Ferson-Otter Creek Watershed Planning

September 21, 2010
2:00-4:00 p.m.

Amy Talbot, LEED AP
Overview

- Fox River Basin background
- Illinois Integrated Water Quality Report
- Ferson-Otter Creek
- The Watershed Plan
- Questions/Comments?
The Fox River Basin – Wisconsin & Illinois

- 3rd largest trib to Illinois R.
- 185 miles long from Waukesha, WI – Ottawa, IL; 115 river miles in Illinois
- 2,658 mi² watershed; 1,720 mi² in Illinois
- Illinois part of watershed has ~2,300 river and tributary stream miles & 406 lakes
- Parts of 11 Illinois counties, 11% of Illinois’ population
Ferson-Otter Creek Watershed

- Drainage area of 54 sq. miles
- 29% developed
- Kane County, 5th
- Elgin, St. Charles, Campton Hills, South Elgin, and Lily Lake
- Population: approx. 32,515
- Star Watershed!
Illinois Integrated Water Quality Report

- Fulfills requirement of Sections 305(b) and 303(d) of the Federal Clean Water Act
- Serves as the primary assessment of State W.Q.—rivers, streams, lakes, groundwater
- Impaired waters placed on 303(d) List
Section 305(b) requires...

- Prepare and submit a report which shall include a description of the water quality of all waters in the State
- 2 year cycle
- 2010-draft form
Monitoring

• Surface
  – Water samples are collected and sent to labs for chemical analysis
  – Physical and biological data are also collected and analyzed
Designated Uses & WQ Standards

• **Designated Uses** include:

<table>
<thead>
<tr>
<th>Aquatic Life</th>
<th>Aesthetic Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Contact</td>
<td>Secondary Contact</td>
</tr>
<tr>
<td>Public Water Supply</td>
<td>Fish Consumption</td>
</tr>
</tbody>
</table>

• **Water Quality Standards**
  – Numeric values (.05 mg/L Phosphorus)
  – Narrative statements (water shall be free of excessive algae)
  – Standards determined by Illinois Pollution Control Board
Water Body Assessments

• Lake or stream segment is assessed:

<table>
<thead>
<tr>
<th>Fully Supporting</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Supporting</td>
<td>Fair or Poor (impaired)</td>
</tr>
</tbody>
</table>

• Causes and Sources identified for each “impaired” designated use.

• “Not assessed” support level for those waterbodies that have not been evaluated.
Section 303(d) requires….

- Identify waters which are not meeting applicable water quality standards/designated uses-303(d) List
- Establish priority ranking for those waters taking into account the severity of pollution and the uses to be made of such waters
- Target waters for the development of TMDLs (and watershed-based plans)
Why the Fox River?

• 14 out of 17 river segments are listed on the 303(d) list

• Causes:
  • Sedimentation
  • TSS, P, pH
  • Mercury, PCB (fish consumption)
  • Fecal coliform (primary contact)

• Sources
  • Ag and Urban Runoff
  • CSO
  • Muni Point Sources
The Lower Fox River Basin in Illinois – Assessed & Impaired Surface Waters

G-4. Lower Fox River Watershed

Legend
- Category 5 Lakes
- Category 5 Streams
- Assessed Lakes
- Assessed Streams
- HUC-10 Watershed
- Watershed Boundary
- State Route
- Interstate
- Municipal Boundary
- County Boundary
**Fox River segment DT-58**

Excerpt *from Illinois Integrated Water Quality Report and Section 303(d) List – 2010: Appendix B-2. Specific Assessment Information for Streams, 2010*

<table>
<thead>
<tr>
<th>Name</th>
<th>Assessment Unit ID</th>
<th>10-digit HUC</th>
<th>Size (miles)</th>
<th>Use Attainment</th>
<th>Causes of Impairment</th>
<th>Sources of Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox River</td>
<td>IL_DT-58</td>
<td>0712000701</td>
<td>3.74</td>
<td>• N (Aquatic Life)</td>
<td>• Polychlorinated biphenyls (PBCs)</td>
<td>• Streambank modification and destabilization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• N (Fish Consumption)</td>
<td>• Mercury</td>
<td>• Impacts from Hydrostructure Flow Regulation/ Modification</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Dissolved Oxygen</td>
<td>• Atmospheric deposition-toxics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Alteration in stream-side or littoral vegetative covers</td>
<td>• Unknown sources</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Other flow regime alterations</td>
<td></td>
</tr>
</tbody>
</table>

*N = “Not supporting”*
Ferson-Otter Creek drains to this segment of the Fox River

Assessed and Nonsupport
- Aquatic Life Use
- Fish Consumption Use

Not Assessed
- Primary Contact
- Secondary Contact
- Aesthetic Quality
### Ferson and Otter Creek


<table>
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<tr>
<th>Name</th>
<th>Assessment Unit ID</th>
<th>10-digit HUC</th>
<th>Size (miles)</th>
<th>Use Attainment</th>
<th>Causes of Impairment</th>
<th>Sources of Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferson Cr.</td>
<td>IL_DTF</td>
<td>0712000701</td>
<td>14.57</td>
<td>• F (Aquatic Life)</td>
<td>Fecal coliform</td>
<td>• Urban runoff/storm sewers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• N (Primary Contact)</td>
<td></td>
<td>• Runoff from Forest/Grassland/Parkland</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• X(2nd Contact)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• X(Fish consumption)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• X(Aesthetic quality)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otter Cr.</td>
<td>IL_DTFA</td>
<td>0712000701</td>
<td>6.5</td>
<td>• F (Aquatic life)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• X (Primary Contact)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>• X(Aesthetic quality)</td>
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</table>
319 Project

NONPOINT SOURCE WATER POLLUTION CONTROL PROGRAM
FOX RIVER WATERSHED RESTORATION

Best management practices have been installed to improve the water quality of the Fox River watershed.

Funded, in part, under Section 319 of the Federal Clean Water act.
Grant No.: C9995200-04

For more information, contact the Illinois EPA at 217-782-3382
FAA Number: 319044

9/29/2010
The Watershed Plan

- CMAP and IEPA
- Funding—Section 604(b) of the Clean Water Act
- Collaborative approach
- Goal
  - to restore beneficial uses and remove from 303(d) list
- Requirements/criteria
- Completed by December 31, 2011
Planning Process: USEPA 9 elements

- Causes and sources of pollution
- Estimate pollutant reduction loads expected from implementation of measures
- NPS management measures to achieve load reductions
- Information/education
- Amount of tech/financial assistance needed & sources
- Implementation schedule
- Interim, measurable milestones
- Indicators for achieving load reductions-WQ progress
- Monitoring
Planning Process: Regional Criteria

• Watershed land use vision
• Pollutant load reductions targets
  – Hydrologic Simulation Program FORTRAN (HSPF)
• Groundwater protection
• Municipal codes/ordinances vs. USEPA WQ Scorecard
Other Plans

- County/Municipal Comp Plans
- Regional Plans
- Others....
## Planning Process Timeline

<table>
<thead>
<tr>
<th>Month</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>September '10</td>
<td>introductions/roles, planning structure, project purpose/timeline</td>
</tr>
<tr>
<td>October</td>
<td>goals and objectives</td>
</tr>
<tr>
<td>November</td>
<td>watershed vision</td>
</tr>
<tr>
<td>December</td>
<td>groundwater protection</td>
</tr>
<tr>
<td>January '11</td>
<td>ordinances</td>
</tr>
<tr>
<td>February</td>
<td>draft Introduction chapter</td>
</tr>
<tr>
<td>March</td>
<td>draft Inventory and Assessment chapter, including problem statement(s)</td>
</tr>
<tr>
<td>April</td>
<td>finalize watershed inventory, prepare to submit to IEPA May 1st</td>
</tr>
<tr>
<td>May</td>
<td>model output, load reduction targets, etc. / chapter</td>
</tr>
<tr>
<td>June</td>
<td>plan recommendations</td>
</tr>
<tr>
<td>July</td>
<td>plan recommendations / chapter</td>
</tr>
<tr>
<td>August</td>
<td><em>summer recess</em></td>
</tr>
<tr>
<td>September</td>
<td>monitoring and assessment chapter</td>
</tr>
<tr>
<td>October</td>
<td>finalize draft plan, prepare to submit Nov. 1st</td>
</tr>
<tr>
<td>November</td>
<td>incorporate feedback from IEPA on draft plan</td>
</tr>
<tr>
<td>December</td>
<td>Final draft plan approval; next steps</td>
</tr>
</tbody>
</table>
Stakeholder Committee

• Role & expectations
• Who’s missing?
• Meeting Schedule
Questions and Comments?

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312.386.8646