City of Toledo
Adapting to Climate Change

Urban Council on Sustainability and Adaptation Meeting
November 8, 2013
Toledo-National Conversation on Climate Action 2007

- Locally hosted by City of Toledo & University of Toledo
- Keynote “Understanding Climate Change” by Dr. Lonnie Thompson
- Audience of 80 people
- Purpose: To educate our community about the science of global climate change and to increase their awareness of work that is already being done locally toward climate protection
Gas Cap Testing and Replacement

- **Purpose:** to educate the general public on the importance of a functioning gas cap and its impact on ground level ozone or smog.
- In 2012, 624 gas caps were tested at 21 sites.
- 120 faulty or missing caps were replaced.
- The program helped to prevent approximately 23,880 pounds of pollution from entering the atmosphere.
Bay View Water Reclamation Facility: Cogeneration Plant

- Combined-cycle cogeneration plant using bioenergy resources
- Fueled by Bay View’s solid waste digester gas and landfill gas from the Hoffman Road Landfill.
- Utilizes a two mile pipeline
- OEPA and Ohio Water Development Authority 26.7 million dollar
Better Buildings Northwest Ohio Municipal Government Energy Efficiency Leadership

• Partnership with the City of Toledo and Toledo-Lucas County Port Authority’s Better Buildings NW Ohio Program

• U.S. Dept of Energy supported

• City of Toledo, Port, and Univ. of Toledo Civil Engineering class gathered energy and greenhouse gas data on 285 City of Toledo buildings and 2240 vehicles.

• Projects include
  • 1MW Solar array at the Water Treatment Plant
  • Lighting and other energy efficiency improvements to over 40 key buildings

Project Summary

<table>
<thead>
<tr>
<th># of Buildings</th>
<th>43+</th>
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<tbody>
<tr>
<td>Total Square Footage</td>
<td>2,000,000+</td>
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<tr>
<td>Total Project</td>
<td>$10,500,000</td>
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<tr>
<td>Annual Energy Savings</td>
<td>$627,000</td>
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<tr>
<td>% Savings per office buildings</td>
<td></td>
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www.youtube.com/watch?v=MTpgFKx7DAM
Collins Park Solar Field

- Installation of 250 kw system with future areas of up to 1 MW
- Tie-In to Generator Building
- Local and American Made Equipment:
  - Aggregate base and weed barrier to reduce maintenance
- Underdrains!!!

http://live.deckmonitoring.com/?id=collins_park_1mw_project
Air Resources

Greenhouse gases limited in two recently written permits.
Green Infrastructure Projects
An Economic Assessment of Extreme Rainfall Events and Strategies for Reducing Economic Losses Project Overview

- National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center (CSC)
- An economic study examining green infrastructure options for reducing flooding from extreme rainfall events
- Using current and future precipitation and land use scenarios
- Great Lake Restoration Initiative (GLRI) funded pilot projects – Toledo, OH and Duluth, Minnesota
Watershed Selected – Silver Creek

- Located in North Toledo
- History of flooding issues and complaints
- Industrial and Residential area
- Has available information/data
Unimproved Streets in Silver Creek watershed
Square Footage of industries in Silver Creek watershed
Coastal Climate Adaptation & Resilience Workshop

- Basic climate science
- Regional climate trends
- Potential climate change impacts
- Planning processes and tools to help communities adapt to climate change and coastal hazards.
- Great Lakes Coastal Resilience Planning Guide - Learn what's in the guide and how it can be used.
- Opportunity to learn how communities and habitat managers are adapting to a changing climate in the Western Lake Erie Basin and beyond.
- Communication and education techniques to support individual and community climate action.
- Opportunity to network with other communities and organizations.
Stormwater Credits Manual Updates

• University of Michigan-Urban Planning Students provide outstanding analysis of credit program.

• Completion December 2013