### Sustainability Lessons in Small Towns and Rural Communities

Maria Lasday, Village Manager
Village of Bannockburn
ICMA Conference Presenter





#### Village of Bannockburn

- Population consists of corporate, residential, retail and college sectors
- 25,000 daytime population
- 1583 evening population
- 2 ½ square miles



#### Bannockburn's Stormwater Conditions in 2008

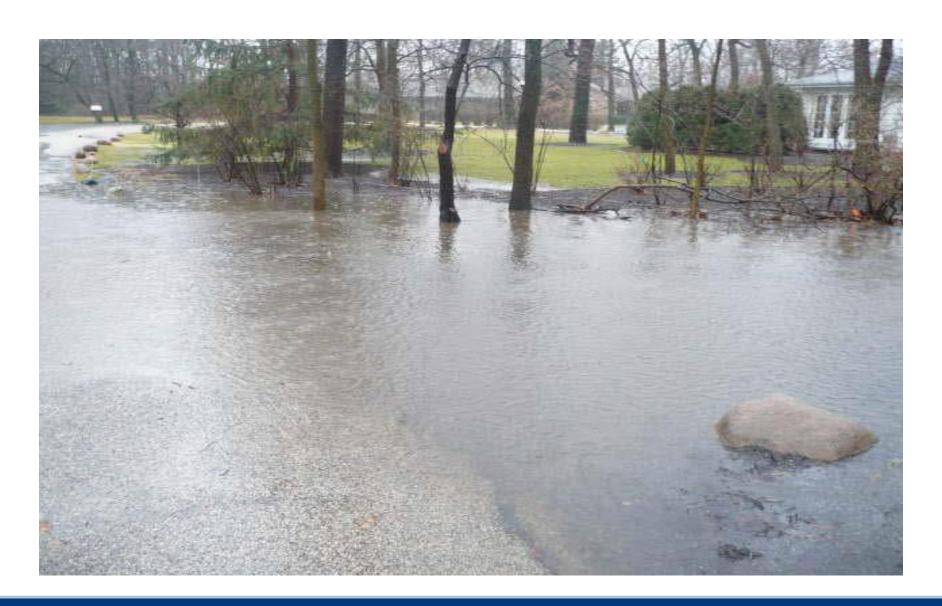
- When I began my current Village Manager position with Bannockburn in April 2008, Stormwater Management was a serious issue.
- After heavy rains, severe flooding occurred.
- FEMA funds obtained due to stormwater damage and costs of clean-up in 2008.

#### Example of Flooding in Bannockburn 2008









## Approach to Solve Flooding Problem and Reduce Cost of Clean-up: Green Solutions

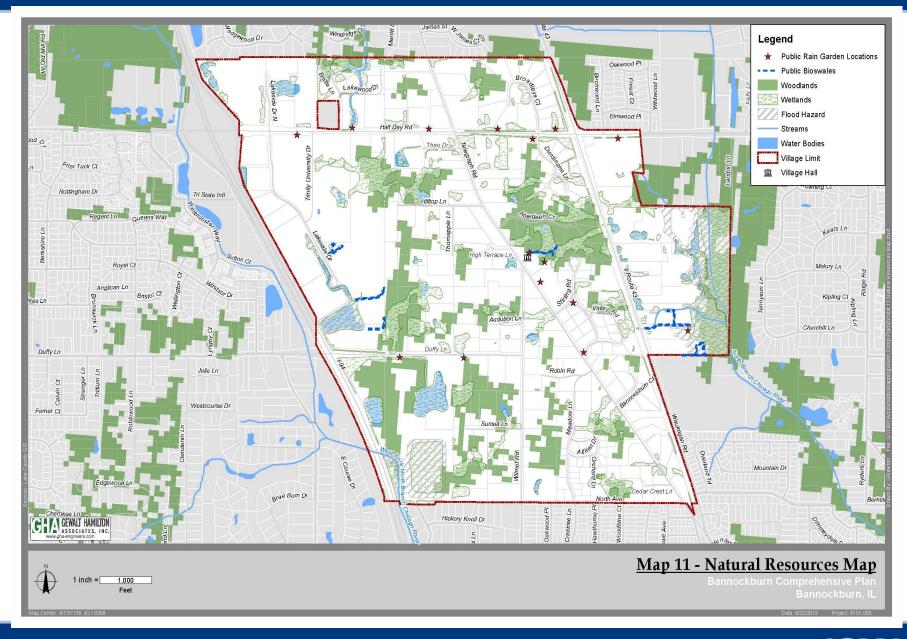
- Incorporate Solutions into the Village's 5 Year
   Strategic Plan and Capital Plan
- Seek Grants
- Educate Residents, Businesses and College
- Lead by Example
- Implement Best Management Practices



#### Bannockburn Best Management Practices

- Preservation of Wetlands
- Encourage Wildlife Habitat
- Installation of Rain Gardens
- Installation of Bioswales
- Removal of Buckthorn and Invasive Species
- Installation of Native Plantings
- Encouraging Pervious Surfaces (Porous Pavers, Porous Concrete Sidewalks & Turfstone Grass Parking Spaces)
- Naturalization and Landscaping of Detention Ponds





# Goal for Rain Gardens and Bioswales: Infiltrate Storm Water Runoff During a Rain







#### Village of Bannockburn Projects

- 1. Best Management Practices Village Hall Location
  - Rain Gardens
  - Wetland Creation
  - Bioswales
- 2. Local Roads
  - Rain Gardens Installed in Depressed Areas in ROWs
  - Bioswales
- 3. Village ROW State ROW Various Locations
  - 8 Rain Gardens
  - 3 Bioswales



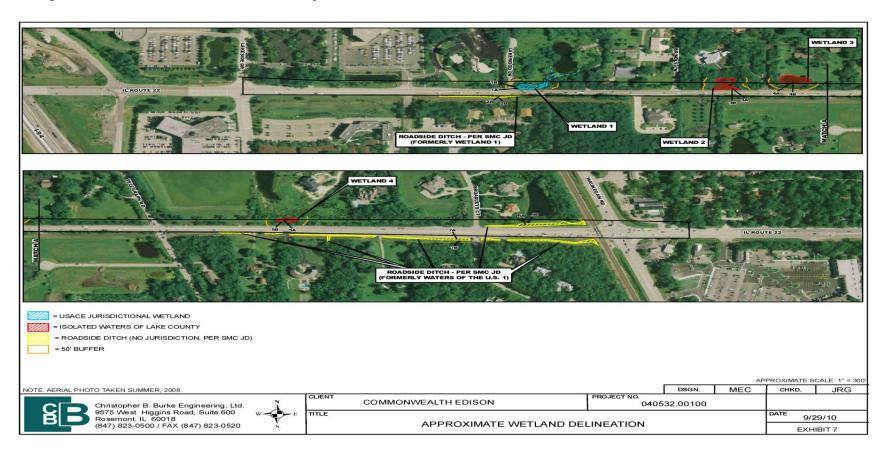
#### Examples of Roadside Rain Gardens in Right of Way



#### **Residential Projects**

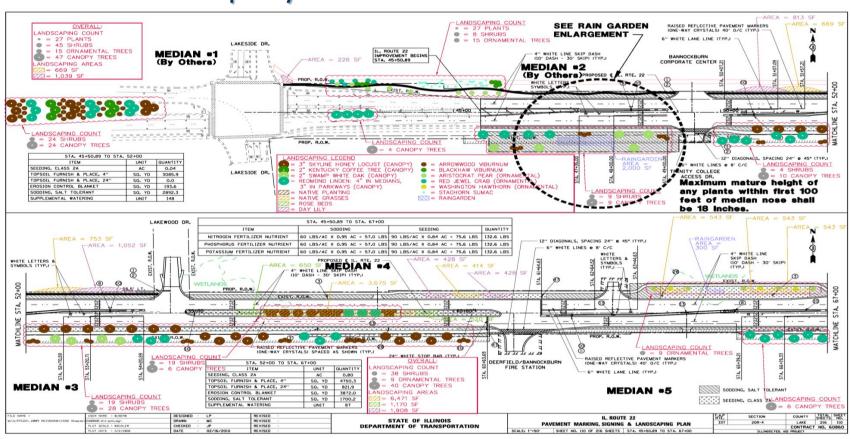
- Rain Garden Program Implemented in the Residential Program – up to \$2,500 grant per rain garden.
- Goal of Program keep water on own property and water back into aquiver system. Be good to the environment and thy neighbor.
- Program a Success. Residents installing rain gardens
- Educating Residents is key to success.

## Incorporation of Best Management Practices – State Widening Project - Ideal in the Depressed Areas and Wetland Areas





# IDOT Incorporation of 8 Rain Gardens into State Widening Project Plans – Including 3,500 sq. ft. on Trinity University International Property





# Bioswales Incorporated into the Route 22 Widening Project Similar to other Village Bioswales





#### 2013: Bioswale Captures Water from Heavy Rain





#### Summer 2013 – Record Rainfall in Illinois

- State qualified for FEMA funds
- Neighboring Communities had roads closed
- In 2013, Bannockburn did not qualify for FEMA funds (minimum threshold - \$1,000). Less than \$1,000 spent for clean-up. No roads closed in Bannockburn.
- In 2008, Bannockburn received approximately \$50,000 in FEMA and State funds for costs related to heavy rain storms.



## Questions/Comments?

For Additional Information, contact:

Maria Lasday

Village of Bannockburn

2275 Telegraph Road

Bannockburn, IL 60015

847-945-6080

mlasday@villageofbannockburn.org



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