3.8 Implement Low Impact Development

5 – 105 Points

Action Updates

This action has been revised for the **current certification cycle**. A version of this action from the prior program year is available for comparison. Edits are highlighted in yellow. (Last updated 2020)

Objective

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

What to Do

The more you do, the more points you earn. Actions completed may be included in your submission for Sustainable CT Action Integrate Sustainability into Plan of Conservation and Development.

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 **(up to 15 points)**

   a. Choose one or more target audiences (such as homeowners, contractors, and/or developers) and develop/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 from among 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). Submission of a single link on the town website will not satisfy the submission requirements for this action.

   Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Outreach, Education, Programs, Campaigns, Recognition/Designation in External Program, and Funding" (see "Timeframe for Credit" Guidance Document for submission requirements).

   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. **(5 points)**

   Submit: Your completed event discussion worksheet and at least one example from among 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).

   Timeframe for Credit: Eligible for new action credit. This action falls under the action type "Events, Meetings, Trainings" (see "Timeframe for Credit" Guidance Document for submission requirements).

   c. Have at least one municipal employee, such as a town manager, town engineer, public works department

personnel, or other facilities maintenance personnel attend a training on LID/green infrastructure practices. **(5 points)**

Submit: The name, date and description of training; the name of the organization that provided the training; and the names and titles of municipal staff members who attended.

Timeframe for Credit: Eligible for new action credit. This action falls under the action type "Events, Meetings, Trainings" (see "Timeframe for Credit" Guidance Document for submission requirements).

2. Planning, Regulation and Policy **(up to 35 points)**

a. Implement a formal, consistently implemented municipal policy and practice of distributing educational materials on LID practices to developers and contractors at the outset of the permitting process. **(5 points)**

Submit: Your officially adopted policy and copies of the educational materials distributed.

Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions" (see "Timeframe for Credit" Guidance Document for submission requirements).

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: A copy of your checklist; 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; and/or your completed Codes and Ordinances worksheet.

Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions" (see "Timeframe for Credit" Guidance Document for submission requirements).

c. By municipal resolution or ordinance, adopt a policy stating that for any municipal construction/reconstruction project, the use of LID must be implemented to the extent possible to manage runoff from the site. Distribute the newly adopted policy to relevant department or division heads, publish the policy to the municipal website, and communicate the policy to developers. At a minimum, the policy should address at least two LID practices that must be integrated, and the anticipated social and environmental benefits. **(15 points)**

Submit: The policy that the governing body adopted by resolution or ordinance, as well as evidence that you distributed the adopted policy to relevant municipal departments (either via email, an in-person meeting, a staff newsletter or other channels). Please also describe specifically where your policy addresses each of the components listed above.

Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions" (see "Timeframe for Credit" Guidance Document for submission requirements).

3. Implementation Projects **(up to 55 points)**

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). **(5 points)**

Submit: Photos of the implementation project, inclusive of permanent signage, and a brief description of the project.

Timeframe for Credit: Eligible for new action credit. This action falls under the action type "Implementation Projects" (see "Timeframe for Credit" Guidance Document for submission requirements).

b. Develop a long-term maintenance plan for LID installations on municipal property. Such plan, at a minimum, should include: **(5 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 or otherwise indicate how the required elements of the maintenance plan can be found.

Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions" (see "Timeframe for Credit" Guidance Document for submission requirements).

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. **(5 points)**

Submit: A copy of the program announcement, program description, and website, if applicable. Additionally, you must include the number of LID practices installed.

Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Outreach, Education, Programs, Campaigns, Recognition/Designation in External Program, and Funding" (see "Timeframe for Credit" Guidance Document for submission requirements).

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.

Timeframe for Credit: Eligible for new action credit. This action falls under the action type "Data Tracking/Benchmarking and Meeting Performance Metrics" (see "Timeframe for Credit" Guidance Document for submission requirements).

Timeframe for Credit

Actions can either be "New" or considered for "Rolling Credit."

New Action Credit. Any action completed within the past three years (from January 1 of the year seeking certification) is eligible for potential certification points. If you are applying for recertification in your year of expiration, you may not claim New Action Credit for items that previously received credit.

Rolling Credit. For any action older than three years (from January 1 of the year seeking certification), you must demonstrate ongoing, currently relevant, and meaningful impact in your community to be considered for certification points. If you are applying for recertification in your year of expiration, you must apply for Rolling Credit for any item that previously received credit, even if it was completed within the past three years.

View the "Timeframe for Credit" Guidance Document for detailed submission requirements.

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
- Municipal Grant Program (MGP)
- 2021 Sustainable CT Community Match Fund

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

- East Lyme - Oct 2019 Certification
- New Haven - Oct 2019 Certification
- Vernon - Oct 2019 Certification
- Waterford - Oct 2019 Certification
- Norwalk - Oct 2020 Certification
- Old Saybrook - Oct 2020 Certification