



People | Clients | Growth | Quality | Performance

# Letting It All Soak In: Nature's Role in Protecting Water Resources

Some Chicago Wilderness Region Case Examples

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- ***Water resource conscious-growth will insure more sustainable water quality and quantity, healthier ecosystems, lower costs, and better air quality, to name a few benefits.*** Water 2050: Northeastern Illinois Regional Water Supply/Demand Plan, Chicago Metropolitan Agency for Planning.

Runoff versus Resource?

Is Infiltration Always Better?

Creatures vs people or canary in the coal mine?



# Groundwater, Nature, and People: Some Case Studies

- Romeoville, Lockport Prairie, and the Hine's emerald dragonfly
- Stearns Road environmental corridor
- I-355, Blackberry Creek, and the Hine's emerald dragonfly
- Bluff Spring Fen and gravel mining
- Carrington Reserve
- Harvest Bible Chapel



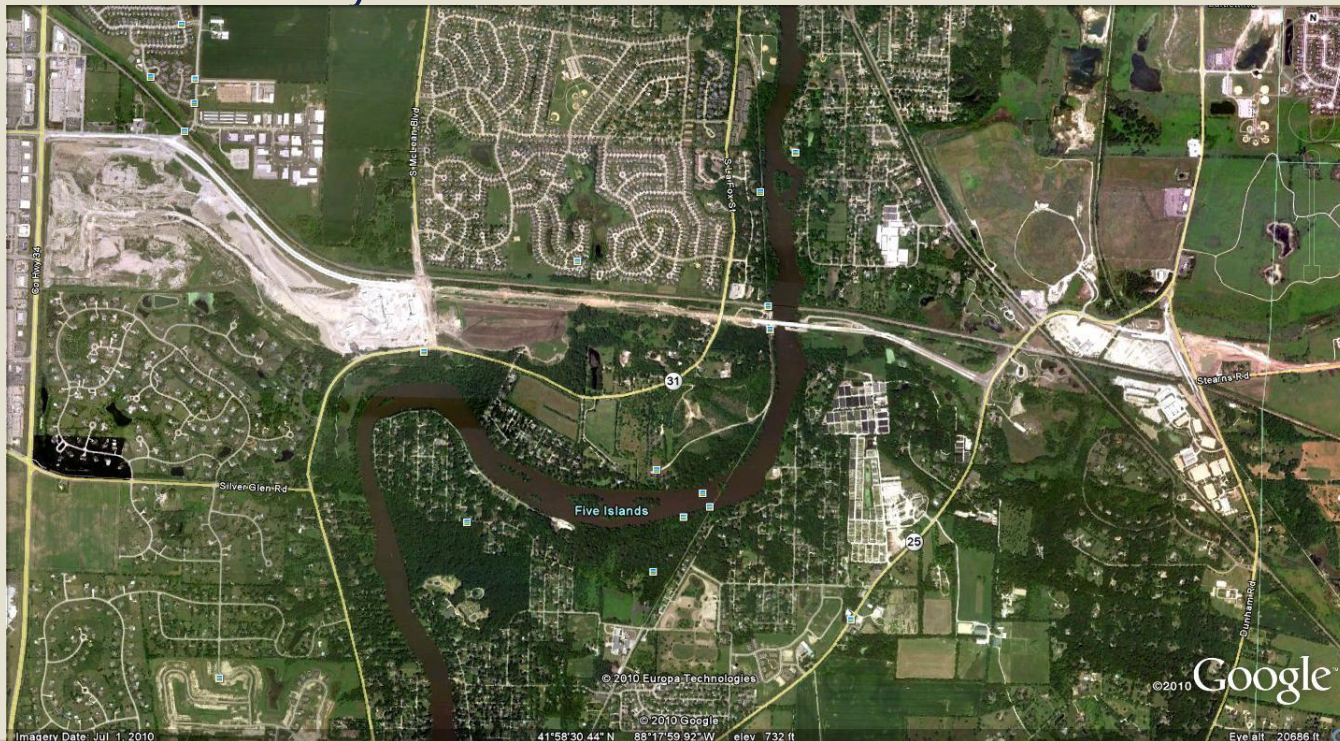
# Romeoville, Lockport Prairie, and the Hine's emerald dragonfly

- HED relies upon shallow dolomite aquifer – Dom will cover studies of this in Will County
- Communities may also rely on shallow dolomite aquifer for potable water
- Romeoville blends from deeper sandstone wells and shallow dolomite wells, treats for radium, and has embraced the HED as a symbol of needed water stewardship



# Stearns Road Environmental Corridor

- Groundwater study to identify recharge areas
- South Elgin recharge ordinance
- Fen protection and enhancement
- Separation of road runoff from groundwater systems
- Used road project to facilitate protection and management natural resources in vicinity



# I-355, Black Partridge Creek and the HED

- ISWS study showed up to 30% of infiltrated water for Black Partridge Creek would be lost due to roadway project. Realigned roadway and separated road runoff – putting dirty water into ground does not make it groundwater
- Then HED discovery – also dependant on groundwater – again diverted all road runoff away from HED habitat. Experimented with creating new habitat by harnessing groundwater discharges.



# Harvest Bible Chapel, Elgin

BMPs, Retrofits, adjacent to Tyler Creek and fen



# Bluff Spring Fen and gravel mining

- Bluff Spring Fen is one of our region's crown jewels – a large wetland system dependant on groundwater.
- But next to large quarrying operation that is now engaged in underground mining of deeper layers.
- Fen Protection Plan
  - Monitoring and groundwater model
  - Diverting surface runoff from offsite sources
  - Putting water back into ground from quarry pit





# Carrington Reserve

## Legend

- Emergent
- Fen
- Mesic Prairie
- Wet Prairie
- Woodland Savanna
- Vegetated Swale
- V-Notch Weir
- Telog
- Site Boundaries



NORTH

NOT TO SCALE



# Carrington Reserve





We want to see less of this . . .





# QUESTIONS

## Acknowledgements

Applied Ecological Services, Bill Stoll  
Illinois Nature Preserves Commission, Steven Byers  
AECOM, Brian Smith  
U.S. Fish and Wildlife Service, Chicago Field Office