City of Oshkosh Stormwater Management



Public Information Meetings Sawyer Creek Watershed September 15 & 17, 2009 Room 404 / 406, City Hall





Sawyer Creek Plan Goals

- Reduce or eliminate street flooding to the maximum extent practicable.
- Reduce 100-year floodplain elevations to remove habitable buildings from the 100-year floodplain, where possible.
- Culverts/Bridges at street crossings should convey stormwater runoff from a 100-year storm event without roadway overtopping, where possible. If this is not possible, provide passage of the greatest storm event possible (25-year to 50-year being desirable).
- Stormwater management practices to be employed should improve stormwater quality by reducing the amount of suspended solids and attached nutrients in the runoff to the maximum extent practicable.



Sawyer Creek Existing Conditions

Bridge Overtopping Frequency

Roadway Crossing	Approximate Overtopping Frequency (Design Storm Event)	
Clairville / CTH K	25-50	
Pedestrian Bridge 2	<2	
Pedestrian Bridge 1	<2	
Oakwood Road	25-50	
West 9 th Avenue	25-50	
Westhaven Drive	25-50	
Pommerening Residence	5-10	
Naslund Residence	5-10	
USH 41 and Frontage Roads	100	
Westfield Drive	50-100	
Sawyer Street	100	

Sawyer Creek Alternatives Analysis



- Sawyer Creek
 - Alternatives 6 and 7 have best performance based upon flood reduction.
 - Alternative 6 impacts Westhaven Golf Course
 - Alternative 7 does not impact Westhaven Golf Course
- Campbell Creek
 - Alternatives 12 and 13B have best performance based upon flood reduction
 - Alternative 13B impacts Westhaven Golf Course
 - Alternative 12 does not impact Westhaven Golf Course

Options for Managing Stormwater

- Impacting Westhaven
 - James Road / STH 91
 - Oakwood Road
 - Sawyer Creek Dredging
 - Tipler Middle School
 - Armory
 - Westhaven Golf Course

- Not Impacting Westhaven
 - James Road / STH 91
 - Oakwood Road
 - Sawyer Creek Dredging
- Tipler Middle School
 - Expanded Armory
 - 9th & Washburn

James Road / STH 91 Detention Basin







Combined Mitigation Strategies for Sawyer Creek and Campbell Creek Watersheds Sawyer Creek Dredging – Westfield Street Locale



Tipler Middle School Dry Detention Basin





Westhaven Golf Course Detention Basins

Golf Course Operations are Retained



Combined Mitigation Strategies for Sawyer Creek and Campbell Creek Watersheds Armory Detention Basin



Combined Mitigation Strategies for Sawyer Creek and Campbell Creek Watersheds Expanded Armory Detention Basin



9th and Washburn Detention Basin



Water Quality Analysis

- Wisconsin DNR Storm Water Discharge Permit Coverage issued on January 2, 2007
- Permit requires reduction of pollution to waters of the state
- Pollutant of Interest: Total Suspended Solids (TSS)
- Must reduce Base Load by 40% by 2013









Options Analysis

Summary

	Existing Conditions	Not Impacting Westhaven	Impacting Westhaven
Storage Provided (ac-ft)	NA	365.5	677.6
Total TSS Removed (tons/year)	NA	26.6	80.9
100-year Flood Plain Area (ac)	591	385	359
Estimated City Parcel Value in 100-year Flood Plain	\$ 265,778,500	\$ 192,006,500	\$ 176,244,500
Number of Residential City Parcels within 100-year Flood Plain	683	496	410
Number of Dwelling Units within City within 100-year Flood Plain	2,182	1,535	1,295
Miles of Streets within 100- year Flood Plain	12.37	8.19	6.40
Project Cost	NA	\$ 25,217,169	\$ 36,664,169

To make up the pollution reduction difference between the two options, approximately 460 acres of Commercial, Industrial and Institutional Land would require treatment with Bio-filters. The estimated construction cost would be \$4.2 million, with estimated annual maintenance costs of \$620,000 vs. \$28,000 for the detention basins.

Future Direction from Common Council

- To utilize Westhaven Golf Course, or not.
- To begin implementation of Sawyer Creek Storm Water Management Plan.

