and has been approved by the Department of Natural Resources and the Environmental Protection Agency.

WHEREAS, the ravine's condition currently does not allow for fish passage, which the improvement of this condition could yield significant grant funds for the upstream reaches of the Klema Ditch.

WHEREAS, the Village of Caledonia works cooperatively with the Root-Pike Watershed Initiative Network through the Southeastern Wisconsin Clean Water Network and the Department of Natural Resources to improve riparian buffers along stream channels and reduce stormwater runoff pollution loading as part of the Village of Caledonia's stormwater permit requirement.

WHEREAS, the recommendation to improve the Klema Ditch is documented in the Wind Point Nine Element Watershed Restoration Plan and prioritized as "Highly Critical".

WHEREAS, the restoration of the impaired Klema Ditch into a clean "Klema Creek" would serve the community by reducing runoff pollution and improving land stability, and enhancing biodiversity through migratory fish passage, which creates a stronger Caledonia brand and sense of place.

WHEREAS, the modeled pollutant reductions as a result of the Klema Ditch project as are estimated to be: total suspended solids =75 tons/yr., total nitrogen = 984 lbs./yr., total phosphorus = 154 lbs./yr., and bacteria = 37%.

WHEREAS, excess sediment and phosphorus from the eroding ravine enter the TRG 5 (Klema Ditch) have a harmful effect on downstream areas, such as Lake Michigan and its beaches.

WHEREAS, there is no commitment by the Village of Caledonia for funding assistance for the design of a restoration/fish passage project for the Klema Ditch, but will be advantageous in securing federal, state, and private grants.

WHEREAS, Root-Pike WIN is already working cooperatively with the Village of Caledonia in the same capacity to restore the impaired and degraded Turtle Creek – a tributary to the Klema Ditch.

NOW, THEREFORE, BE IT RESOLVED THAT the Village of Caledonia will cooperatively work with Root-Pike Watershed Initiative Network (a 501(c)(3) non-profit organization that initiated and implements the 2014 Wind Point Nine Element Watershed Restoration Plan) to develop grant applications and HEREBY AUTHROIZES Mr. Dave Giordano, Executive Director of Root-Pike Watershed Initiative Network to act on behalf of the Village of Caledonia to:

1. Create and submit grant applications to various funding sources with the Village of Caledonia Public Services Director's input, review, and final approval.
2. Facilitate the design of the project in accordance with the rules, regulations, and wishes of the Village of Caledonia, Racine County, and the Department of Natural Resources.
3. Take the necessary action to undertake, direct, and complete the approved design provided by the various potential funding sources under the supervision of the Village of Caledonia's Public Services Director.

Adopted by the Village Board of the Village of Caledonia, Racine County, Wisconsin, this 15th day of November, 2021.

VILLAGE OF CALEDONIA

By: _____
James R. Dobbs, Village President

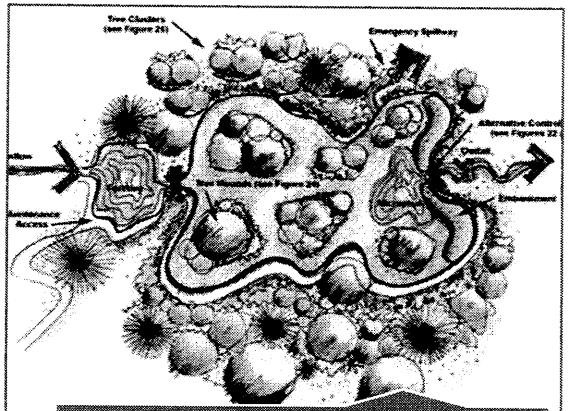
Attest: _____
Joslyn M. Hoeffert, Village Clerk

Klema Creek Rehabilitation

Cleaning Up the Klema

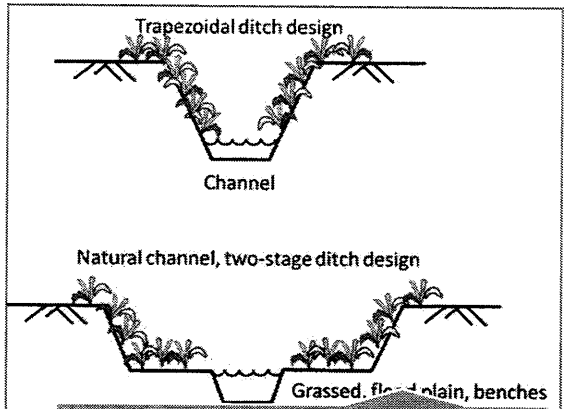
Three Big Ideas

degraded ditch to clean creek



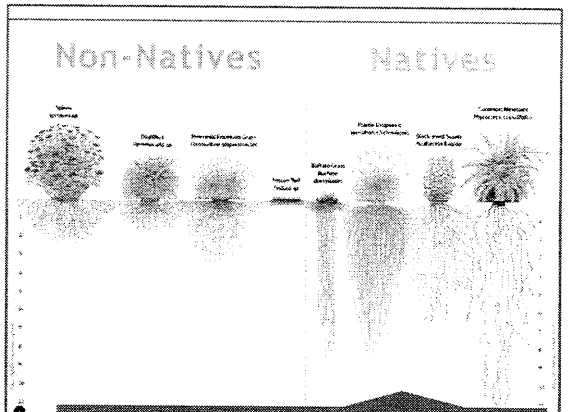
Clean Up the Water

- Pre-treat Stormwater Inputs



Reduce Flooding

- Increase Channel Capacity



Use More Native Plants

- Convert Turf to Native Vegetation

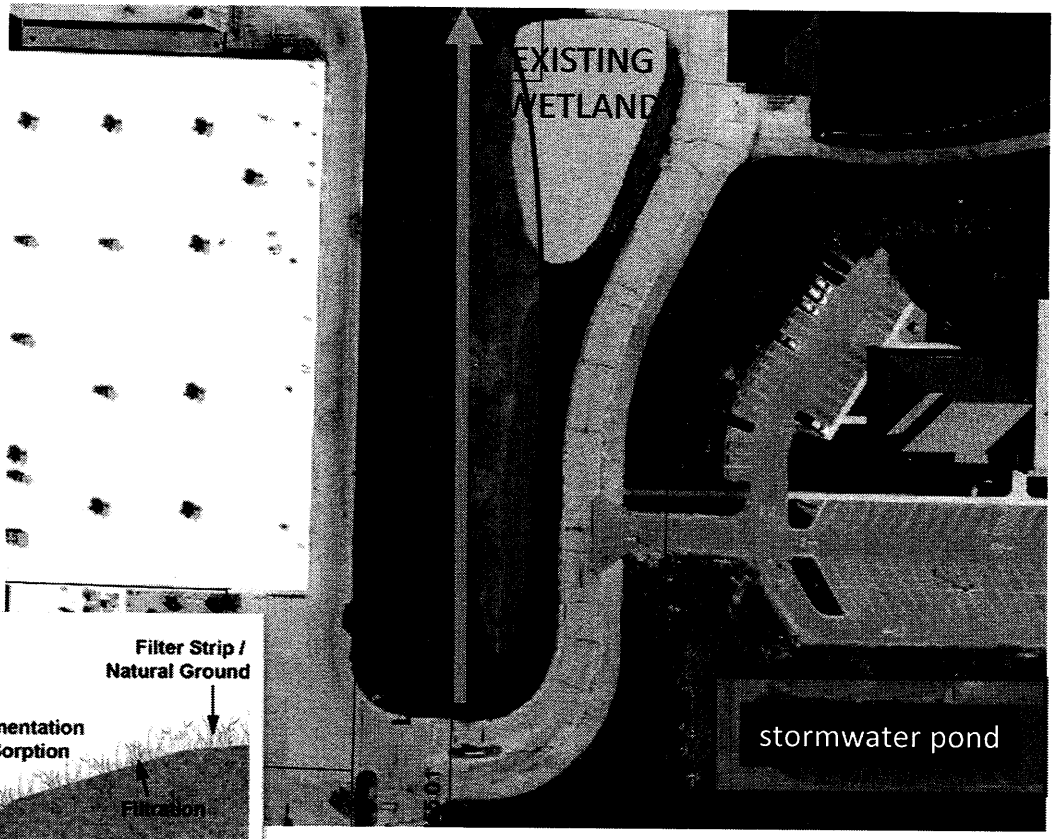
WATERSHED INITIATIVE NETWORK WIN ROOT-PIKE

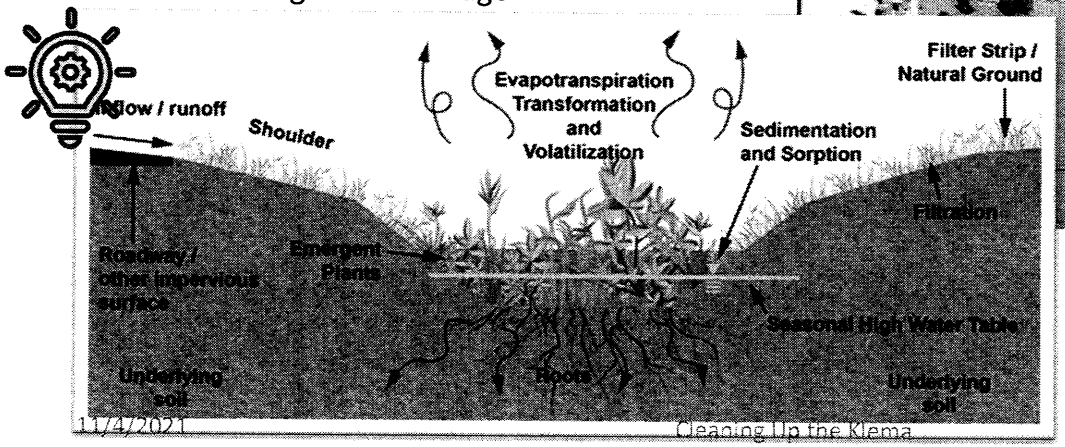
RESTORING OUR BROKEN LAKE MICHIGAN RIVERS

Stormwater Pre-treatment #1

Village Hall Headwaters

- About a half acre of possible storage/BMP
- Could be considered wetland creation
- Could tie into existing wetland
- Plant native vegetation / remove invasives
- Better buffer planting around Village pond
- Less mowing for the Village

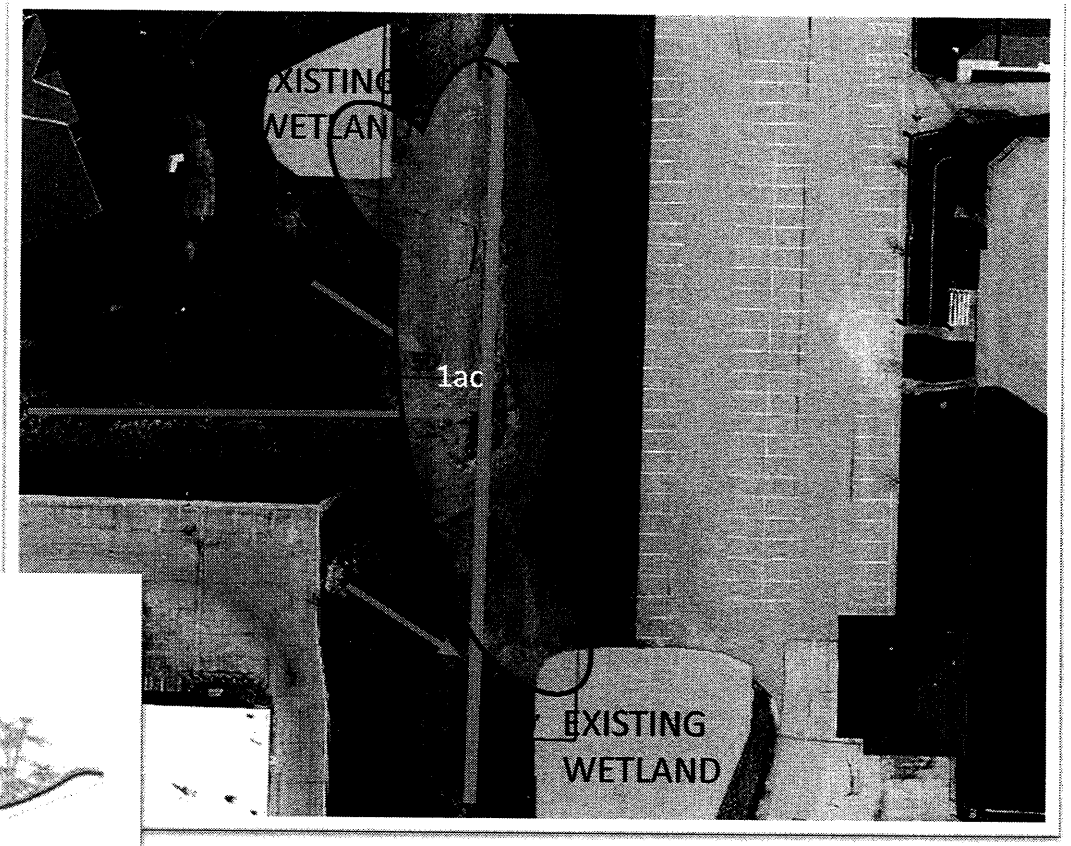


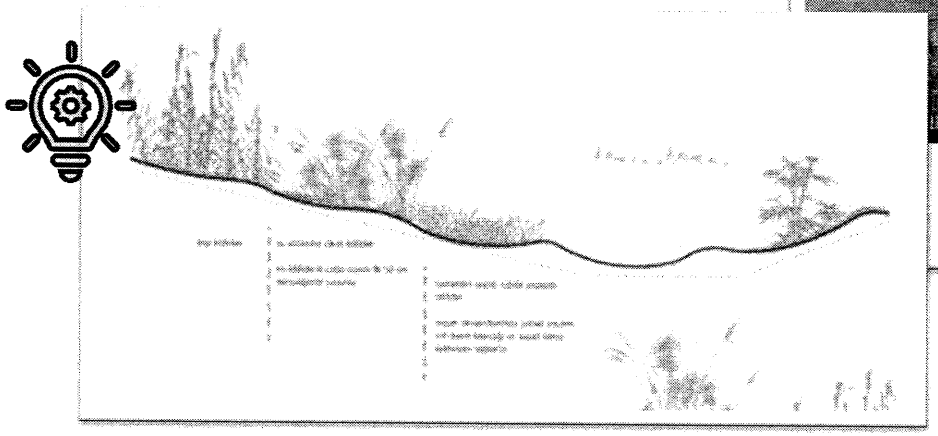


Stormwater Pre-treatment #2A

Hall Parking Confluence

- Unnamed confluence of the Klema Ditch
- About one acre of possible storage/BMP
- Could be considered wetland creation
- Could tie into existing wetlands
- Less mowing for the Village

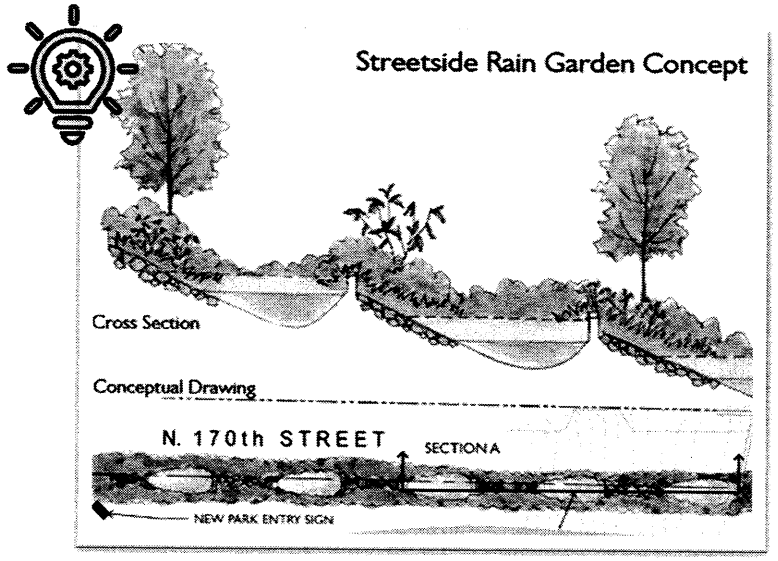


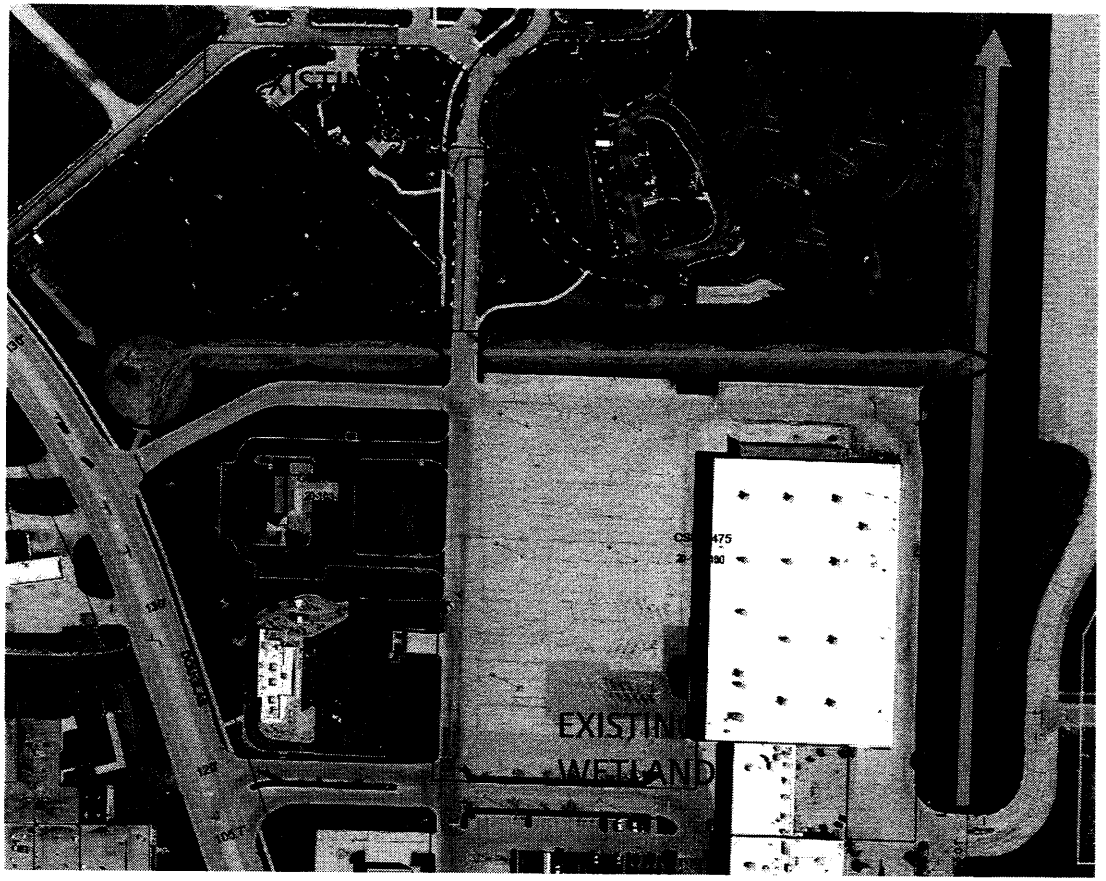


Stormwater Pre-treatment #2B

Zales Discount Corridor

- Optimize unnamed tributary
- About one acre of possible storage/BMP
- Less mowing for development

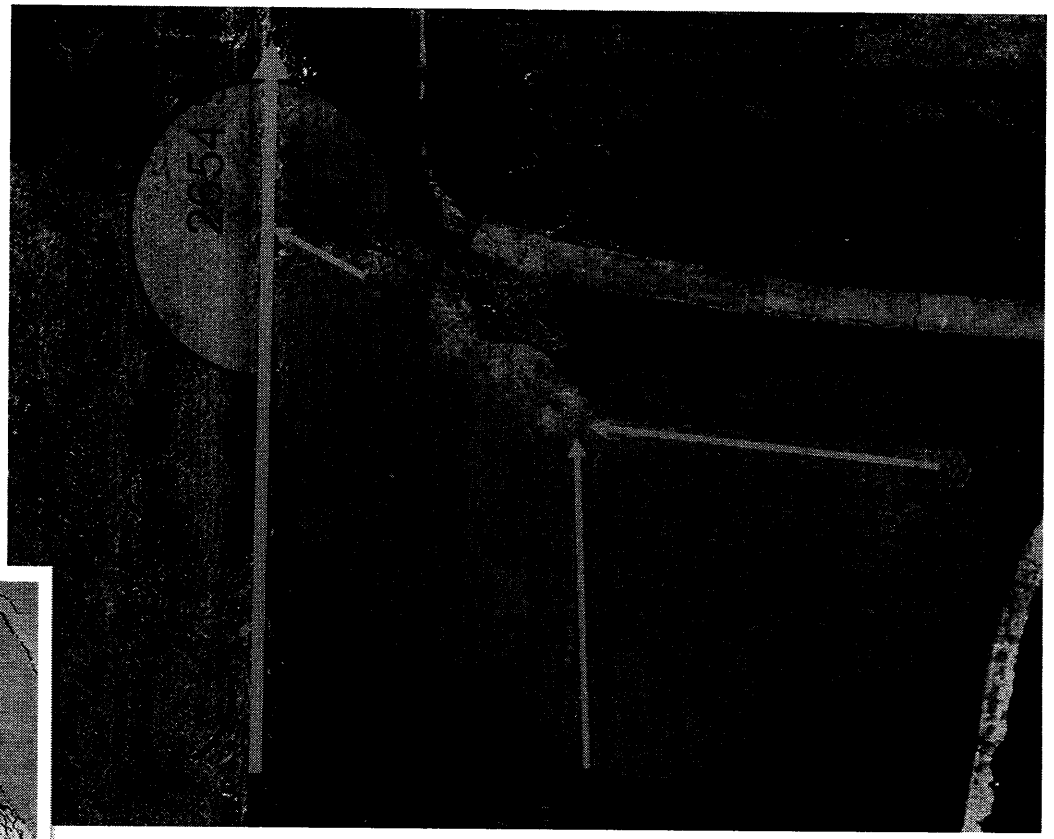


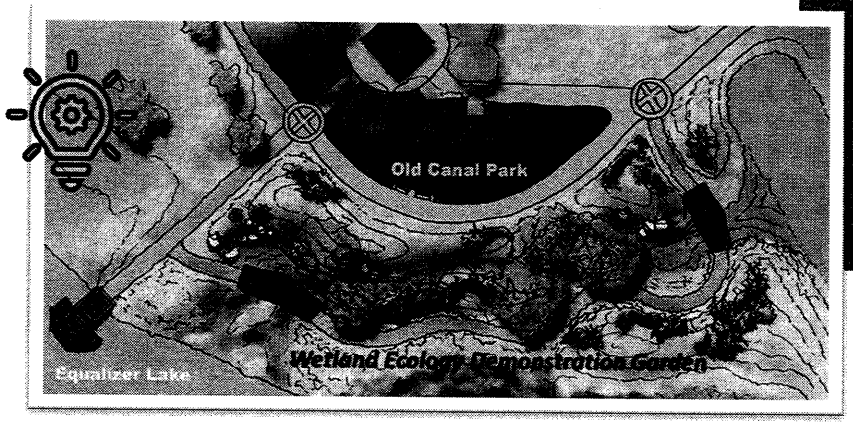


Stormwater Pre-treatment #3

Wetland Ecology Garden

- Utilize dry pond as pre-treatment/demo
- About one acre of possible storage/BMP
- Could be considered wetland creation
- More funding available for education
- Less mowing for the Village





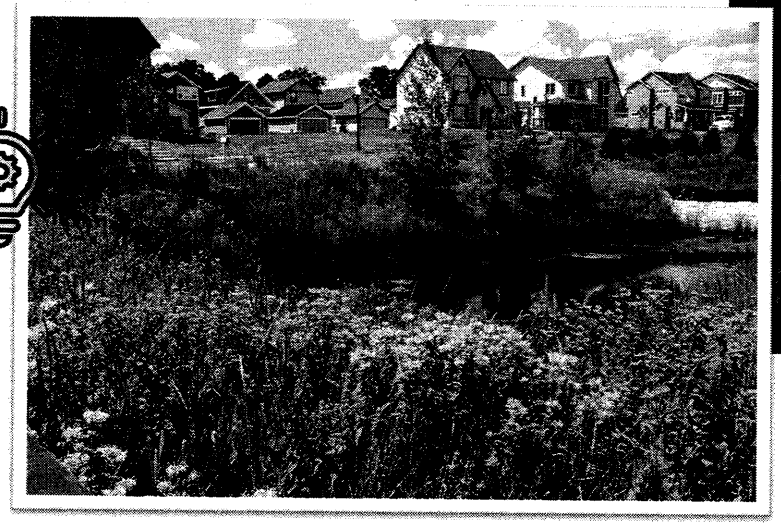
WATERSHED INITIATIVE NETWORK WIN ROOT-PIKE

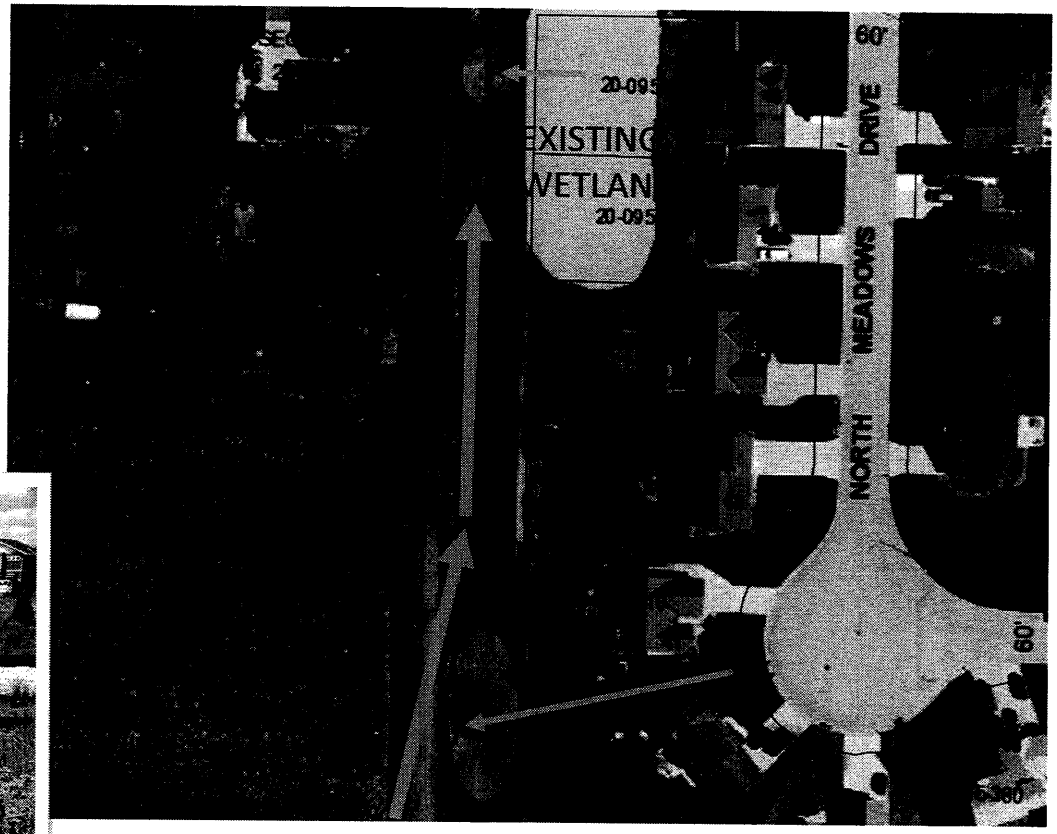
RESTORING OUR BROKEN LAKE MICHIGAN RIVERS

Stormwater Pre-treatment #4

N. Meadow Bioswales

- Residential outputs to the Klema About one acre of possible storage/BMP
- Could tie into existing wetlands
- Less mowing for the Village

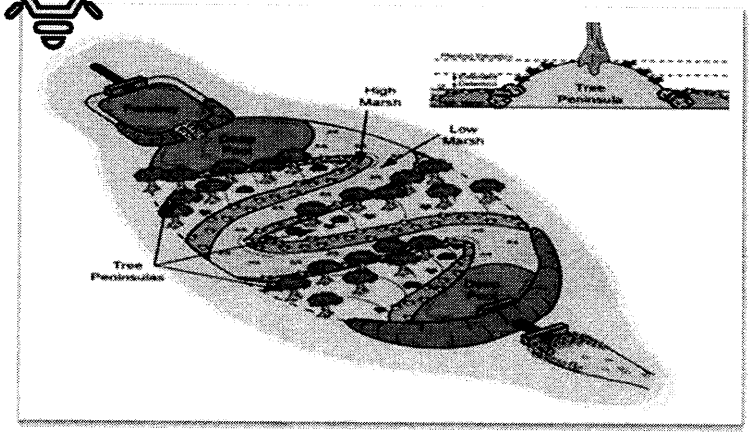


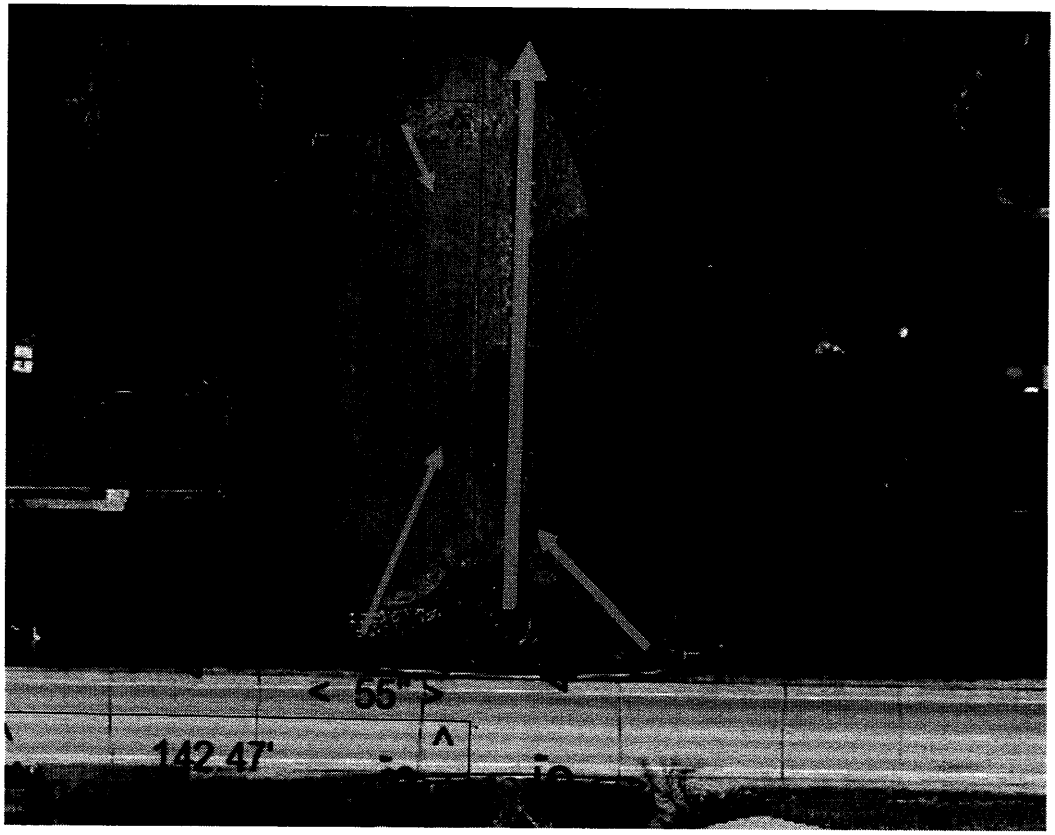


Stormwater Pre-treatment #5

Four Mile Bioswales

- Roadway ditches feeding the Klema
- About one acre of possible storage/BMP
- Could be considered wetland creation

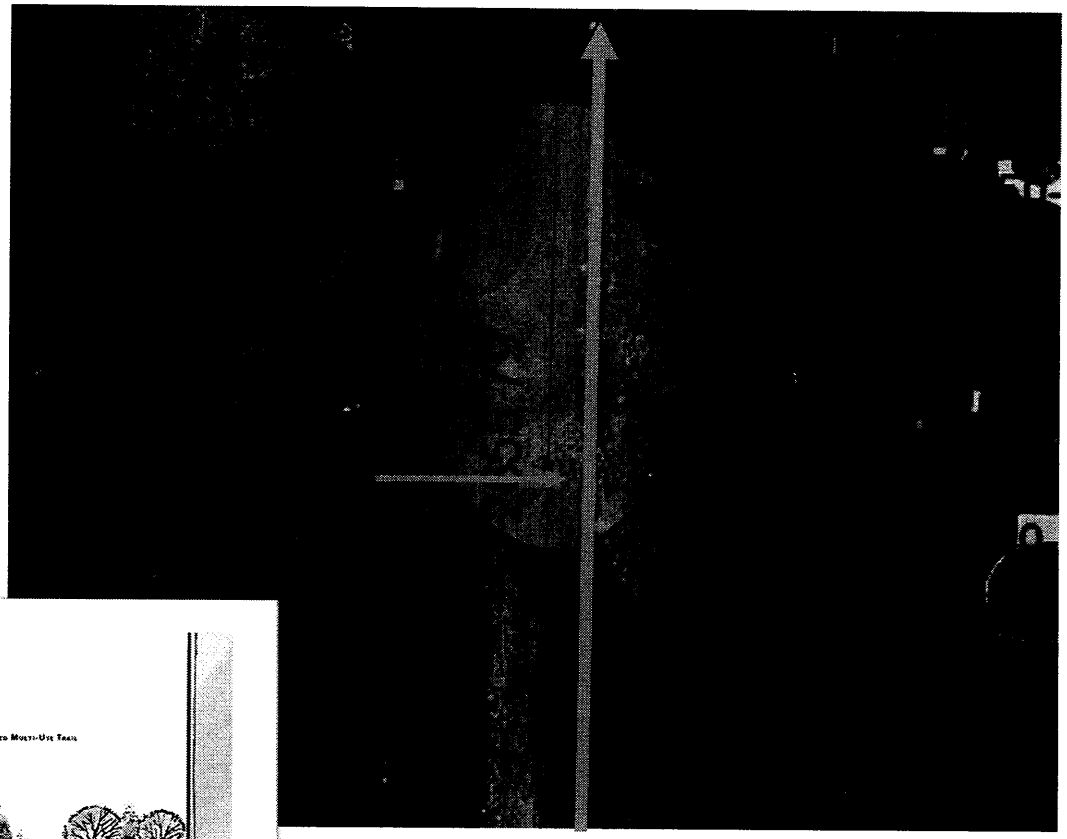


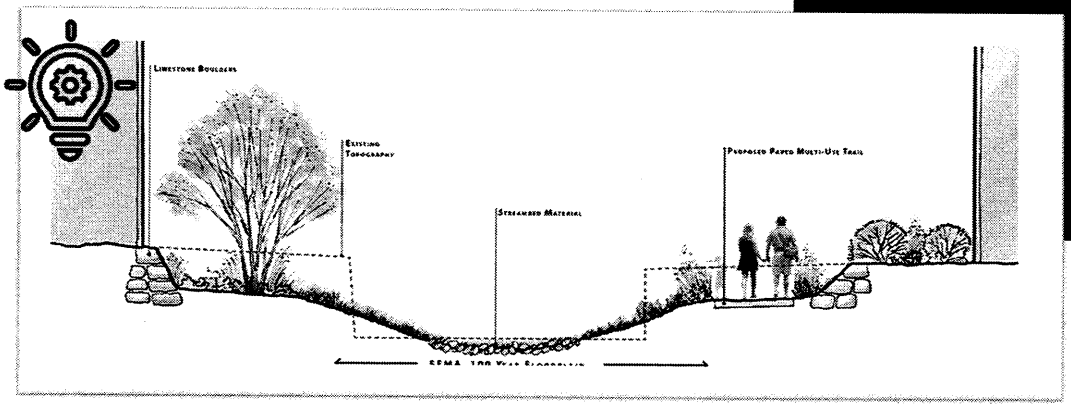


Stormwater Pre-treatment #6

Four Mile Bioswales

- Outfall North of Four Mile Rd.
- Increase flood capacity with two stage ditch
- About one acre of possible storage/BMP
- Could be considered wetland creation

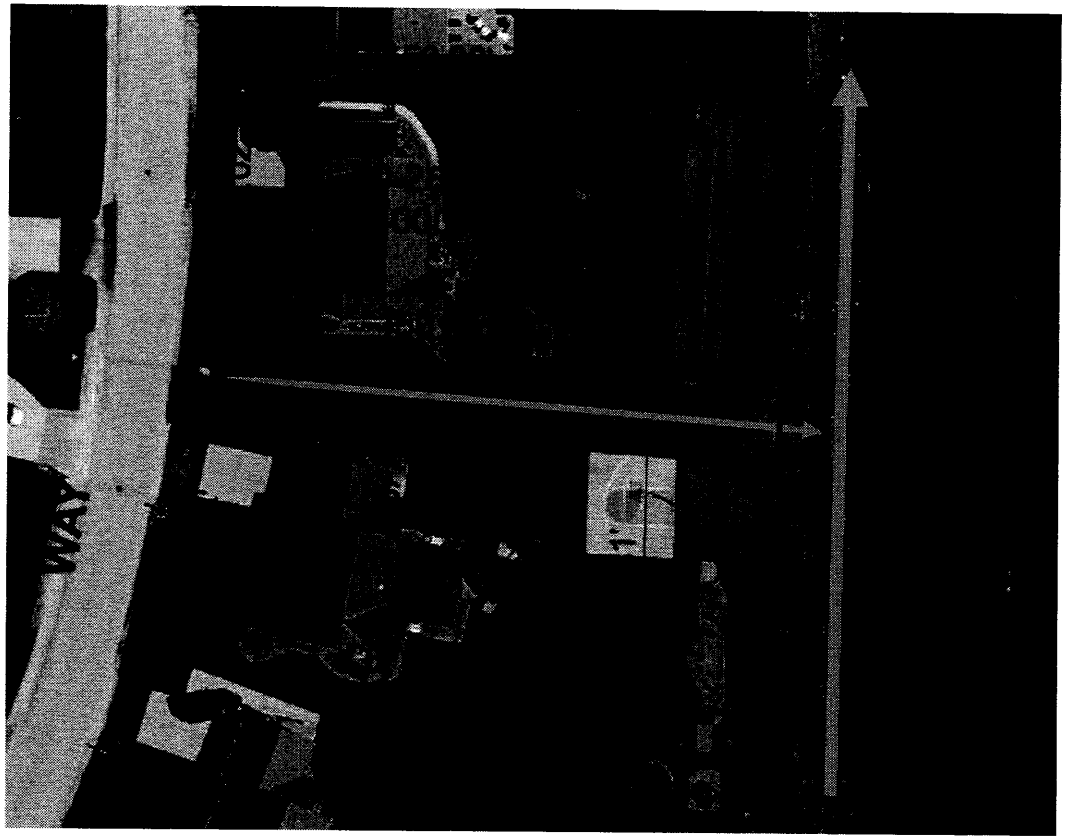




Stormwater Pre-treatment #7

San-Del Out Lot 1 Outfall

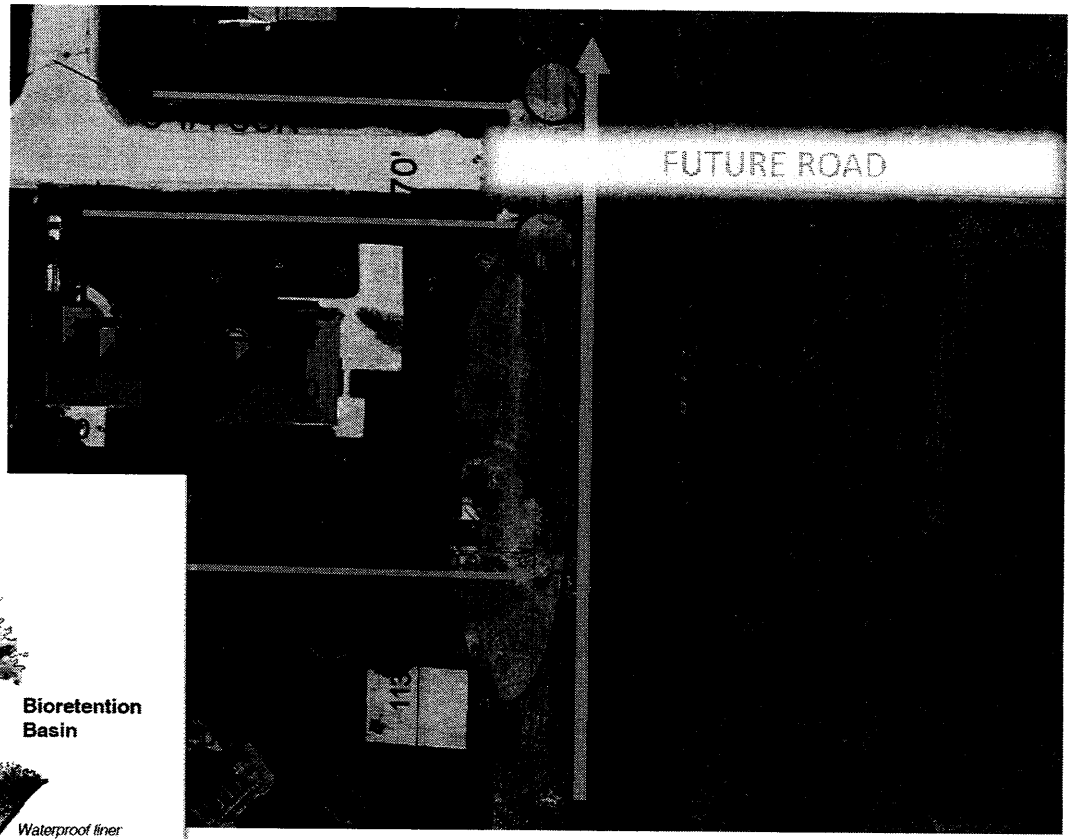
- Outfall from San-Del Way Out Lot 1
- About a half acre of swale optimization
- Convert turf ROW with native swale
- Potential for two stage channel upgrade

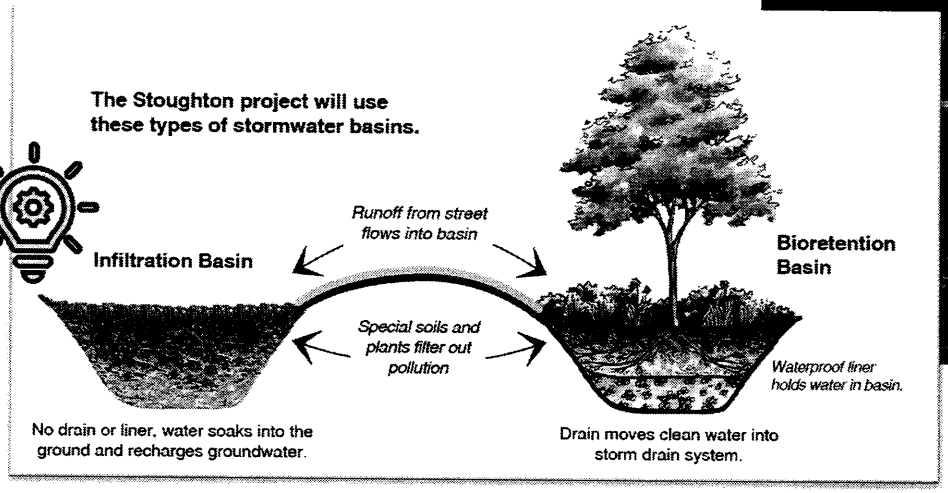


Stormwater Pre-treatment #8

Antoinette Ave Inputs

- Outfalls from Western swales
- About one acre of possible storage/BMP
- Could be considered wetland creation

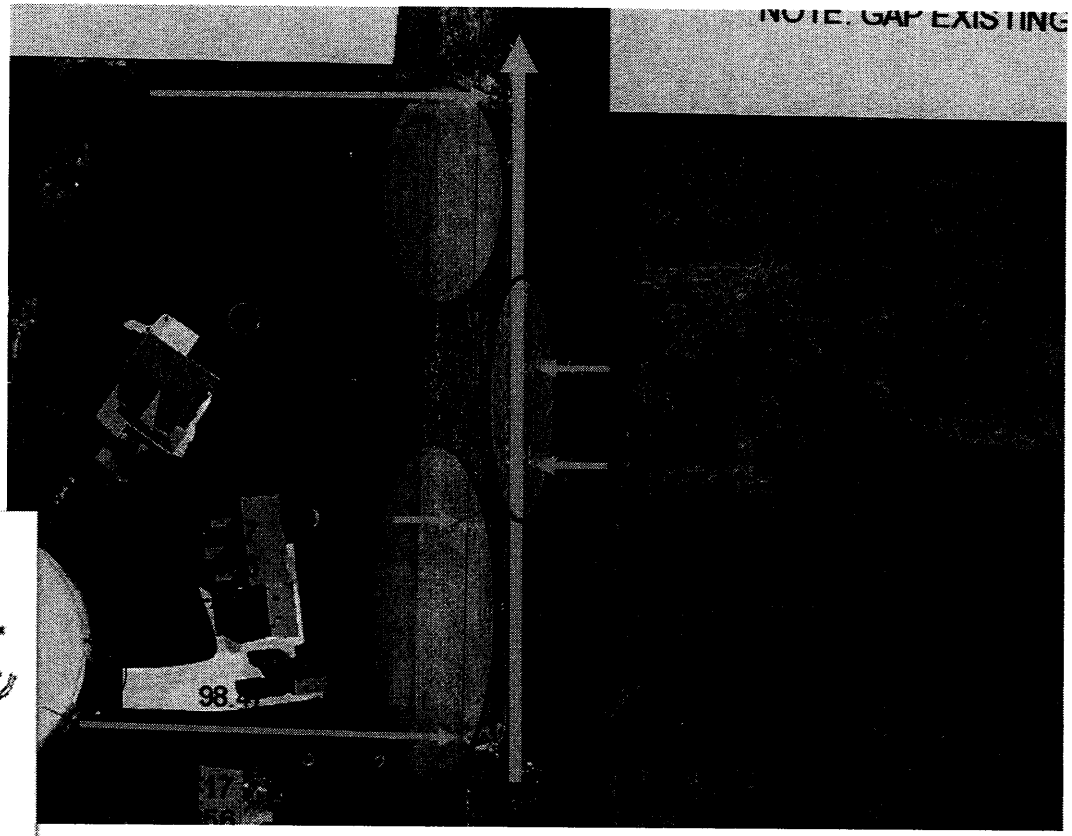


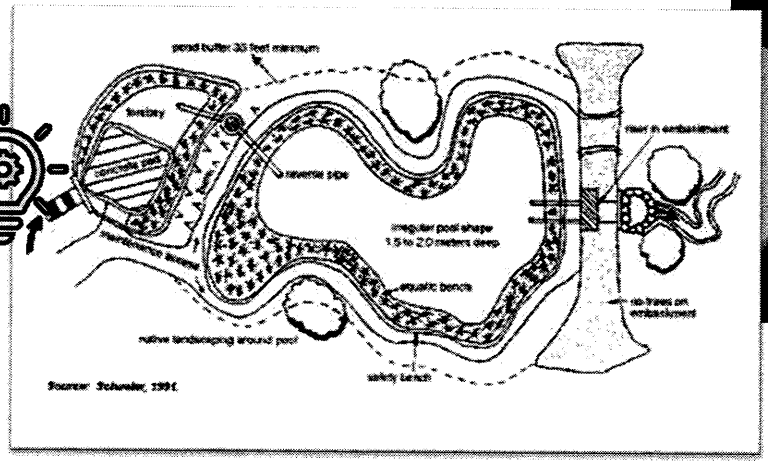


Stormwater Pre-treatment #9

Rebecca Drive Inputs

- Outfalls from Western swales
- About one acre of possible storage/BMP
- Could be considered wetland creation
- Expand two stage channel?

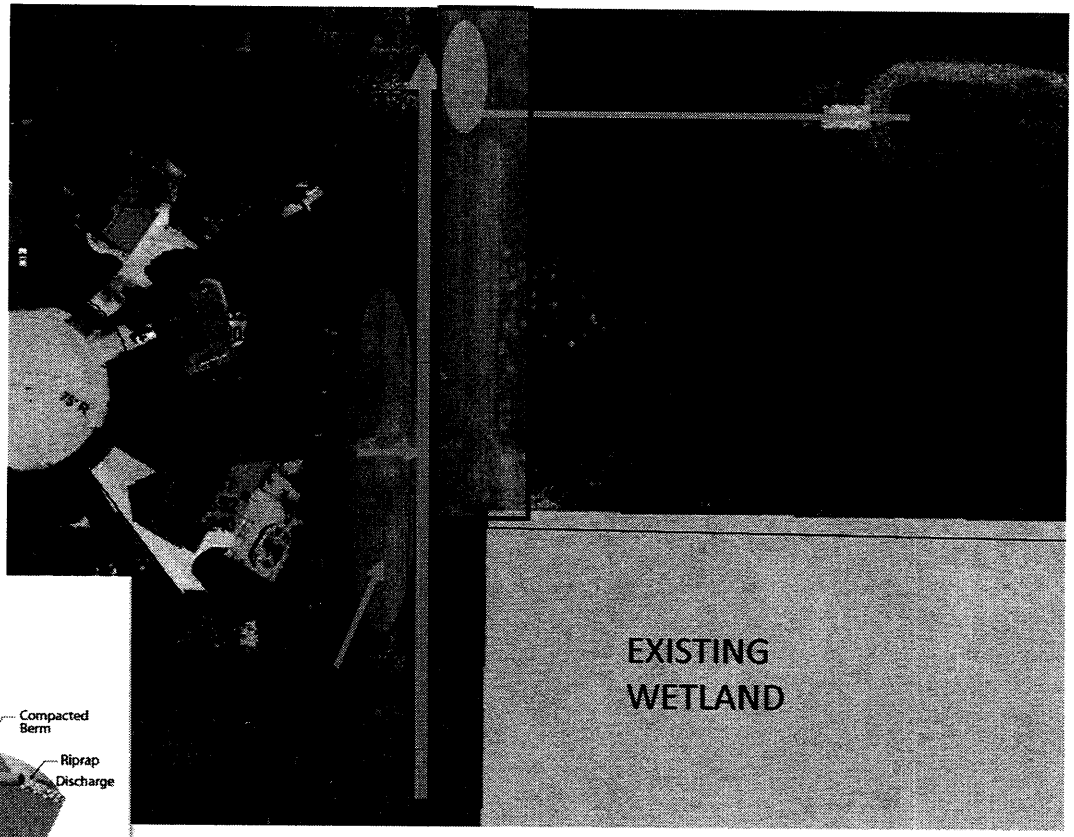


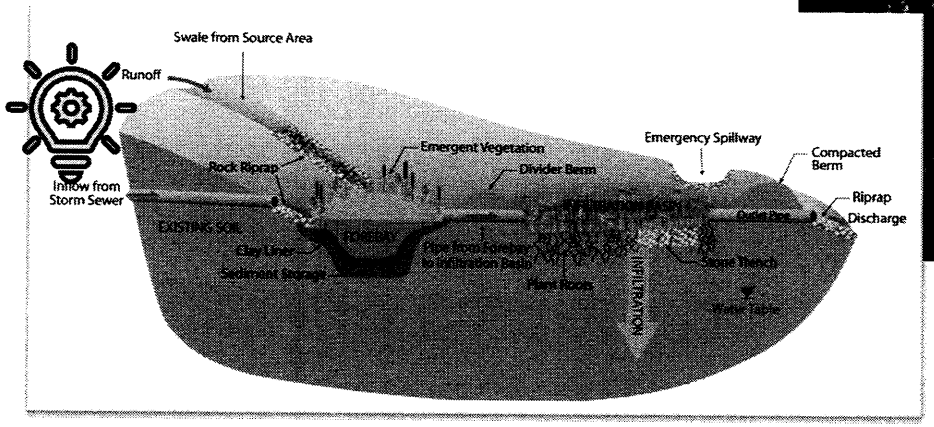


Stormwater Pre-treatment #12

Rebecca Drive Inputs

- Outfalls from East and West sources
- Rehab buffers with native vegetation
- Could increase capacity with two stage channel reconstruction
- Educational opportunity for students



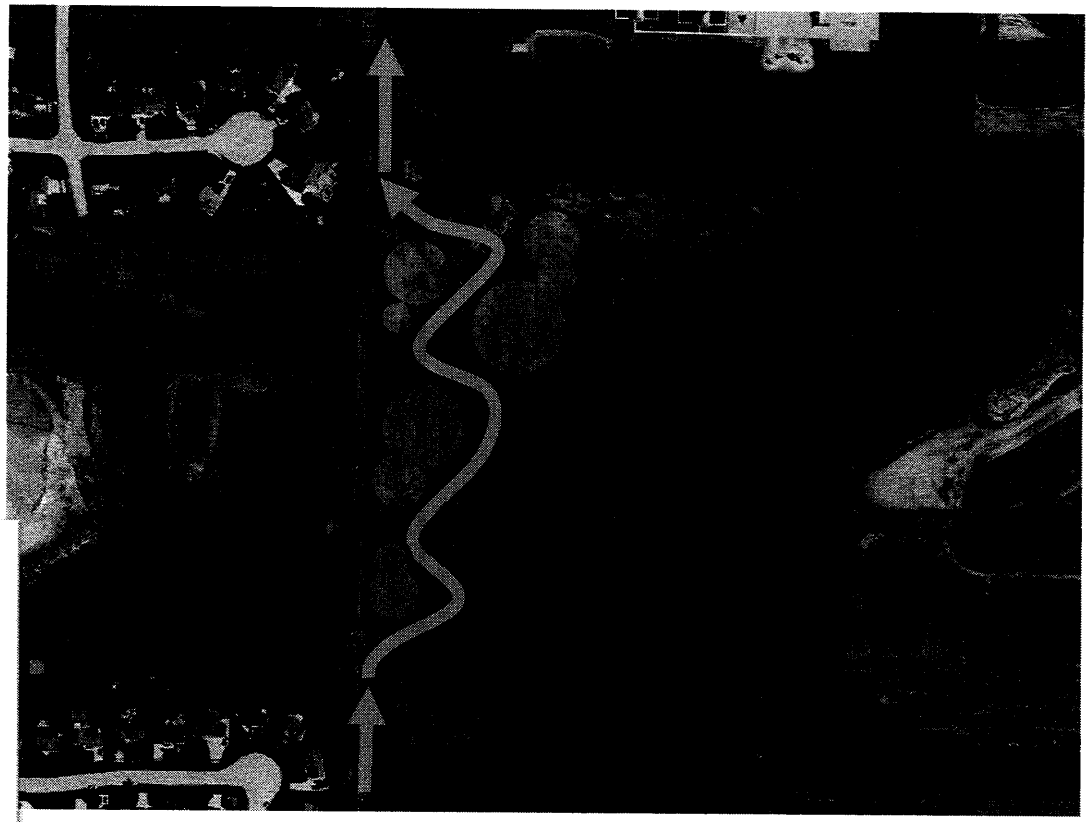


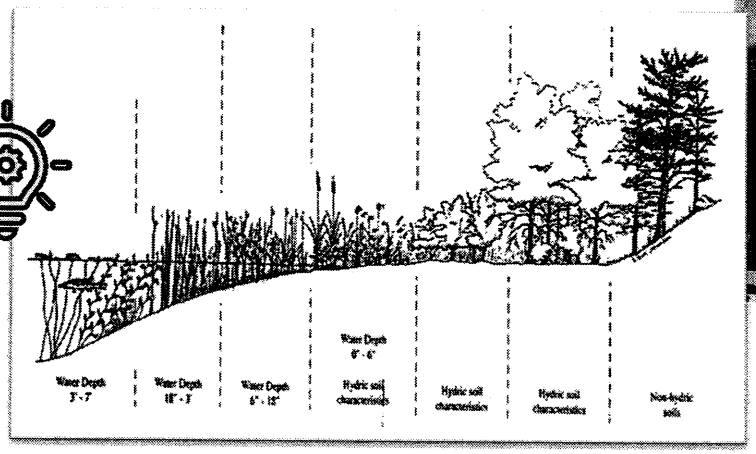
WATERSHED INITIATIVE NETWORK WIN ROOT-PIKE

RESTORING OUR BROKEN LAKE MICHIGAN RIVERS

Stormwater Pre-treatment #13
Enhanced Wetland

- Reconnect and re-meander into wetland for flood storage, water quality & habitat
- Use construction roads as future trail system
- Add educational elements over time





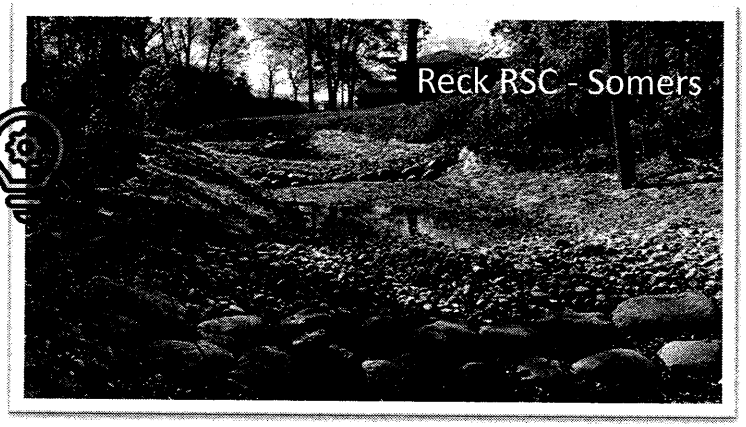
WATERSHED INITIATIVE NETWORK WIN ROOT-PIKE

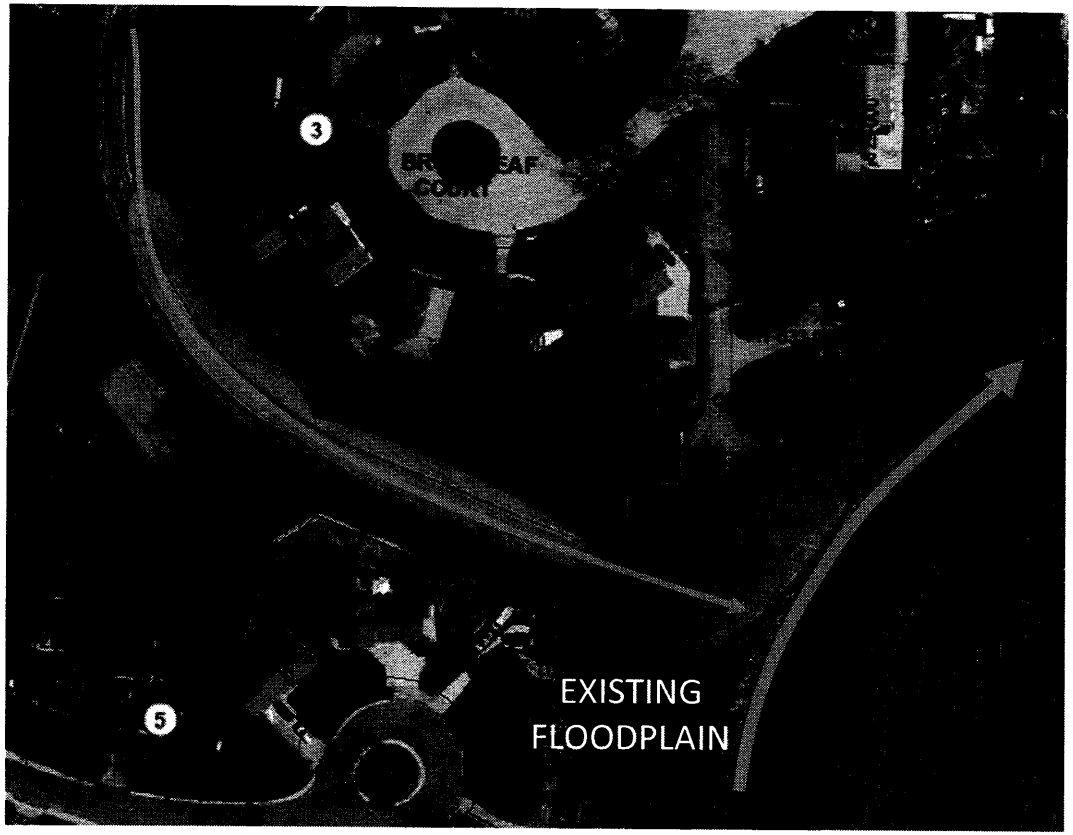
RESTORING OUR BROKEN LAKE MICHIGAN RIVERS

Stormwater Pre-treatment #14

Crestview Inputs

- Outfalls from Western concrete channel
- About one acre of possible storage/BMP
- RSC innovation could be applied?
- Flood plain could be reduced?

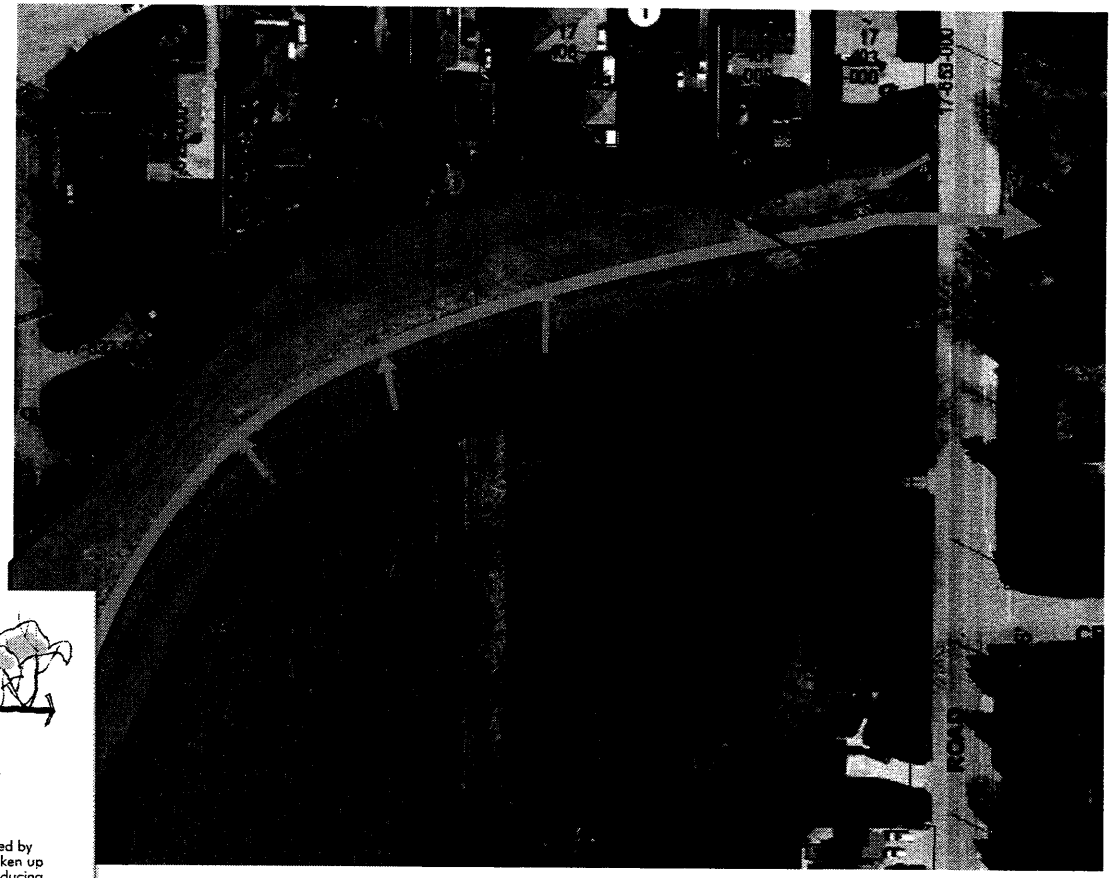


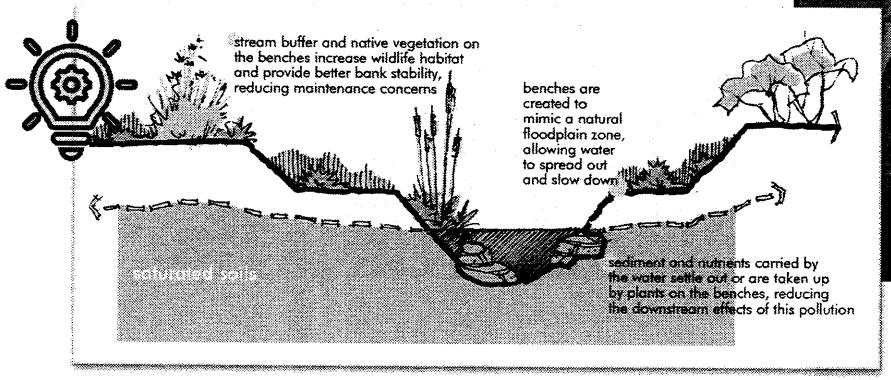


Stormwater Pre-treatment #14

Novak Rd Inputs

- Outfalls from Novak Rd need a forebay
- Revegetate entire section with native buffer
- Village easement in the flood plain?
- Other small outfalls made need a forebay
- Increase capacity with two-stage channel





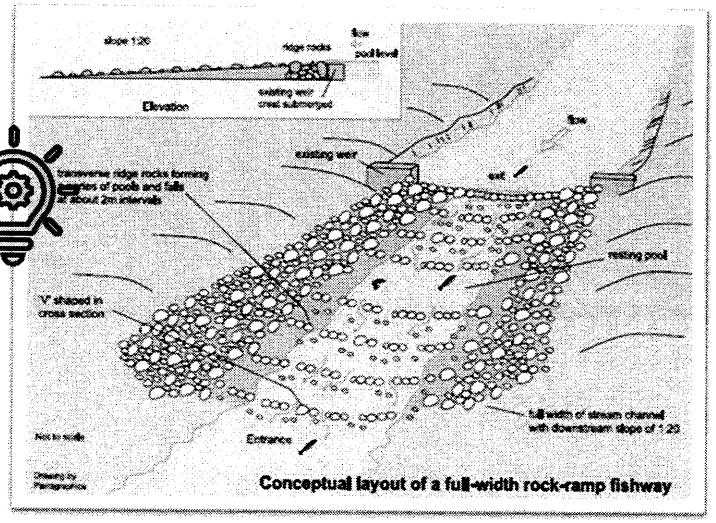
WATERSHED INITIATIVE NETWORK WIN ROOT-PIKE

RESTORING OUR BROKEN LAKE MICHIGAN RIVERS

Possible Fish Passage Ravine Restoration

Novak to the Lake

- Current condition prevents migratory fish
- Requires significant research and analysis
- Ravine restoration would also stabilize banks and prevent excessive erosion



WATERSHED INITIATIVE NETWORK WIN ROOT-PIKE

RESTORING OUR BROKEN LAKE MICHIGAN RIVERS