3.8 Implement Low Impact Development

5 – 125 Points

Action Updates

This action was last updated in 2024. A version of this action from the prior program year is available for comparison. Edits are highlighted in yellow.

Objective

Inspire low impact development (LID) projects in your community.

What to Do

Note: MS4 permits authorize government entities to discharge water collected by their storm sewer systems to U.S. waters. Effective 2017, the Connecticut Department of Energy and Environmental Protection issued a permit that applies to 121 of Connecticut's 169 municipalities. Activities by covered municipalities to comply with MS4 General Permit requirements are not eligible for points under this action; activities must go beyond compliance.

1. Education Projects

   The more you do, the more points you earn.

   a. Choose one or more target audiences (such as homeowners, contractors, and/or developers) and develop and distribute educational materials on low impact development (LID) practices and their benefits, through the town website or other means. Such materials should describe at least three LID practices, including but not limited to bioswales, bioretention/rain gardens, cisterns/rain barrels, stormwater wetlands, green roofs, permeable pavement and other site planning and development LID best practices. **(5 points)**

   Submit: An overview of the education provided (5 sentences maximum), including target populations, and at least one example of educational materials disseminated in the last three years, which could include flyers, articles, letters, newsletters, presentations, or digital communications. For websites, submit both a hyperlink and a screenshot of the relevant webpage(s).

   b. Host an educational event on storm-water issues and LID, with potential topics including but not limited to those described in part (a) above. The event must have taken place in the last three years. **(5 points)**

   Submit: Your completed event discussion worksheet and at least one example of educational materials disseminated, which could include flyers, articles, letters, newsletters, presentations, or digital communications. For websites, submit both a hyperlink and a screenshot of the relevant webpage(s).

   c. Have at least one municipal employee (such as a town manager, town engineer, public works department personnel, or other facilities maintenance personnel) or at least one member of a relevant commission attend a training on LID/green infrastructure practices. The training must have taken place in the last three years. **(5 points)**

   Submit: The name(s) and title(s) of the individual(s) who attended the training, date of attendance, the organization that provided the training, and an agenda or brief description of the content covered.

2. Planning, Regulation and Policy

The more you do, the more points you earn.

a. Distribute educational materials on LID practices to developers and contractors at the outset of the permitting process. **(5 points)**

Submit: An overview of the education provided (5 sentences maximum) and at least one example of educational materials disseminated in the last three years, which could include flyers, articles, letters, newsletters, presentations, or digital communications. For websites, submit both a hyperlink and a screenshot of the relevant webpage(s).

b. Consistent with your Plan of Conservation and Development (POCD), encourage and promote LID in your municipal ordinances and/or regulations through one or more of the following strategies: (1) adopting an LID checklist or similar regulation for new and redevelopments that establishes LID as the preferred approach to stormwater management wherever possible; (2) adopting 3 or more of the practices identified in the LID worksheet; or (3) completing a review of existing regulations using the Center for Watershed Protection's Code and Ordinances Worksheet or similar tool. ***Please note*** that strategies submitted under this action are not also eligible for points under Sustainable CT Action Promote Effective Parking Management or any other action (no double-counting). **(15 points)**

Submit: For strategy 1, submit a copy of your checklist; for strategy 2, submit the language in the relevant ordinances and/or regulation(s) formally adopted by your governing body that encourage or promote low impact development and your completed low-impact development worksheet; for strategy 3, submit your completed Codes and Ordinances worksheet. If the selected strategy (or strategies) was implemented more than three years ago, also include a brief description of how it is still relevant and used by your municipality.

c. By municipal resolution or ordinance, adopt a policy stating that for any municipal construction and/or reconstruction project, the use of LID must be implemented to the extent possible to manage runoff from the site. At a minimum, the policy should address at least two LID practices that must be integrated, and the anticipated social and environmental benefits. **(20 points)**

Submit: A copy of the resolution or ordinance formally adopted by your governing body; documentation that the resolution or ordinance has been adopted (such as meeting minutes, a copy of the municipal zoning regulations with relevant portions highlighted, a link to municipal ordinances, or similar verification); and a brief description of how your policy addresses at least two LID practices and anticipated social and environmental benefits.

3. Implement LID

a. Develop and implement a LID implementation project, with permanent signage, in a high-visibility location (such project could be on municipally owned property or on a collaborating private parcel). The LID implementation project must have been completed in the last three years. **(15 points)**

Submit: Photos of the implementation project, inclusive of permanent signage, and a brief description of the project, including the date it was completed.

b. Develop a long-term maintenance plan for LID installations on municipal property. Such plan, at a minimum, should include: **(10 points)**

- Inspection schedule to confirm proper functioning;
- Enumerated maintenance tasks such as removal of sediment buildup, vegetation management, overflow clearing, etc.; and
- Indication of who is responsible for maintenance.

Submit: The maintenance plan, evidence of adoption by Department of Public Works or other appropriate town body, and your completed maintenance plan worksheet. If your plan was adopted more than three years ago, also include a brief description of how it is still relevant and used by your municipality.

c. Establish a program to incentivize homeowners to implement low impact development (LID) practices on private property. Examples might include reduced cost rain barrels, reduced cost rain-garden plantings, etc.

For long-term, ongoing programs, there must have been activity in the last three years. **(5 points)**

Submit: A copy of the program announcement, program description (including dates of most recent activity), and website, if applicable. Additionally, you must include the number of LID practices installed.

d. Reduce directly connected impervious area compared to a baseline year within the past 3 years. For each 1% reduction town-wide or within a targeted watershed, or reduction of 25 acres of directly connected impervious area, **10 points will be awarded, for a maximum of 40 points.**

Submit: Data showing the amount of impervious area in your baseline year as well as data for the current year demonstrating that a reduction has been achieved.

Engaging Partners

Sustainable CT encourages regional collaboration and other forms of partnership. For every action, please complete the "Partners" box in your submission, indicating the name(s) of any municipalities and/or organizations you partnered with (if any) and a brief description of your municipality's role. If you collaborate with other municipalities, each community will receive points. For additional information, please see the "Partners Guidance Document".

Potential Municipal and Community Collaborators

Staff from the planning department, public works, engineering, and board of selectmen or mayor's office could be helpful in implementing this action.

In addition, the planning and zoning commission, homeowners, and business owners could help implement this action.

Funding

If available, below are potential funding sources specific to this Action. For a complete listing of potential funding opportunities to assist with implementing Sustainable CT Actions, please visit the Sustainable CT Grants Portal, which is searchable by Action. Please also visit the Support for Your Town page for opportunities for technical assistance and other supports.

- Urban Act Grant Program
- Sustainable CT Community Match Fund
- State Funding Readiness Project

Resources

Toolkits, Calculators, Guidance Documents

- UConn, Center for Land Use Education and Research (CLEAR), "the State of Low Impact Development in Connecticut"
- UConn, Center for Land Use Education and Research (CLEAR), "UConn Green Infrastructure Virtual Tour"
- CT Department of Energy and Environmental Protection, "2004 Connecticut Stormwater Quality Manual"
- Trinkaus Engineering, LCC, "Morris Low Impact Sustainable Development and Stormwater Management Design Manual"
- US Global Change Research Program, "National Climate Assessment, Northeast Chapter"
- American Society of Landscape Architects, "Green Infrastructure"
- US Environmental Protection Agency, "Benefits of Green Infrastructure"
- Georgetown Climate Center, "Green Infrastructure Toolkit"
- National Oceanic and Atmospheric Administration, Habitat Conservation, "Living Shorelines"
- US Environmental Protection Agency, Green Infrastructure Wizard
- Living Shorelines Academy
- CT Department of Energy and Environmental Protection, "Municipal Outreach for Green Infrastructure and Low Impact Development"
- Connecticut River Coastal Conservation District & North Central Conservation District, "How to Create a

Streamside Buffer Garden"

Organizations and Relevant Programs

- Center for Watershed Protection
- US Environmental Protection Agency, "National Pollutant Discharge Elimination System (NPDES)
- Connecticut Sea Grant
- Connecticut Institute for Resilience and Climate Adaptation
- University of Connecticut Center for Land Use Education and Research (CLEAR)
- CT Nonpoint Education for Municipal Officials (CT NEMO)
- Connecticut Conservation Districts

Why This Matters

According to the nonprofit, Center for Watershed Protection, "as much as 65% of the total impervious cover over America's landscape consists of streets, parking lots, and driveways –what center staff refer to as 'habitat for cars.'"

Rainwater hitting these surfaces does not penetrate and ends up flowing directly into streams and rivers. When water does not have a chance to penetrate the aquifer before arriving at streams, a host of issues arise– polluted water enters streams, the water is too hot from being on the pavement, streams fed by groundwater dry up, and the wetlands fed by springs dry up. All of this is very disruptive to wildlife, and nature in general.

Roadway and parking surface pollutants come from automobiles, and building and construction waste. Pavement collects nitrogen oxides from car exhaust, rubber particles from tires, debris from brake systems, phosphates from residential and agricultural fertilizers, and dozens of other pollutants, all of which get washed directly into streams and rivers before being cleansed by microbes filtered by soil.

To handle the volume of stormwater running off large impervious areas, communities install catch basins, piping, and culverts. These stormwater management systems are expensive to install and maintain. If not properly maintained, areas flood.

Flooding and pollution affect both environmental and economic sustainability by making activities like swimming, fishing or shell-fishing unappealing at best, dangerous or impossible at worst.

Benefits

One successful strategy to reduce urban runoff that has emerged in the past 20 years is the use of low impact development (LID) practices, also know as green infrastructure. LID practices include green roofs, pervious pavements, rain gardens, bioretention cells, and roadside bioswales.

Also, LID practices:

- Allow rainfall to seep into the ground, which
    - Reduces the runoff that enters the stormwater system, and thereby
    - Reduces flooding
- Improve water quality by allowing the natural soil to filter and reduce pollutants, and
- Reduce "heat island" effects in urban communities.

CT Success Stories

- Coventry - May 2022 Certification
- Mansfield - Oct 2022 Certification
- Vernon - Oct 2022 Certification
- Hamden - Sep 2023 Certification
- New Haven - Sep 2023 Certification
- Deep River - Oct 2024 Certification

- Greenwich - Oct 2024 Certification