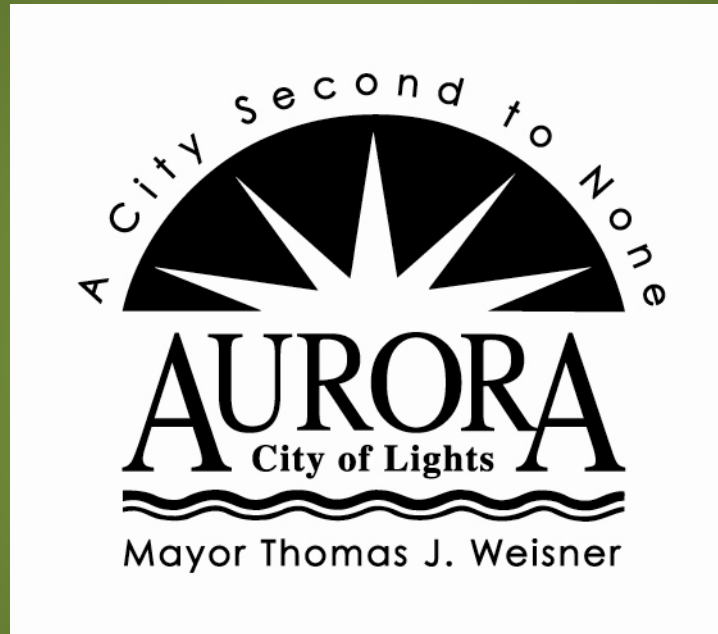


# CITY OF AURORA



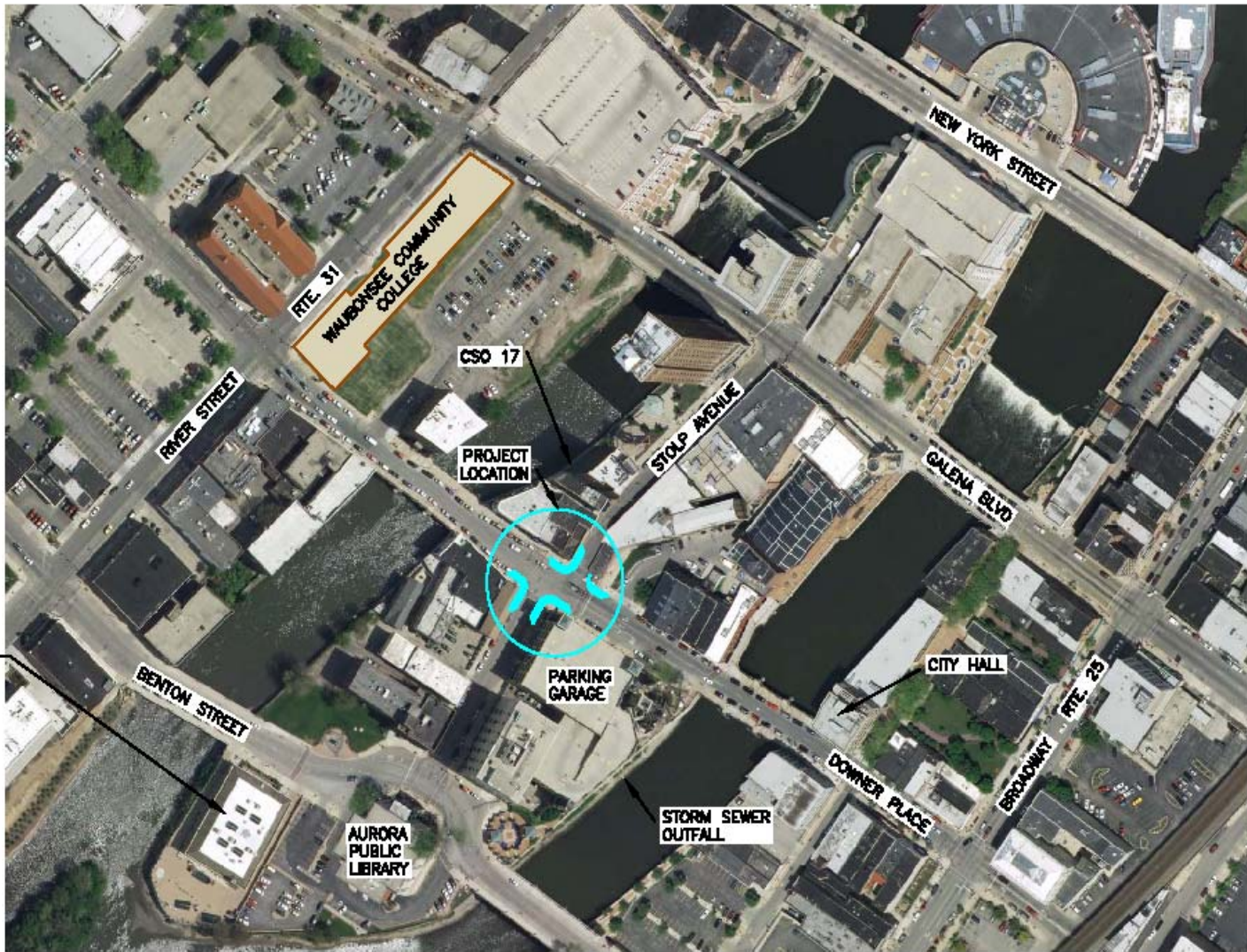
Stolp Avenue and Downer Place  
Bioinfiltration Project

Illinois Green Infrastructure Grant Program



# Stolp Avenue & Downer Place Bioinfiltration Project

- The improvement is a raingarden type infiltration BMP
- Located in the heart of Aurora's Downtown on Stolp Island.
- The site is within the City's 7000 acre combined sewer system.
- The project falls within the IGIG Small Projects Category



SCI-TECH HANDS-ON  
SCIENCE MUSEUM

2010 08 04 10:00 AM

**CITY OF AURORA**  
DIVISION OF PUBLIC WORKS  
44 EAST DOWNER PLACE

REVISIONS:			
DESIGNED BY: LES	CHECKED BY: LES	SCALE: 1" = 160'	DATE: 12/2010
DRAWN BY: JJ	APPROVED BY: LES		

PROJECT:	<b>DOWNER PLACE AND STOLP AVENUE BIOFILTRATION BASINS</b>
DRAWING TITLE:	<b>APPENDIX A</b>

SHEET NUMBER:	1
TOTAL SHEETS:	1







# Downer Place Visioning Workshop

- Organized by the Aurora Downtown Business Association
- Purpose: To get local stakeholder ideas on how Downer Place might be reshaped during the construction of the Downer Place Bridges
- 60 area residents and business owners along with a few interested students participated
- Attendees were broken into 6 work groups



# Workshop outcome

- All 6 work groups recommended adding curb bump outs
  - Increase pedestrian safety: The existing cross walks are over 55 feet long
  - Traffic calming: the existing driving lanes are excessively wide, which results in faster vehicle speeds
  - Create gathering areas that are inviting to potential consumers and increase foot traffic to local shops
  - Create areas for out door café seating
- The workshop resulted in report that included exhibits for the curb bump outs

FOX THEATRE B'LDG. AND P



→ FOX THEATRE  
→ OFFICE  
→ LOBBY

11  
28 DOWNER

ROAD AHEAD

ONLY

←

↑

↗

NO PARKING

NO PARKING





Una Voz, Inc.  
22 E. Brown

Urban Fitness Corp

THE CITY OF...





# Grant Proposal Process

IEPA feedback on Aurora's Proposal:

- Demonstrated a good understanding of the stormwater problem and provided data to backup the information
  1. Described the impairments to the Fox
  2. Included sampling data that makes a connection between stormwater runoff and the river's impairments
- Extensive planning in place for green infrastructure improvements
- Operation and Maintenance of BMP's was addressed



The entire portion of the Fox River that flows through Illinois is included in the State's 2010 303(d) list as an impaired water way.

Designated Use	Impairment	Source
Aquatic Life	Total Suspended Solids, pH, Total Phosphorus, DO	Atmospheric Deposition, CSO's, Streambank Modification/Destabilization, Municipal Point Source/Urban Discharges, Flow Modification, Dam/Impoundment
Fish Consumption	Mercury, PCB's	
Primary Contact Recreation	Fecal Coliform	
Public Water Supplies	Chloride	

# Fox Metro WRD River Sampling Data

Table 1.02 Water Quality Data – Mill St, Montgomery IL

Sampling Period April 30, 2008 through July 8, 2009

Percentiles	Fecal Coliform	NH <sub>3</sub> , <sub>4</sub>	NO <sub>3</sub>	N-org	P-ortho	P-org	TP	BOD <sub>5</sub>	TSS
Low 25th	113	0.024	0.76	1.32	0.07	0.15	0.258	1.25	24
Mid 50th	236	0.04	1.04	1.47	0.09	0.16	0.3	3	31
High 75th	488	0.105	1.38	1.75	0.12	0.18	0.353	4	42
# of samples	47	58	55	53	22	19	52	50	58

Data from FMWRD LTCP dated March 31, 2010, Prepared by Walter E. Deuchler Assoc.



# North River Street Storm Sewer

## July 23-24 2010 Rain Event

### Sampling by Walter E. Deuchler Associates

N. River Street (Storm Sewer)	Sequential Bottle ID										
	Initial	5 min.	10 min.	15 min.	20 min.	30 min.	45 min.	1 hr.	--	6 hr.	
	1	2	3	4	5	6	7	8	--	9	
Collection Date	7/23/10	7/23/10	7/23/10	7/23/10	7/23/10	7/23/10	7/23/10	7/23/10		7/24/10	
Collection Time (24hr)	18:10	18:15	18:20	18:25	18:30	18:40	18:55	19:10		1:15	
Flow Meter	18:05	18:10	18:15	18:20	18:25	18:35	18:50	19:05		1:10	
Temperature (°C)*	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	
D.O. (mg/L)*	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	
pH (S.U.)*	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	
Conductivity (uS/cm)*	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	
BOD (mg/L)	18	20	6	19	6	6	< 6	3	NS	< 42	
TSS (mg/L)	292	304	244	248	120	68	24	16	NS	400	
Fecal Coliforms (#/100mL)*	TNTC(326K)	TNTC(>200K)	TNTC(622K)	TNTC(>400K)	TNTC(>400K)	TNTC(442K)	3.20E+04	1.13E+05	NS	1.14E+05	
TKN (mg/L)	2.34	2.76	2.68	2.56	1.66	0.99	0.71	0.78	NS	1.44	
Ammonia N (mg/L)	0.20	0.21	0.22	0.22	0.07	0.05	0.05	0.05	NS	0.13	
Nitrate N (mg/L)	0.24	0.13	< 0.09	0.19	0.28	0.32	0.40	0.55	NS	0.48	
Nitrite N (mg/L)	0.09	0.13	0.15	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NS	0.05	
Organic N (mg/L)	2.14	2.55	2.46	2.34	1.59	0.95	0.66	0.73	NS	1.31	
Total P (mg/L)	0.54	0.46	0.42	0.42	0.31	0.20	0.16	0.18	NS	0.30	
Soluble, Unreactive P (mg/L) <sup>1</sup>	0.11	0.17	0.14	0.17	0.16	0.09	0.10	0.10	NS	0.06	
Soluble, Reactive P (mg/L) <sup>2</sup>	< 0.02	< 0.02	0.02	< 0.02	0.05	0.07	0.08	0.09	NS	< 0.02	
Chloride (mg/L)	9.6	8.0	6.3	5.2	4.5	4.2	6.8	12	NS	14	
Fluoride (mg/L)	0.19	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	NS	< 0.03	
Sulfate (mg/L)	6.9	4.4	4.5	3.9	3.2	2.8	3.2	4.3	NS	6.1	

For more information on the quality of Illinois's surface waters go to:

- <http://www.epa.state.il.us/water/tmdl/303d-list.html>



# Grant Proposal Process

IEPA feedback on Aurora's Proposal continued:

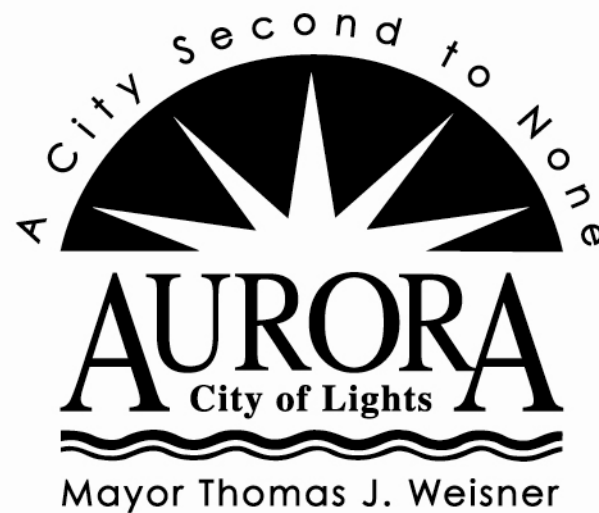
- Aurora does not really need another demonstration project
- Application could have added more specific details about the proposed BMP

Questions ?

**AKA Stump the Chump**



This has been a  
presentation of the  
Engineering Division of the  
Public Works Department for  
the  
CITY OF AURORA



# A Few Lessons Learned

- Get the local community involved: “Get me involved in the beginning and I will be your ally. Bring me in at the end and I will be your critic”
- Design your improvements so you can meter stormwater that enters and exits the site.
- Manage expectations:
  - It takes time for plants to get established, some species will thrive some will not.
  - Be prepared for additional maintenance, especially during the first few years after planting.