Putting a Watershed Plan into Action:

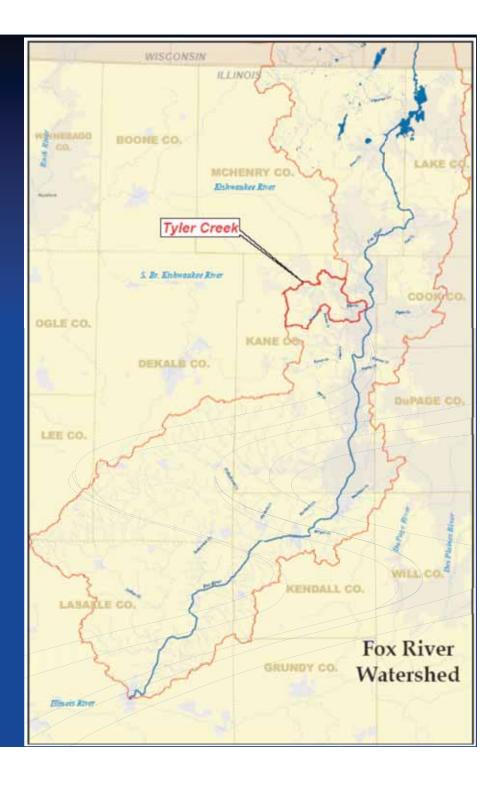
Lessons Learned in the Tyler Creek
Watershed

Rob Linke, P.E., CFM

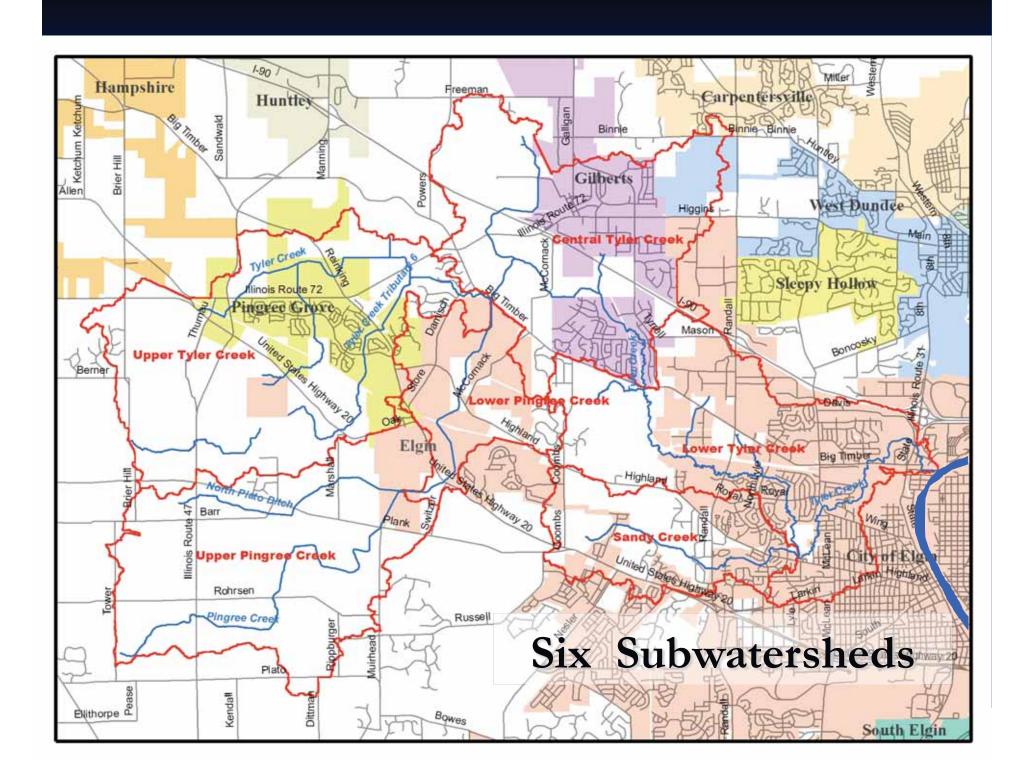


Watershed Details

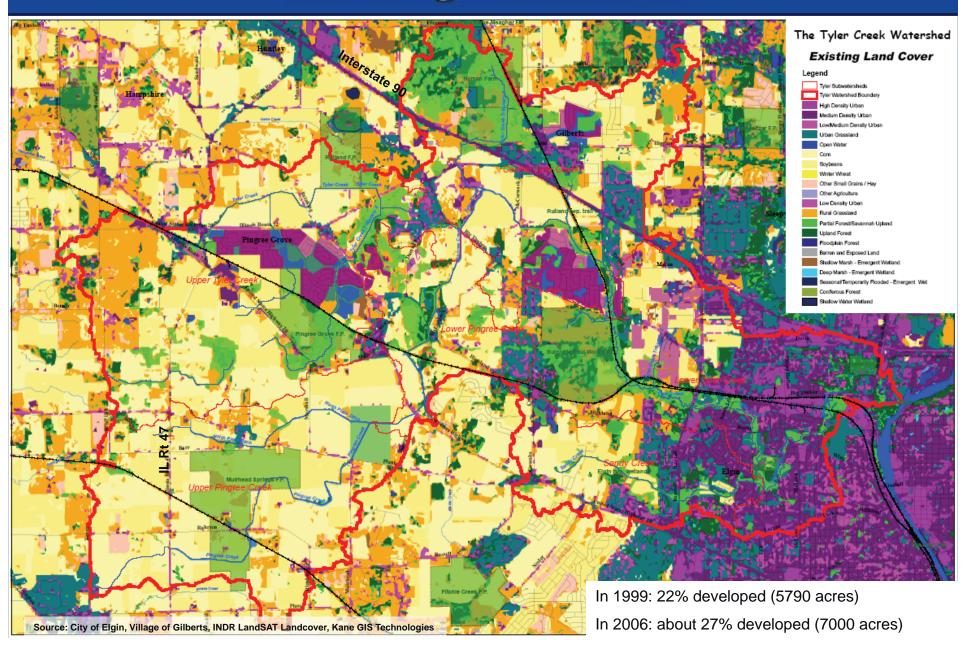
- Located in Fox River Watershed;
- 40.5 sq. mi.
- Located in high-growth corridor of central Kane County



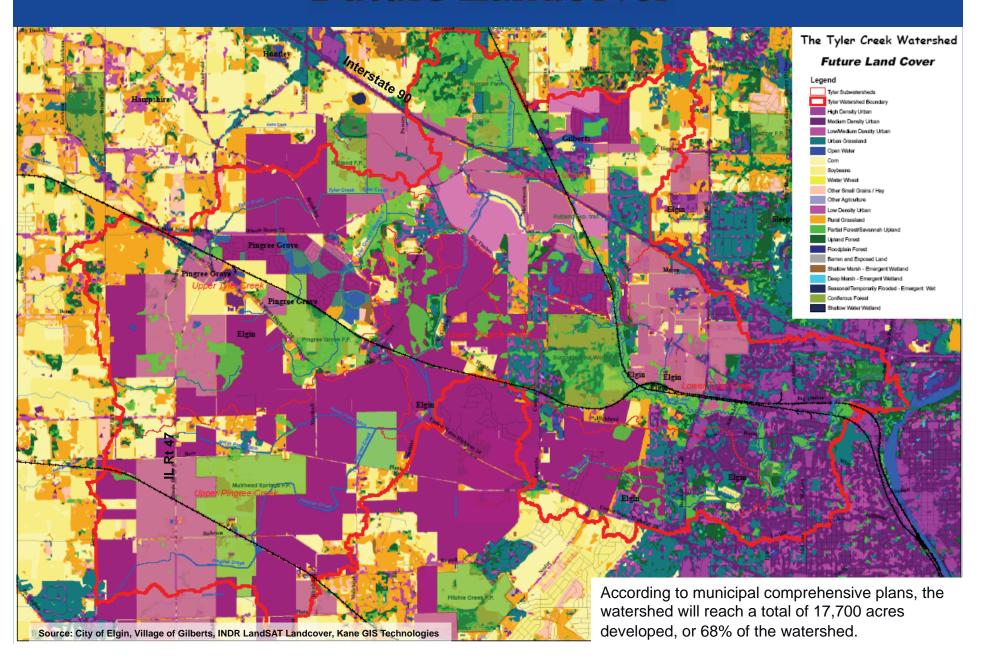




Existing Landcover



Future Landcover

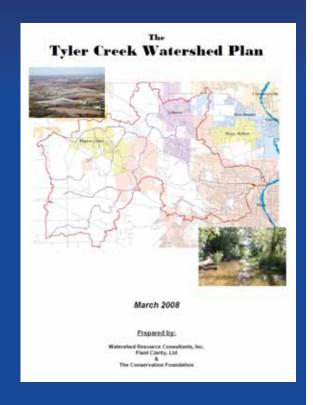


Watershed Plan Background

- Original plan created in 1996

 A good plan, but lacked many specifics and didn't account for extensive development now planned for the watershed
- Area organizations seeking ways to protect watershed
 - Fox River Ecosystem Partnership
 - Fox Valley Land Foundation (Now The Conservation Foundation)
- Watershed update process began in 2005

 Funding provided by IEPA through Section 319 Clean Water
 - Act funds
 - Administered/Coordinated by Chicago Metropolitan Agency for Planning (CMAP)
- Final Approval by IEPA in March 2008

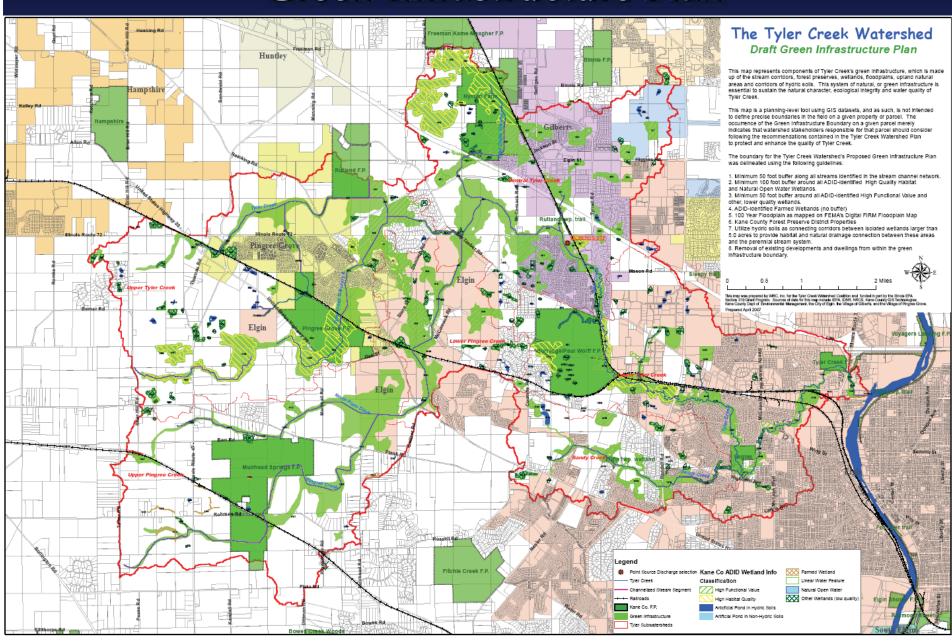




Key Watershed Protection Strategies

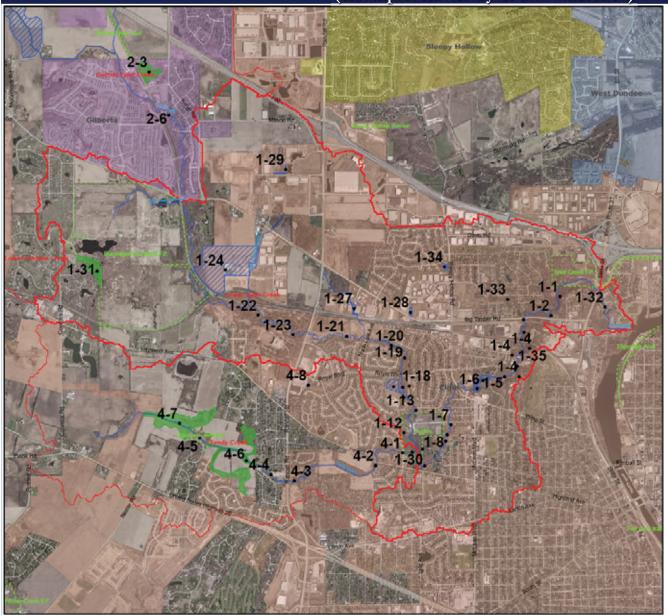
- 1. Organize a Tyler Creek Watershed Coalition.
- 2. Protect remaining high-quality natural areas.
- 3. Implement water quality BMP projects in Lower Tyler Creek.
- 4. Incorporate Green Infrastructure Plan and innovative stormwater management into new developments.
- 5. Build upon water quality modeling & monitoring of the Tyler Creek Watershed by FRSG/ISWS to aid in analysis of BMP planning and assessment.

Green Infrastructure Plan



Site-Specific Recommendations

(Example: Lower Tyler Subwatershed)



Subwatershed Protection Recommendations

Tyler Creek Watershed Plan

Lower Tyler Creek & Sandy Creek Subwatersheds

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-0.	Pentoration	Welland and Upland Woods Restoration on Public Property
4	Personation	Joint wood reductor of hing Fan
4	Personation	ubland woods resturation at 15ths Flats
4	Personation	Joiand woods restoration at Inling Park
4	State Coally	inglement charmel recordion and stabilization plan on Private Property
4	Pentoralion	implement of earn compon regionation plan on Private Property
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3	State State	Herboth dry bottom pelantion with ned-al-vegetation
-92	With Suits	Streeturk declaration or Private Property
421	Permanent Habitat Projection	Permanenty project privately overecopytons of ACIC Website 1222
97 22 23 43 43 54	Restoration	Remote concrete seawals and damand restore natural stream bank regelation.
-03	William Guide	Storm Steven Curtic Str. E. Steves Froman
-01	Weller County	Storn-Sever Cultai BirP Reinft Program
94	Weer Supply	Retrofficant of dry bottom detention basin for low flow WG treatment
11	West Guesty	Proactive Water Quality BAP and Green infrastructure planning for Naure developments
1	Weer Supply	Present existing first strange Expirent practice their South SMF and Sees Information abouting to Store developments
0	Personation	Protect and restore high quality ADIO (Vetland 487)
4	Permanent Habitat Protection	Fernands projectings quarty ACO Wetland (Or
4	Permanent Hapital Photection	Permanentis protect triat quality ADID Wellands SIS and SIS
м	WINE CORN	maniparaucomy of accelerate acting where to maintain units gody memor booten to spirace units units
4	Restoration	Protect and resture Tyler Greek stream contion on private properly
47	WHIT CLIEN	Retroft by bottom detertion basin

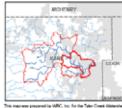
Legend

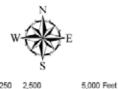
- Tyler Creek Tyler Watershed Boundary

Kane Co. F.P.

Tyler_Recommendations

Water Quality





Tyler Creek Watershed Plan

Recommended BMPs

<u>Urban</u>

- Low Impact Development
- Retrofitting existing detention basins
- Structural WQ devices at storm outfalls
- Water Quality Inlets
- Pet Waste Management
- Street sweeping
- Streambank stabilization
- Rain Garden / Rain Barrel Programs
- Stream corridor restoration / management

Tyler Creek Watershed Plan

Recommended BMPs

Agricultural

- Preserve open lands to promote infiltration
- Wetland restoration/conversion to encourage retention
 & infiltration
- Removal/abandonment of agricultural tile systems
- Expanded riparian buffers
- Nutrient Management Plans

Tyler Creek Watershed Plan

Keys to Success

- 1. Active coalition of watershed stakeholders willing to insure plan recommendations get done.
- 2. Active coalition of watershed stakeholders willing to insure plan recommendations get done!
- 3. Active coalition of watershed stakeholders willing to insure plan recommendations get done!!
- 4. Well defined watershed plan recommendations
- 5. Technical expertise/assistance to implement plan recommendations.

Tyler Creek Watershed Coalition

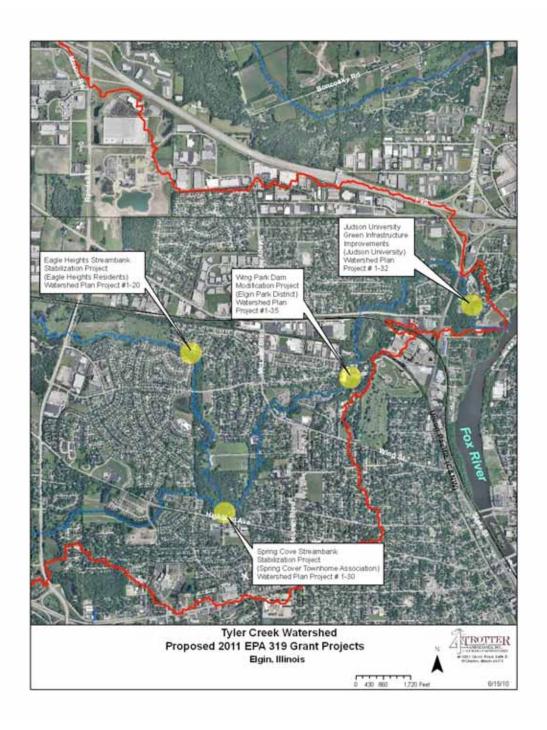
Active Participants

- Private Landowners/HOAs
- Judson University
- City of Elgin
- Village of Gilberts
- Kane County

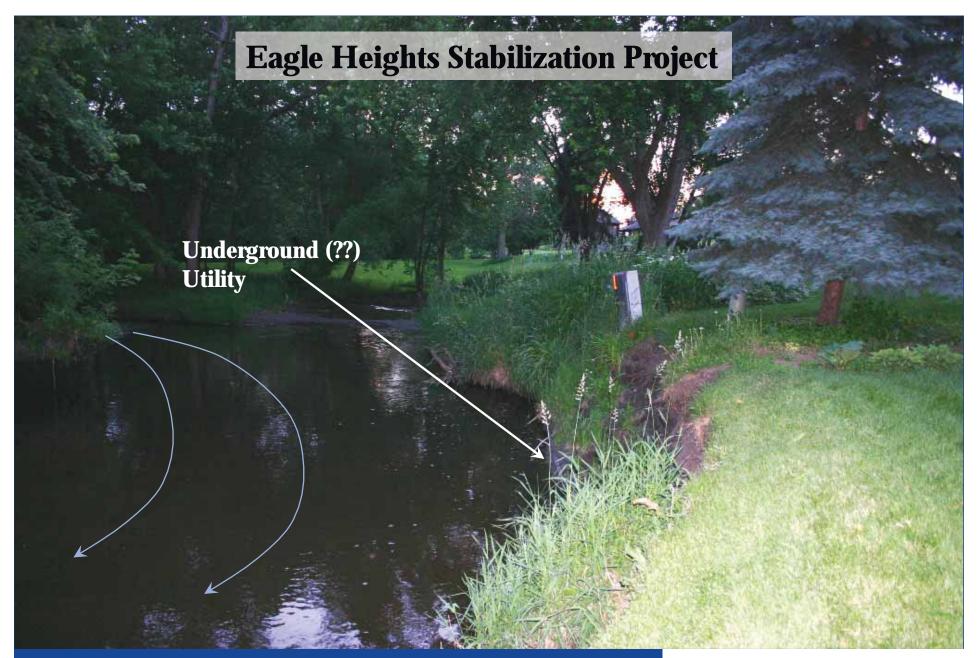
More Involvement Needed From:

- Agricultural landowners
- Village of Pingree Grove
- Kane Co Forest Preserve

Site-Specific Projects proposed for 2011/2012







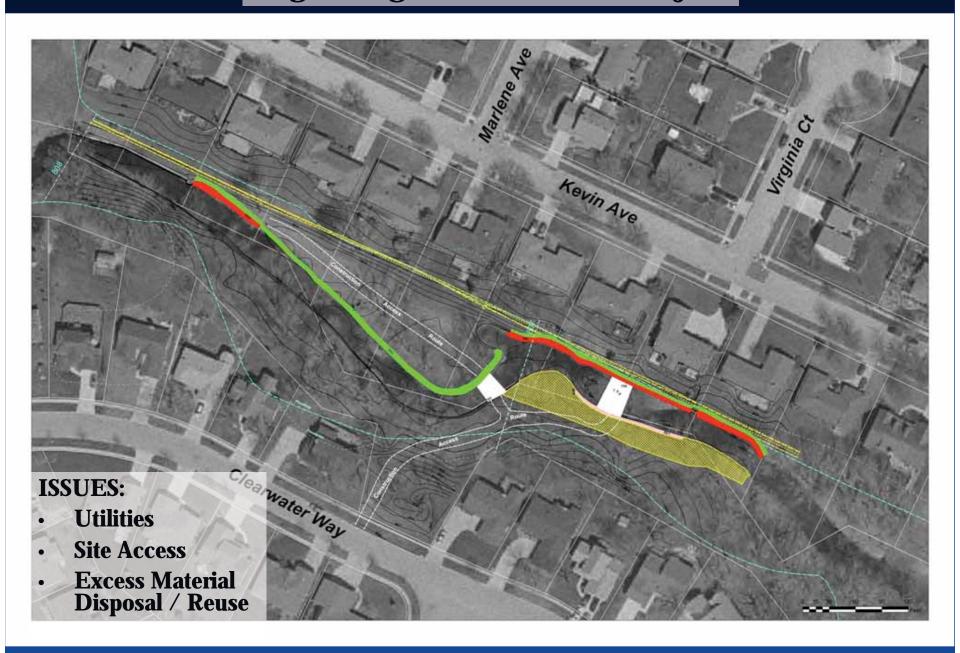
Summer 2010 – normal flow



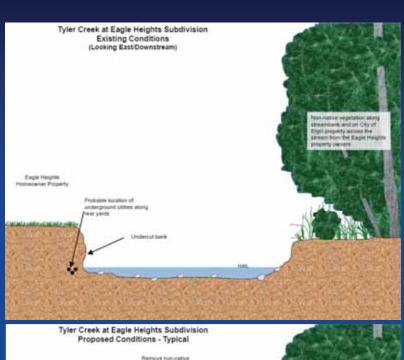
Eagle Heights Stabilization Project

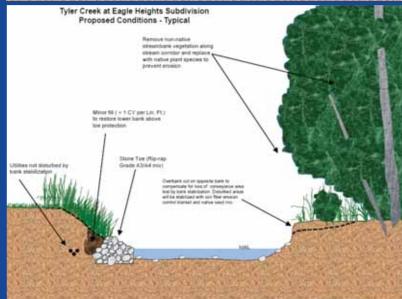


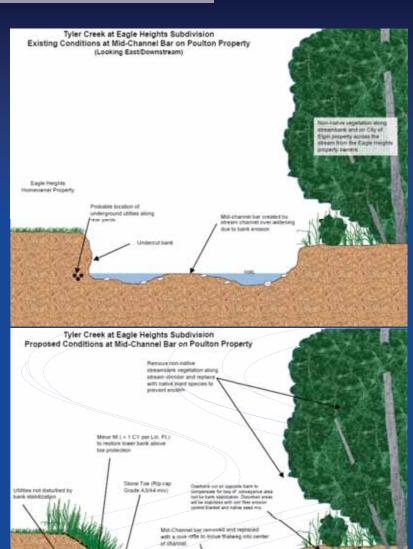
Eagle Heights Stabilization Project



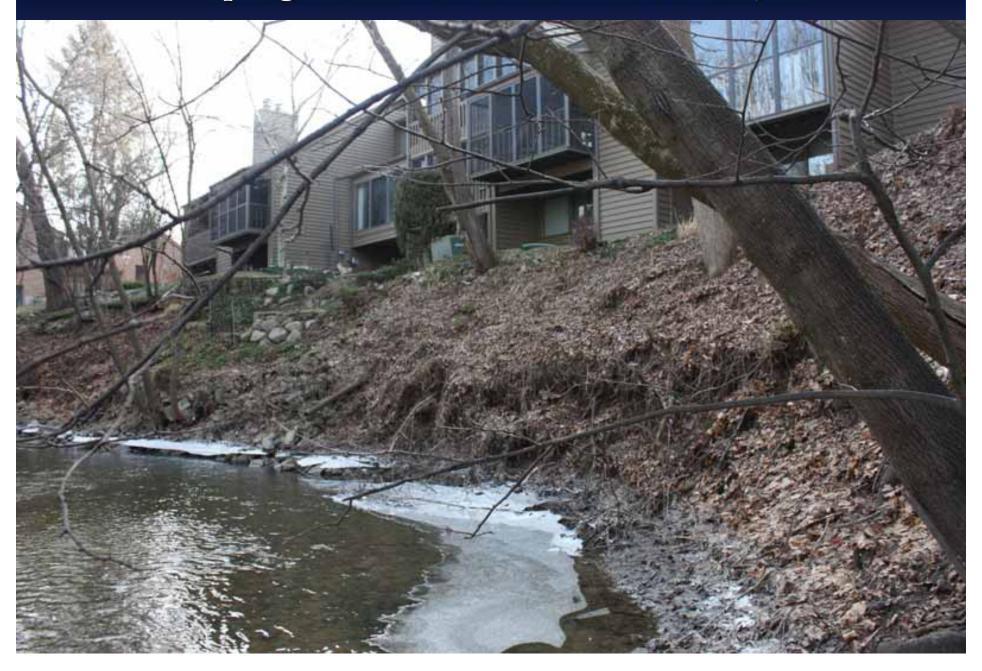
Eagle Heights Stabilization Project Typical Sections





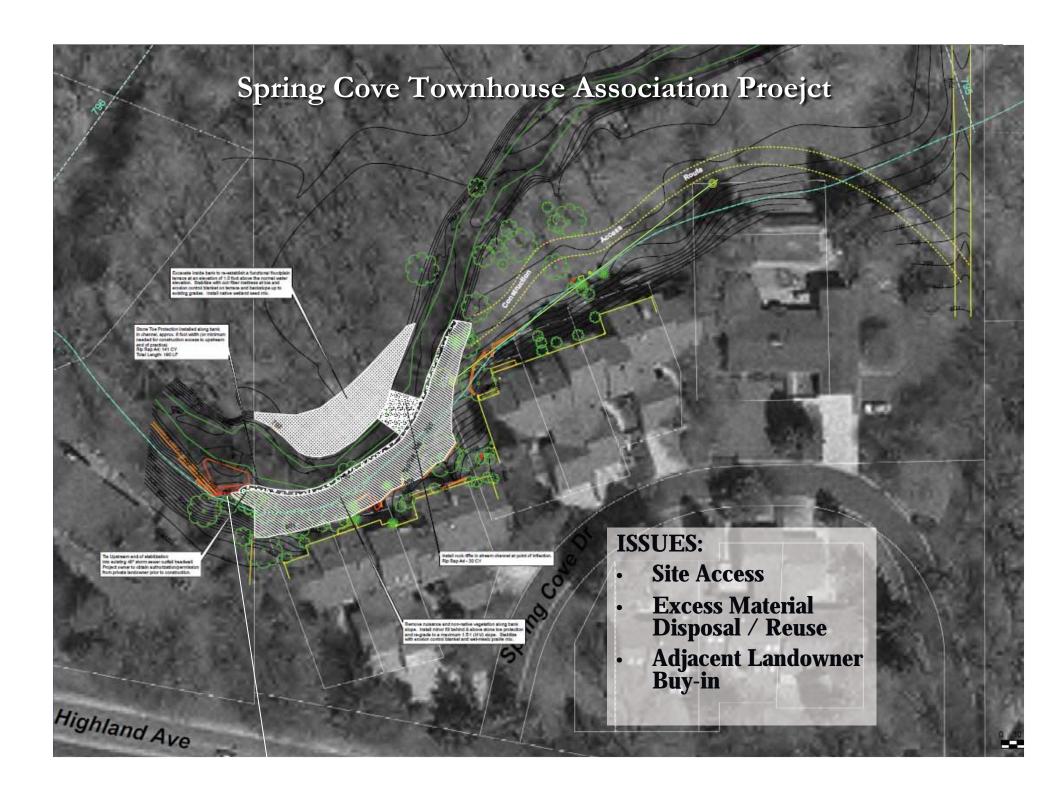


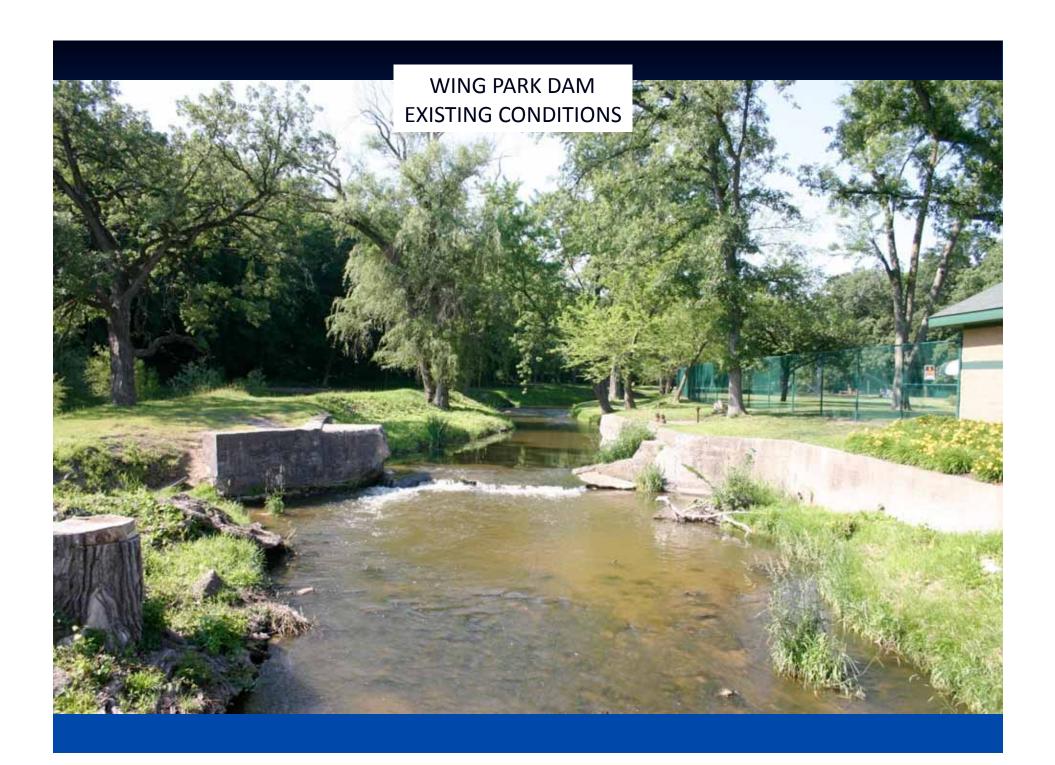
Spring Cove Townhouse Association Project

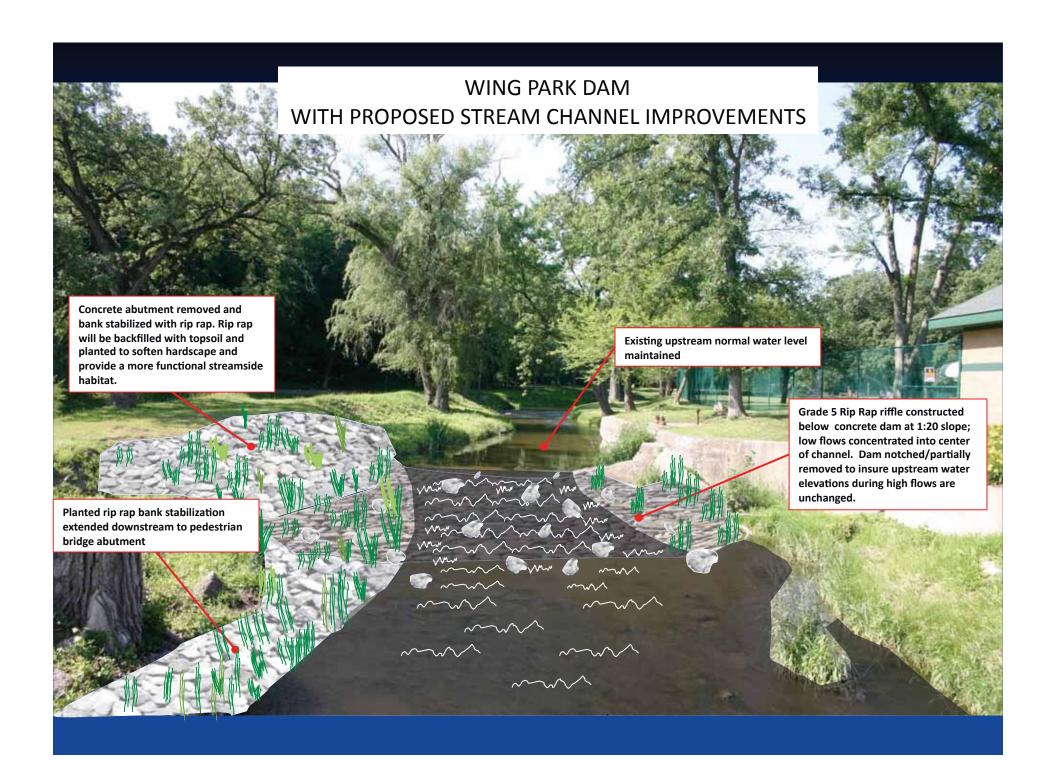


Spring Cove Townhouse Association Project











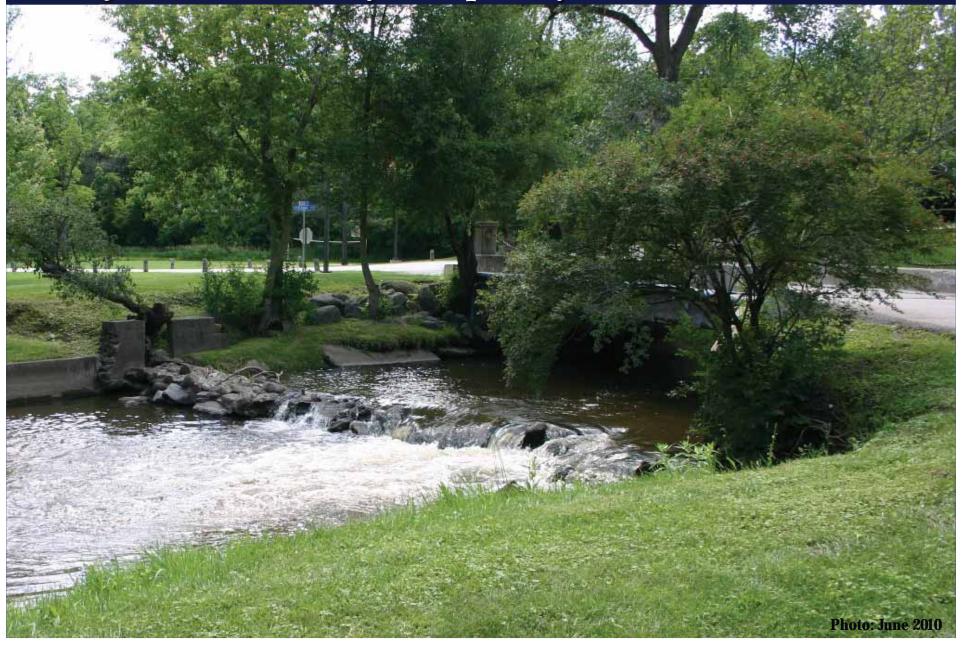
Judson University Campus Flooding

Judson stakeholders report that over last 15 years the frequency of flooding on campus has increased

Analysis: 100 Yr flood hasn't changed, but smaller floods happening more frequently

August 2007 flooding on Judson University Campus

Judson University Campus Tyler Creek Corridor



Judson University Campus Tyler Creek Corridor

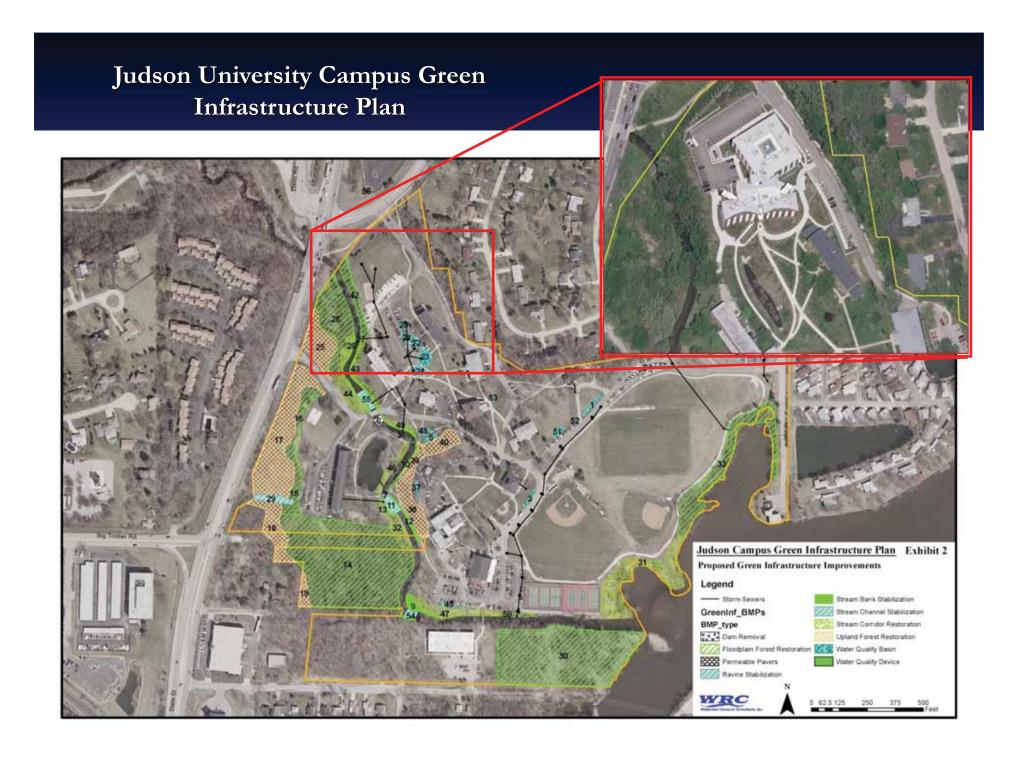






Judson University Campus Tyler Creek Corridor



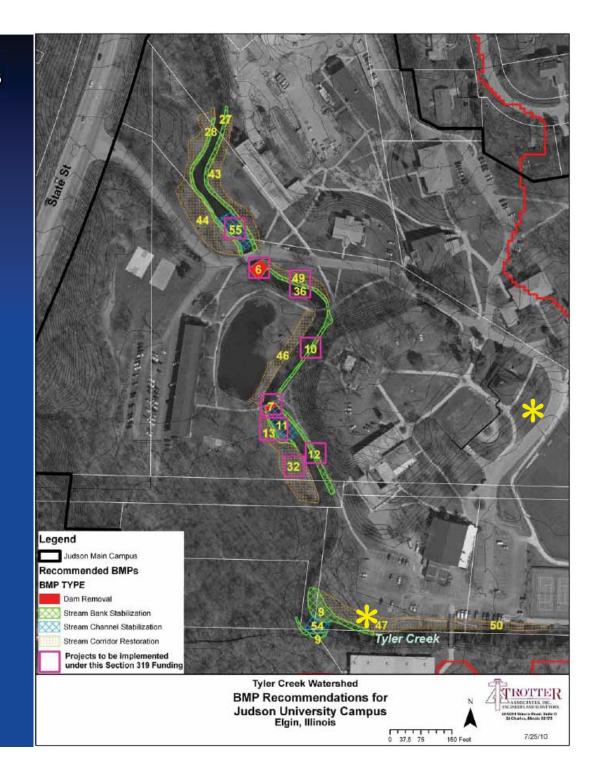


Stream Corridor Projects - 2011/2012

- Removal of upper dam
- Channel stabilization above Judson Drive Bridge
- Streambank stabilization of Administration Hill
- Remove lower dam remnants and stabilize streambank in current alignment

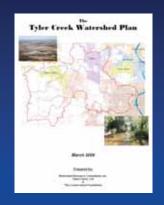
Green Infrastructure Projects – 2011/2012

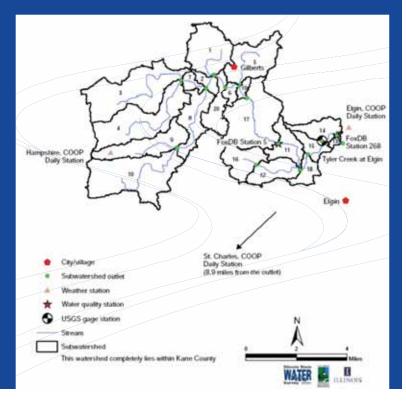
- Bioretention Basin on Presidents Drive
- Bioretention Basin at Plant Ops Parking Lot



Coalition Activities – Moving Forward

- Support/publicize the Four Site-Specific Projects
- Water Quality Monitoring to support future analyses/studies
- Encouraging municipalities to update subdivision regs to embrace low impact development practices







Questions?