Lord Street Basin CSO Green Infrastructure Retrofit Project

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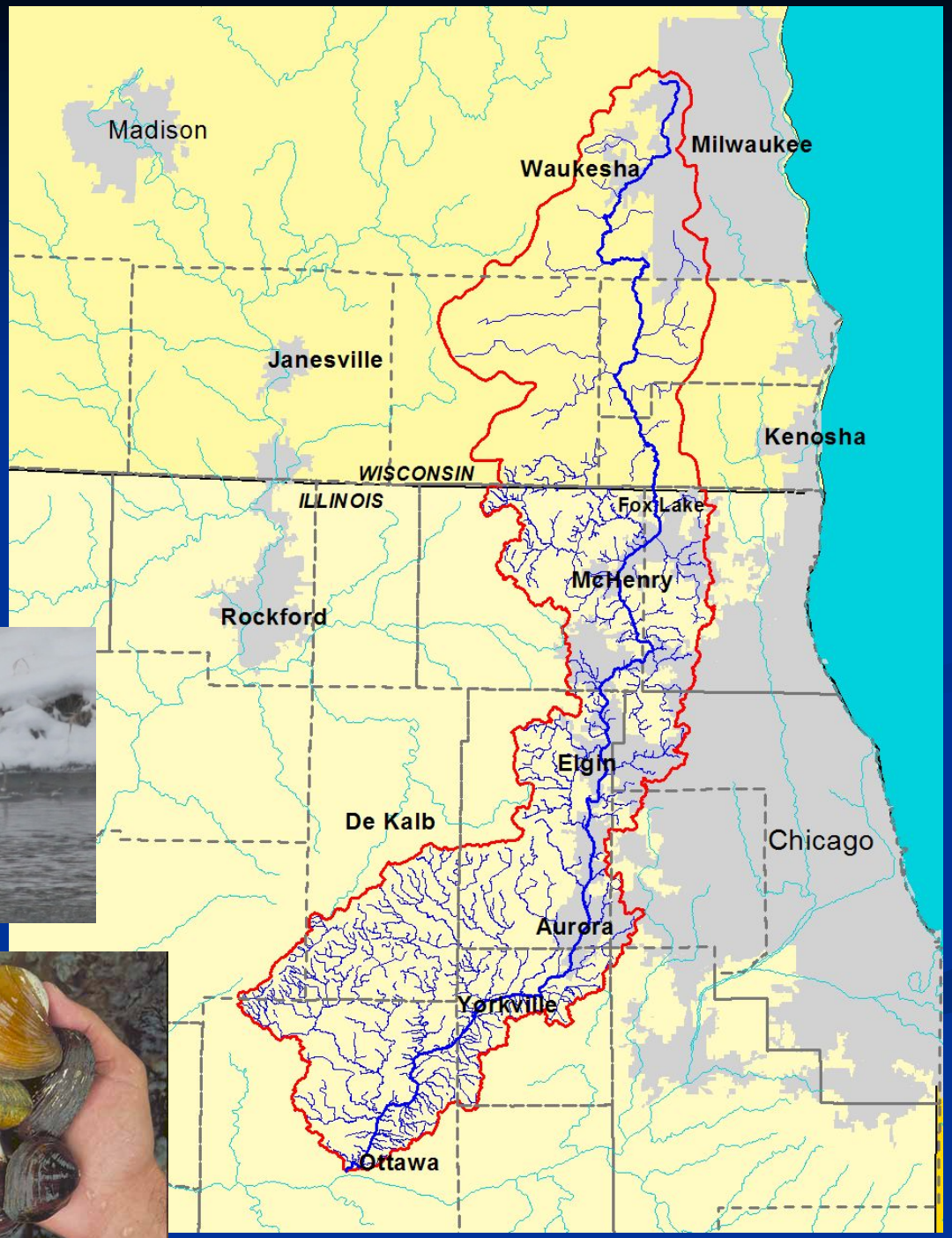
Madison
Milwaukee
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Janesville
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WISCONSIN
ILLINOIS
Fox Lake
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Fox River Impairments

- Fox River Listed as Impaired in according to the IEPA Water Quality Report

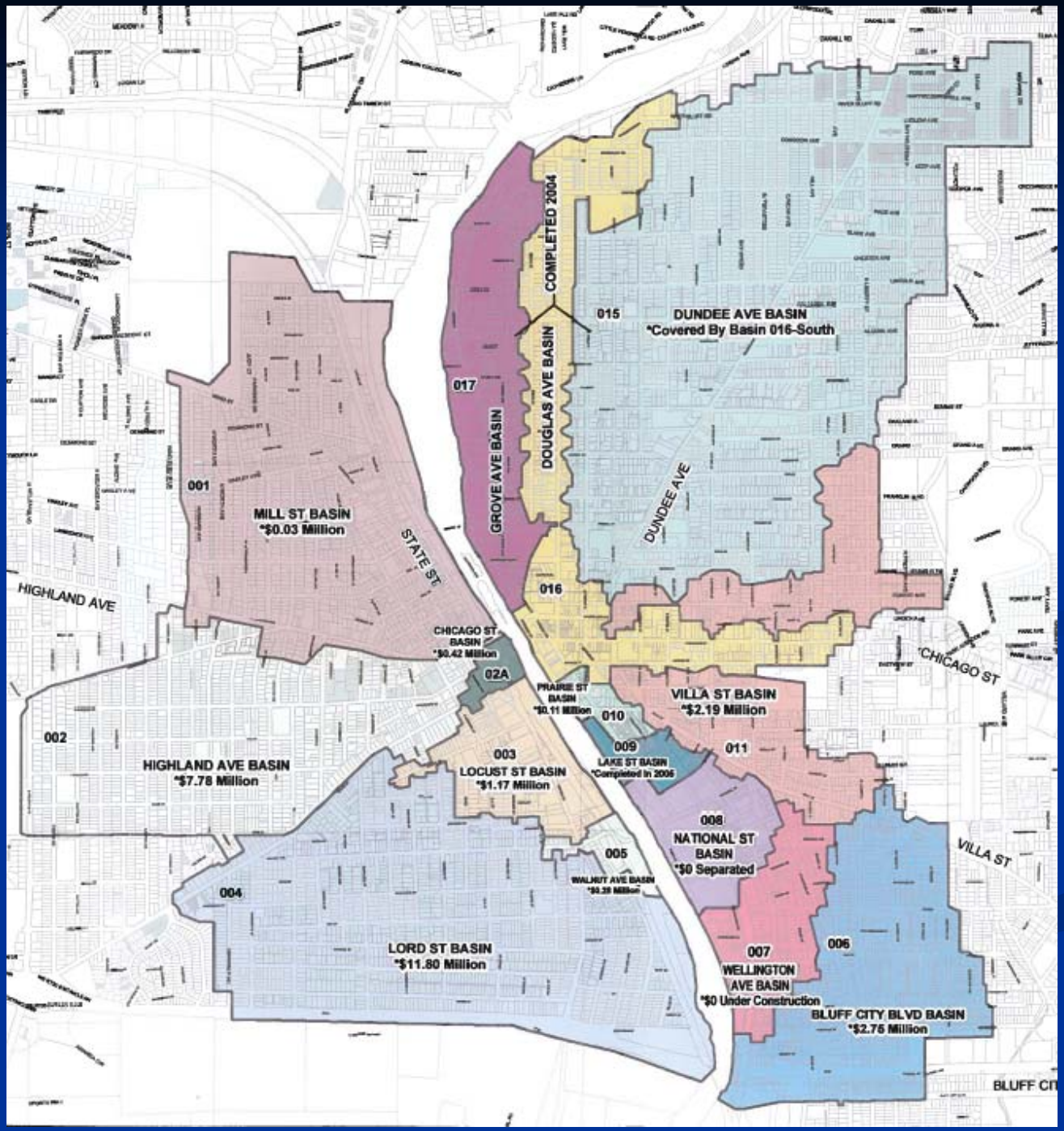
- Pollution Causes:
  - Dissolved Oxygen
  - TSS
  - Excess Algal Growth
  - Sedimentation/Siltation,
  - TDS
  - PCBs
  - Other Flow Regime Alterations
  - Habitat Assessment
  - Total Fecal Coliform

- Pollution Sources:
  - Municipal Point Sources
  - **Combined Sewer Overflows**
  - Urban Runoff/Storm sewers
  - Hydrologic/Habitat Modification
    - Upstream Impoundment
    - Flow Regulation /Modification
  - Contaminated Sediment
  - Streambank Modification / Destabilization

Tributaries Impaired: Nippersink Creek, Flint Creek, Boone Creek, Poplar Creek, Blackberry Creek, Tyler Creek and Indian Creek

Combined Sewer Overflows
in the City of Elgin

- 3000+ acres
- 11 CSO discharges to the Fox River
- $20 Million spent so far in sewer separation
- $3 Million/year budgeted for sewer separation projects
- Full street reconstruction planned as sewers are separated; Total Cost = $110+ Million
- LTCP lays out prioritized, plan for full separation over a 35 year period.



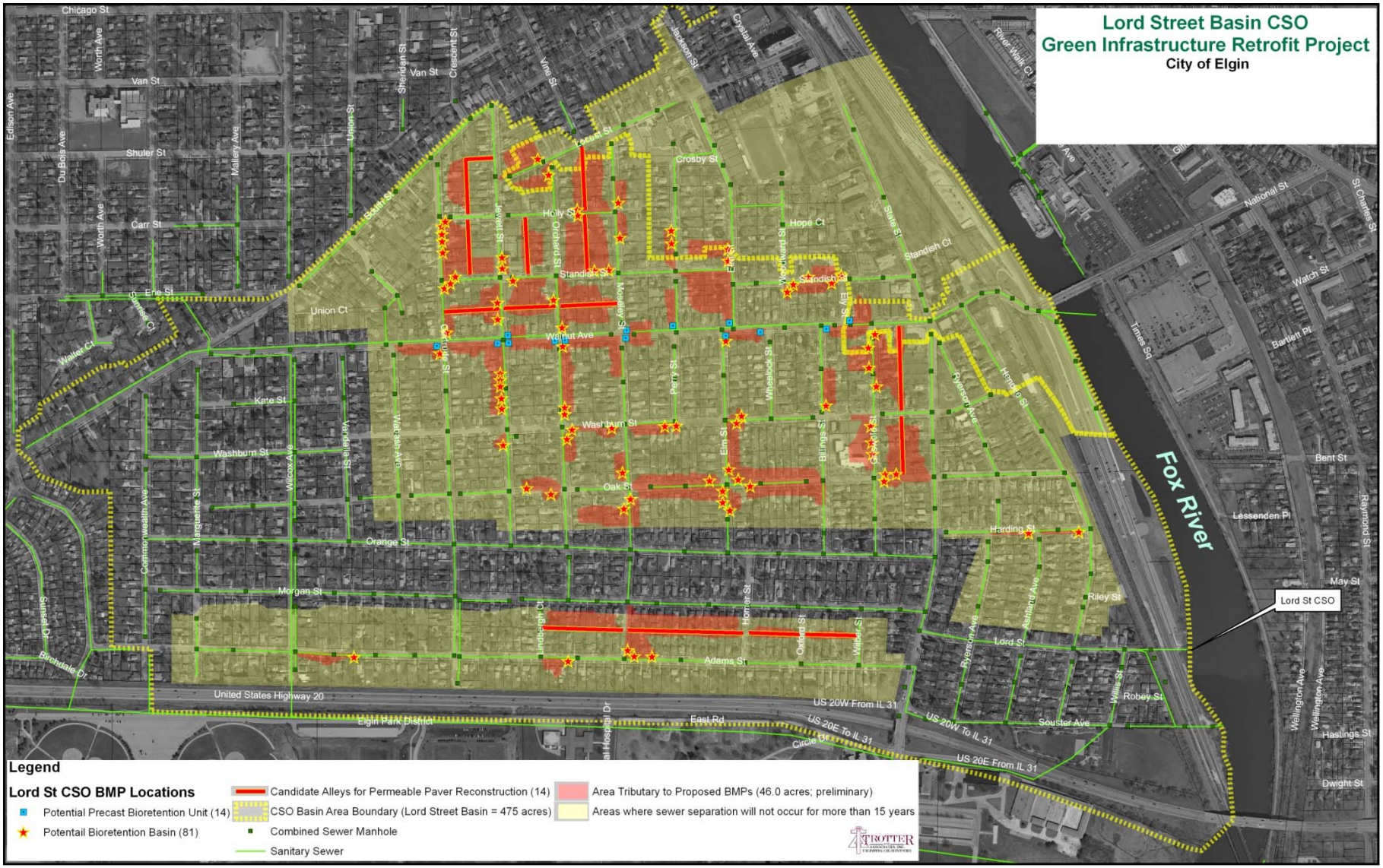
Project Approach

- Use the Lord Street CSO Basin Area to implement a demonstration project that will create numerous Stormwater Best Management Practices (BMPs) which will capture and infiltrate stormwater runoff, thus reducing the amount of surface runoff entering the combined sewer system.

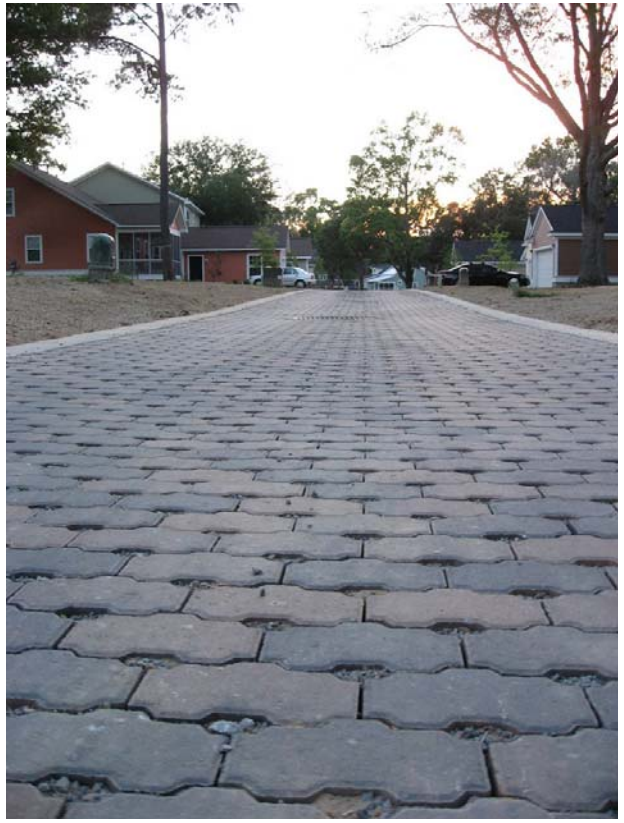
- These BMPs include the following:
  - Bioretention Basins constructed between the curb and sidewalk within the ROW
  - Interlocking Permeable Concrete Pavement (Permeable Pavers) installed in public alleys

Project Approach

Project Approach

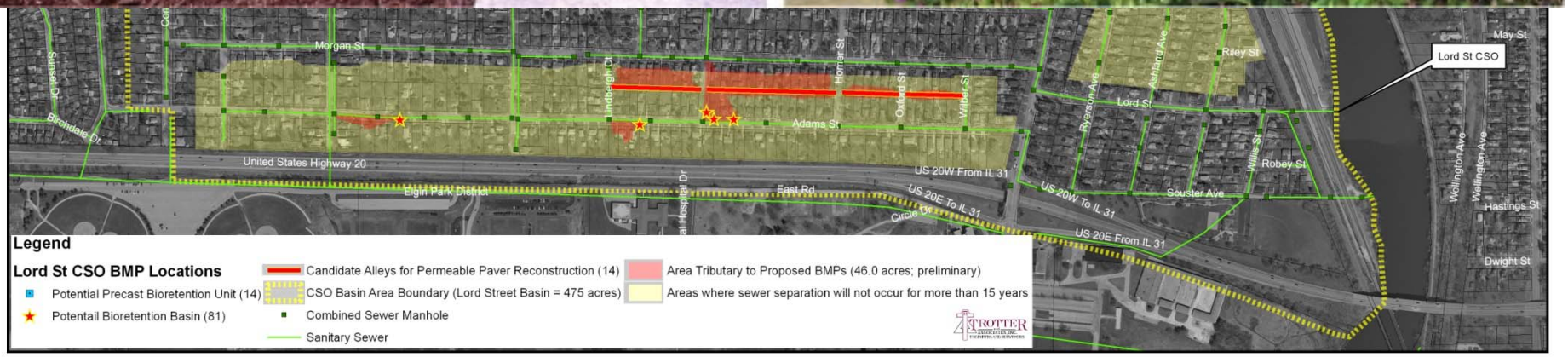


Project Approach



Project Approach

Adams Street



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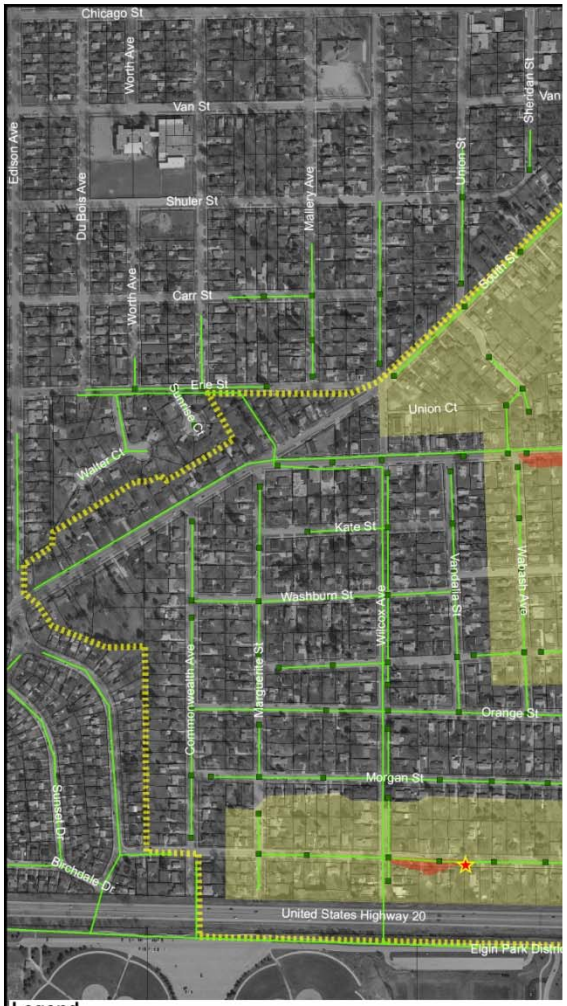

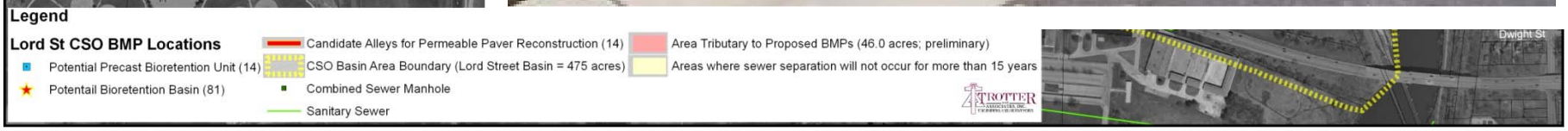

Bioretention Basin Construction

Can direct street runoff into basin via open curb cut or install cast iron inlet frame in curb.

TROTTER and ASSOCIATES, INC. ENGINEERS AND SURVEYORS

Source: Madison, WI Terrace Rain Garden Program

Bioretention Basin Construction

Get the residents involved!

- Increases resident's buy-in
- Can lower overall project cost

TROTTER and ASSOCIATES, INC. ENGINEERS AND SURVEYORS

Source: Madison, WI Terrace Rain Garden Program

Bioretention Basin

Residents maintain the BMP

(City provides periodic inspection & works with residents to insure proper maintenance)

TROTTER and ASSOCIATES, INC. ENGINEERS AND SURVEYORS

Source: Madison, WI Terrace Rain Garden Program

Bioretention Basin Potential!

Elgin resident with native vegetation installed in the ROW.

Establish & Promote a Successful Rain Barrel Program?

Elgin resident with a rain barrel for re-using rooftop rainwater during the growing season.

TROTTER and ASSOCIATES, INC. ENGINEERS AND SURVEYORS

Typical Bioretention Basin Site

South side of Walnut Ave

Typical Bioretention Basin Site

South side of Walnut Ave

Tips for a Successful Grant Application

- Show how project fits in with community & watershed-wide environmental initiatives.
  - Elgin Sustainability Plan
  - Fox River Study Group
  - Local Watershed Plans (Tyler Cr, etc.)
- Be thorough!
  - Do your homework to quantify the problem and show specifics about your solution
- Emphasize the Public Involvement.
  - Ultimate success hinges on stakeholder ownership in the project

Discussion