



Leaders at the Core of Better Communities

2010 Annual Awards Program

Program Excellence Awards Nomination Form

Deadline for Nominations: March 12, 2010

Complete this form (sections 1 and 2) and submit with your descriptive narrative.

SECTION 1: Information About the Nominated Program

Program Excellence Award Category (*select only one*):

- ☐ Community Health and Safety
- ☐ Community Partnership
- ☒ Community Sustainability
- ☐ Strategic Leadership and Governance

Name of program being nominated: Alternative Stormwater Management Program: A Municipal Approach

Jurisdiction(s) where program originated: Village of Bannockburn, IL

Jurisdiction population(s): 1500

Please indicate the month and year in which the program you are nominating was fully implemented. (Note: All Program Excellence Award nominations must have been fully implemented by or before January 31, 2009, to be eligible. The start date should not include the initial planning phase.)

Month: June Year: 2008

Name(s) and title(s) of individual(s) who should receive recognition for this award at the ICMA Annual Conference in San José, California, October 2010. (Each individual listed MUST be an ICMA member to be recognized.):

Name: Maria Lasday

Title: Village Manager Jurisdiction: Village of Bannockburn

Name: _____

Title: _____ Jurisdiction: _____

Name: _____

Title: _____

Jurisdiction: _____

SECTION 2: Information About the Nominator/Primary Contact

Name of contact: Maria Lasday

Title: Village Manager

Jurisdiction: Village of Bannockburn

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Alternative Stormwater Management Program: A Municipal Approach

1. Problem Assessment, the Challenge or Need that Prompted the Village of Bannockburn to Develop the Program.

The Village of Bannockburn (“Village”) sought to mitigate flood water damage and stormwater discharge from Village property when heavy rain storms occurred within the Village. In addition, the Village wanted to encourage its residents to keep their storm water discharge on their property to help their fellow residents, to be sensitive to the environment and to improve the water quality for its residents and regional waterway. As a result, the Village developed an Alternative Stormwater Management Approach Program (“Program”) that integrated the Village’s zoning, development and storm water management policies, requiring all plans for any new developments or additions to residential or commercial properties to incorporate alternative stormwater practices prior to seeking approvals or permits. To further this objective, the Village chose to lead by example when it implemented a variety of Best Management Practices to improve water quality and to reduce the volume and rate of stormwater discharging off site.

2. Program Implementation and Costs

Beginning in the summer of 2008, to reduce stormwater quantity discharging from Village property, the Village developed the Program and began to implement Best Management Practices on Village property (the “Project”), which included the following:

- a. Restoring 979 square yards of wetland in unvegetated areas;
- b. Enhancing ±500 linear feet of existing unvegetated drainage swales by stabilizing and planting to create bioswales (seed and blanket);
- c. Construction of three (3) permanent Riverstone check dams;
- d. Creation of two (2) rain gardens (300 square yards each); and

- e. Installation of two (2) educational signs.

The total Project cost, as projected, was \$106,173, which was partially funded by a grant.

The breakdown of costs for the implementation of the Project included the following:

- a. The cost for the installation of the two Rain Gardens was equal to \$36,378, which covered the bedding, soil and stone, plugs for the rain garden and the installation of the plantings, a cover blanket, labor and mulch;
- b. The cost for the wetland restoration amounted to \$31,393, which provided for shade tolerant wetland plugs and the installation of the plantings, wooded wetland seed mix, and a North American Green cover blanket;
- c. The cost for the Rip Rap (stone) at outfalls was equal to \$1,050;
- d. The cost for the installation of 500 linear feet of bioswale was equal to \$10,000, which provided for a North American Green cover blanket, three Riverstone outcropping ditch checks, shade tolerant wetland plugs and the installation of the plantings and swale seed mix;
- e. The cost to prepare the site for the Project and removal of buckthorn was \$16,900;
- f. The cost to purchase educational signs was equal to \$800; and
- g. Surveying, Engineering and Construction Observation costs were equal to \$9,652.

3. Tangible Results or Measurable Outcomes of the Program

The following four major benefits were anticipated and resulted from the Project:

- a. The quality of the stormwater released was improved;
- b. The rate of stormwater release was reduced;
- c. The quantity of stormwater discharge was reduced through infiltration in bioswales, wetlands and rain gardens; and

- d. Members of the community would want to incorporate Best Management Practices on their properties.

The Project featured the following innovative characteristics and measurable outcomes:

- a. ***Improved water quality*** – Non-point source pollution is one of the leading factors contributing to a decline in water quality nationwide. Impervious surfaces such as roads, driveways and rooftops create stormwater runoff that erodes streambanks and pollutes water systems. As stormwater travels over these surfaces, it picks up pollutants such as lawn chemicals, oil, grease and road salts, depositing these contaminants into streams and rivers. The Project reduces non-point source pollution by reducing the runoff into streams, filtering out pollutants and recharging groundwater supplies, as well as controlling flooding and erosion. The Project's improvements act as a filter for stormwater.
- b. ***Reduced flood damage*** – The Project has reduced the quantity and velocity of stormwater leaving the site, which cause less flood damage during heavy rains. The rain gardens and bioswales promote greater infiltration of water into the ground, thus reducing the amount of stormwater that leaves the site. The presence of native vegetation and check dams at the sites significantly reduced the rate of stormwater run-off. Single family homes located downstream of the Project benefit from the reduction in stormwater quantity and improvement in water quality.
- c. ***Enhances/protects natural resources*** – The Project helps the environment since it enhances the quality of wetlands, streams, creeks and rivers downstream by reducing the amount of pollutants that enter the downstream watershed. Furthermore, the

reduced discharge rate reduces erosion in downstream areas, resulting in an improved quality of natural resources on the receiving end.

- d. ***Provides educational and/or recreational benefits*** – The Project includes educational signs that educate the public, which will, hopefully, result in greater protection of natural resources in the area. The Village hopes that this Project will serve as a pioneer Project for residents and other municipalities to follow. As the rain gardens, bioswale and wetland restoration improvements are located at a frequently used public park and adjacent to the Bannockburn Grade School site, this Project has many chances to provide educational and recreational benefits. To facilitate the educational benefits, the Village teamed with local environmental groups, the Village Garden Club, Bannockburn Grade School students and parents, local agencies and homeowners to encourage participation in the Project. The school located adjacent to the park property was able to use this Project as an educational component to enhance what is learned in the classroom by experiencing a natural system in person. At the Village's Community Day in August 2009, Village representatives discussed downstream erosion and flooding concerns with local homeowners while viewing the completed Project.

4. Lessons Learned During Planning, Implementation and Analysis of the Program.

While planning the Project for the Program, the Village needed to determine (a) which areas within the Village would most benefit from the Program, (b) which native plants were resistant to the deer population, (b) which native plants thrived with excess water, (c) which soil and materials would be needed to replace nonporous clay soil, (d) how much buckthorn would need to be removed, and (e) which rain garden design would work the best given the soil conditions.

For these reasons, after investigating the depressed areas within the Village and researching native plants, rain garden designs and soil composites, during the summer of 2008, the Village installed a test rain garden on Village property, which served as a basis for future rain garden installations within the Village.

While implementing the Project, the Village learned what rain gardens and bioswale installations need to thrive. For example, to keep the native plantings from dying, the Village realized that rocks needed to be installed near the storm sewer culvert to slow down the flow of water, otherwise the native plants would wash away after it rained. Additional buckthorn also needed to be removed to provide more sunlight for the plantings. The Village also learned that the residents were very interested in the outcome of the Project and its effect with the present drainage issues within the Village. In fact, the Project had begun to bring the community together to help the environment and their fellow neighbor. Residents, businesses, and the university located within the Village became more engaged and aware of the need to implement stormwater Best Management Practices to reduce storm water discharge on their properties.

Thus far, the Program has been a success. However, to reach the Village's ultimate goal of managing stormwater runoff throughout the Village and to raise awareness within its regional waterway, the Village has continued its efforts beyond the initial Project. During the Fall of 2009, the Village (a) completed the installation of 2 more rain gardens on Village property, (b) plans to install 12 more rain gardens in Village right of ways, (c) will implement a public participation program in May 2010 to encourage its residents to incorporate Best Management Practices by installing a rain garden(s) on their property, (d) has educated other communities the benefits of the Program at a Lake County Municipal League workshop, at a Watershed regional meeting, and will be a presenter at the upcoming Alliance for Innovation TLG Conference.