

Leadership in Low Impact Development Recognition Program Report

January 10, 2006

Description

This is a Cooperative Agreement between EPA Region 3: The Mid-Atlantic Region and the Low Impact Development Center, Inc. It is being developed to serve as a leadership model for Low Impact Development (LID) recognition programs across the country by creating an Expert Review Panel to review and recognize LID projects/programs and installations. This model will be useful to stakeholders in EPA regions across the country including local and state governments, universities, private industry, non-profits, and individuals. The chosen projects/programs will be showcased across the EPA agency and other panel member websites.

What is Low Impact Development (LID)?

LID is a stormwater management strategy concerned with maintaining or restoring the natural hydrologic functions of a site to achieve natural resource protection objectives. LID addresses stormwater through small, cost-effective site design and landscape features that are distributed throughout the site. LID projects/programs promote public awareness, education and participation in environmental protection.

Eligibility

Submissions will be accepted from individuals, watershed organizations, state and local government organizations, private contractors, universities, and colleges. The geographic scope of this recognition program is limited to projects/programs conducted in EPA Region 3: The Mid-Atlantic Region (District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, and West Virginia).

Disclaimer: All materials provided for recognition consideration will be made available to the public. By submitting a project/program for recognition the applicant agrees to share all information with the general public via the internet (e.g. EPA and LID Center websites) and workshops and conferences. Exceptions include proprietary information. Please clearly identify this information in the submission materials. If further clarification is needed, please send an email to contact@lowimpactdevelopment.org.

Goals

The primary goal of this effort is to establish a forum in which innovative and sustainable stormwater management planning, design, and program management efforts receive recognition. This model will provide the opportunity

for a diverse group of organizations to present and promote their programs to a variety of audiences.

Justification and Significance

The use of LID practices offers incentives to integrate stormwater management controls into community development, economic, and environmental protection programs. Pilot project installations, full-scale developments, and academic research have shown LID to be a technologically feasible and effective stormwater management approach. Current impediments to the broader application of LID are often institutional barriers that include regulatory language, codes and ordinances, not recognizing true costing, inexperience, and lack of training and public education. Despite these obstacles, there is a groundswell of interest in LID due to the potential for integration with other environmental programs, public acceptance of green infrastructure, and opportunities to leverage funding and resources.

This model will demonstrate how to develop successful LID projects and programs. This includes information on how project/program concepts can be developed, critical pathways to success, and the effectiveness of a project/program at promoting more livable and sustainable communities.

Selection Criteria

Quantitative criteria will be developed and used to assess candidate projects/programs in each Project/Program Category. The criteria and evaluations will be posted as a foundation for development of other LID and sustainable design recognition programs.

The solicitation announcement is to be released in January 2007. More information is available on the web at www.lowimpactdevelopment.org/recognition.

Outcome and Benefits

The immediate outcome of this initial recognition program effort is the submittal and recognition of professional organizations, businesses, stakeholders, and municipalities that incorporate key elements of LID into their projects, training or development programs. The LID Center will report on how the applicants intend to use the strategies and techniques. This will allow permit writers and planners insight and knowledge into how to best incorporate or promote LID with local governments. The metric to gauge success will be the number of codes and ordinances or institutions that promote LID. The second metric is the number of design professionals who are engaged in the process and will start to use LID in their daily consulting operations. The awareness, comfort, and facilitation that will be available by providing the awareness of LID for different development types will be instrumental in providing additional and new ways to design sites and infrastructure so that they are more water sensitive.

LID Expert Review Panel

The ultimate goal of the expert review panel's effort will be to identify the best projects/programs in each of the award areas. The review panel consists of individuals who have demonstrated leadership in promoting innovative environmental programs. The panel consists of a wide-range of academia, practitioners, educators, stormwater program managers, industry, and local government. Following are the 10 participants currently on the panel:

1. Environmental – Melanie Shepherdson, Staff Attorney, Natural Resources Defense Council (NRDC)
2. Private Sector Development – Doug Beisch, P.E., Senior Water Resources Engineer, Williamsburg (VA) Environmental Group, Inc.
3. Regulatory - Rich Dooley, Planner, Arlington County (VA) Planning Division, CPHD
4. ^aTechnical – Howard M. Neukrug, Director, Office of Watersheds, City of Philadelphia (PA) Water Department
5. Academia Research – Robert Traver, Associate Professor, Villanova University, Department of Civil and Environmental Engineering
6. Academia Design – David Myers, Ph.D., Associate Professor, University of Maryland Landscape Architecture Program, Department of Plant Science and Landscape Architecture
7. Government – Ted Graham, Water Resources Program Director, Metropolitan Washington Council of Governments (MWWCOG)
8. Stakeholder - Brian Vanwye, Riverkeeper, Anacostia RIVERKEEPER®
9. ^bBuilder - Michael Luzier, President, National Association of Home Builders (NAHB) Research Center
10. Political – Delegate David Bulova, State of Virginia

^aTechnical (Alternate Representative) – Engineer, City of Philadelphia Water Department

^bBuilder (Alternate Representative) – Alexander P. Duran, Ph.D., P.E., Senior Environmental Engineer, NAHB Research Center

Recipient Recognition

US EPA, as an agency, pays very close attention to innovative and emerging stormwater management techniques, such as LID. This Program has received a high level of interest from not only the Agency, but state and local governments and higher education institutions. Once the review committee has made its final decisions, the Agency, as well as the other involved organizations, will showcase these projects/programs throughout the region via the internet and the media.

The Program anticipates that recipients will be honored through a series of website postings, newsletters, trade magazines, etc. The recipients will be asked to participate in a ceremony in Washington, DC where they will receive

recognition and have the opportunity to meet the other recipients. This will be the beginning of an opportunity to network and learn from other recipients doing interesting and creative work on low impact development.

Recognition will include listserv and newsgroup notification to allow others in the community to learn about the recipients' outstanding efforts. The criteria and discussion of why the project/program was selected for recognition will be included in each of the project/program descriptions. A report on the evaluation and selection process will also be posted.

Feedback

After this initial effort feedback from the participants will be solicited in order to determine how to best improve the process and criteria for future recognition programs. This information will be presented in the final project/program report and posted on the internet site as part of user comments.

Project/Program Categories

This competition is open to ten (10) general project/program categories. A project/program may be submitted under no more than one category. The expert review panel reserves the right to change the submission to another category if the panel concludes that the category would be more appropriate for the recognition of the submission. The panel reserves the right not to award in any and all categories.

The categories and descriptions are provided below. Candidate areas include, but are not limited to, state, federal, and local government projects/programs, monitoring, school projects/programs, revitalization, transportation, environmental restoration, community involvement and outreach, master planning, student project research, codes and ordinances, contractors, builders, and design projects/programs.

Each category is followed by potential award criteria for the review panel to use to finalize the selection criteria for each topic. Each category will also be subjected to general criteria that will be adapted for each category. An example is provided after the description of the ten (10) initial categories. The expert panel will have the opportunity to expand or subtract the categories.

Category 1: Codes and Ordinances: New regulations and systems at the local government level

Description: This category will recognize new regulations and systems at the local government level. An example includes, inserting language into zoning classifications and subdivision requirements allowing the use of overlay districts, Planned Unit Developments (PUDs), or conservation development ordinances. These zoning classifications provide a builder with design and engineering flexibility. Often, adoption of a new zoning classification is far easier than a complete rewrite of local codes.

Potential criteria:

- Comprehensive rewrite of development codes
- New LID codes or overlay areas
- New plumbing or water conservation codes
- Codes that promote reduction of runoff volume or watershed pollutants of concern
- Integration of LID with conventional stormwater approaches

Category 2: Technology and Pilot Projects/programs: Demonstration of innovative non-proprietary approaches and uses of new concepts

Description:

This category will recognize the use of technology and pilot projects/programs that demonstrate new and innovative concepts. This includes recognition of projects/programs that incorporate LID techniques using innovative designs and non-proprietary non-structural and structural approaches. This will also include design techniques that promote LID at the site level, new uses or configurations for BMPs, and construction materials and techniques. Examples may include integration of LID into overall environmental management systems, use of LID for wetlands programs, forest buffers, and air quality. New analysis methods for engineering and design.

Potential criteria:

- Integration of LID with other protection programs
- Development of watershed retrofit approach
- Integration with other infrastructure elements
- Modeling demonstration of effectiveness
- Construction phasing
- Life-cycle costs; recycled material selection; innovation planting

Category 3: Visionary Projects/programs: non-built academia and design contests

Description: This category will recognize potential implementation of visionary projects/programs including non-built academia and design contests. An example includes students designing solutions that respond to the innovative and creative use of low impact development techniques in the built environment.

Potential criteria:

- Watershed restoration plans
- Site Designs that demonstrate water balance
- Outreach materials

Category 4: Leadership: Government initiatives

Description: This category will recognize leadership projects/programs implemented in government initiatives. This will be for agencies or elected officials that strive to promote the sustainable management through the implementation of cost-effective, environmentally sound landscaping practices and programs designed to reduce adverse impacts on the natural environment.

This may include structural and non-structural projects/programs. Sustainable environmental management can be implemented directly and visibly through the use of LID.

Potential criteria:

- Local government outreach program
- LID funding approaches
- Provide educational opportunities for the community (e.g. tours for school children)

Category 5: Leadership: NGO initiatives

Description: This category will recognize leadership projects/programs implemented in NGO initiatives. This will be for NGOs that strive to promote the sustainable management through the implementation of cost-effective, environmentally sound landscaping practices and programs designed to reduce adverse impacts on the natural environment. This may include structural and non-structural projects/programs. Sustainable environmental management can be implemented directly and visibly through the use of LID.

Potential criteria:

- NGO community outreach program
- LID funding approaches
- Provide educational opportunities for the community (e.g. tours for school children)

Category 6: Research: Demonstration of benefits

Description: The consensus among researchers is that a properly designed LID system will reduce peak outflow and volume compared with a conventional BMP. Similar to traditional stormwater management practices, ample quantitative data concerning the pollutant removal capabilities of LID practices is available.

This category will recognize research efforts that demonstrate the benefits of LID. An example includes comparing pollutant removal effectiveness of LID practices versus traditional practices and linking the user to technical specifications for the best management practice (BMP).

Potential criteria:

- Life cycle costing
- Effectiveness of individual BMPs
- LID specifications
- Effectiveness of LID systems
- Outline weaknesses and mistakes – provide suggestions for similar future projects/programs

Category 7: Educational Programs: Outreach and Jobs

Description: LID education needs to occur among all stakeholder groups; however, arguably the most important group is still the municipal community. Without the support and encouragement of these individuals, the use of these

practices is severely limited. New outreach and education materials need to target these officials and communicate that these practices are safe, effective, and easy to implement.

This category will recognize educational programs that promote the use of LID. LID BMPs can serve as educational tools, facilitate awareness of the environment, and encourage stewardship. Examples include rain barrel distribution and installation programs as a forum for public awareness about the effects and impacts of residential stormwater. The use of vegetated BMPs can also bring public awareness to the effects of urbanization on hydrology and the natural water balance. LID is a visible stormwater control system as opposed to conventional controls, which often are underground infrastructure components.

Potential criteria:

- LID training program materials
- Integration into jobs programs
- LID outreach brochures
- Establishment of partnerships
- Project/program visibility and public education (e.g. tours, education of school children)

Category 8: Built projects: large-scale implementation

Description: LID can be used in the planning process for new development and the redevelopment and retrofit of urban areas. This category will recognize built projects with large-scale implementation of LID. These projects can include large infrastructure retrofits, such as parking lots, that demonstrate one or more techniques, or for entire development or redevelopment projects.

Potential criteria:

- Integration of LID with Smart Growth Concepts
- Design for targeted watershed pollutants
- Overall livable community

Category 9: Corporate and Private Sector: Leadership and implementation for businesses

Description: LID practices offer opportunities to reduce the life cycle cost of a site's stormwater infrastructure. This category will recognize corporate and private sector projects/programs that exhibit outstanding leadership and implementation as a corporate investment in the community.

Potential Criteria:

- Multiple projects/programs using LID
- Corporate training programs
- Corporate design and maintenance criteria

Category 10: Institutional: Large public sector implementation project / program

Description: This category will recognize institutional projects/programs that include large public sector implementation. An example includes a watershed restoration project that incorporates LID strategies and new public facilities.

Potential Criteria:

- Government Building retrofit or new construction
- LID community retrofit program
- Mitigation for CSO area
- Reduction in stormwater
- Energy savings

Project/program Criteria

The following section provides a description of the general criteria that will be considered in evaluating for the submissions for each of categories. The goal is to provide the committee with some common themes that apply to each of the award areas.

General Criteria:

A. Environmental

- Utilize an LID practice for environmental protection of receiving waters.
 - i. Wetlands
 - ii. Vegetated Buffer Zones
 - iii. Encourage watershed approaches
- Develop the full potential of environmentally sensitive site planning and design.
 - i. Reduce connectivity of impervious surfaces
 - ii. Reduce tree clearing
 - iii. Integration with Green building concepts
 - iv. Use recyclable materials
- Encourage public education and participation in environmental protection.
 - i. Encourage environmental stewardship
 - ii. Improve aesthetic appeal of community
 - iii. Increase wildlife and habitat protection areas
- Encourage flexibility in regulations that allows innovative engineering and site planning to promote smart growth principles.
 - i. Codes and ordinances

B. Economic

- Reduce construction and maintenance costs of the stormwater infrastructure.
 - i. Reduce long-term community costs
 - ii. Environmental Management Systems
- Provide economic incentives that encourage environmentally sensitive development.
 - i. Codes and ordinances may be amended
 - ii. Provide incentives for LID including the use of:
 1. Density bonuses
 2. Reduction of municipal submittal fees

3. Early construction start permits
 - Long-term cost savings.
 - i. Homeowner cost-savings: Energy and water
 - ii. Show reduced costs to community
 - Attract environmentally conscious buyers to your community.

C. Outreach

- Promote citizen stewardship, awareness and participation in environmental protection programs.
- Help to build a greater sense of community.
- Encourage partnerships

Scoring Criteria:

Each category will be awarded four places: 1st, 2nd, 3rd, and honorable mention. An expert review panel member will be selected to lead the evaluation of each category. Each panel member will evaluate the submission independently. The results from each member will be compiled to produce a list of top four projects/programs for each category. The lists will be used as a guide for the panel to reach a consensus on the selection of each award. The lead panel member and the LID Center will facilitate the final selection in the event that the group cannot reach consensus.

	Scoring Criteria	Description
1.	Innovation	Encourages innovative and creative management of site planning impacts.
2.	Ease of Implementation	Implementation can be modified to sites across Region 3 and throughout the country.
3.	Cost Effectiveness	Provides economic incentives that encourage environmentally sensitive development.
4.	Site Design – Environmentally Sensitive	Site design includes pollution prevention measures that store, infiltrate, evaporate, and detain runoff.
5.	Aesthetic Appeal	Provides a function to control site hydrology, but is also aesthetically pleasing.
6.	Water Quality – Environmental Protection of Receiving Waters	Demonstrates significant positive effect on stream stability, habitat structure, base flows, and water quality.
7.	Outreach and Education	Promote citizen stewardship, awareness and participation in environmental protection programs.
8.	Regulatory Flexibility	Encourages flexibility in regulations that allows innovative engineering and site planning to promote smart growth principles.
9.	Projected Long-term Success of Project / Program	Promotes reduction of site development and long-term maintenance costs

		through cost-effective designs and citizen participation and acceptance.
10.	Monitoring – Water Quality and Quantity	Development and use of appropriate pre- and post-development monitoring protocols to document the effectiveness of individual management practices as well as the overall LID approach.
11.	Other Environmental Benefits	Promotes reduction of energy and / or water use. Encourages conservation of wildlife habitat.

A database will be implemented to track the awarded projects/programs and follow future progress. The primary objective of the database is to maintain an administrative handle on the recognition program and improve the effectiveness of future recognition programs.

How to submit a project/program for consideration

Please submit electronic copies of your submission, which should include the following:

- Application form. See below.
- Project/program Summary (see application form for complete requirements)
 - Maximum five (5) pages of text (font size 12, Times New Roman or Arial).
 - File types MS Word (.doc), WordPerfect (.wpd), Rich Text Files (.rtf).
 - Imbedded graphics and photographs should be compressed.
 - Maximum 2 MB total file size

NOTE: While we prefer electronic submissions we will consider paper submissions under special circumstances. Please send an email to contact@lowimpactdevelopment.org to make this request.

Questions and comments for any aspect of this recognition program should be emailed to contact@lowimpactdevelopment.org.

Entry Deadline

Due by close of business March 9, 2007.

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