

December Disconnection workshop series

- Today - Supporting Low Impact Development (LID) Practices in Local Regulations
- Wednesday December 9th – Finding Retrofits
- Wednesday, December 16th – Keeping Track & Maintenance

UCONN | COLLEGE OF AGRICULTURE,
HEALTH AND NATURAL RESOURCES



December Disconnection Workshop Series

Supporting Low Impact Development (LID) Practices in Local Regulations Wednesday, December 2nd, 1 to 2 pm

- 1:00 pm **Summary of LID provisions in CT's MS4 permit**
Amanda Ryan, UConn CLEAR
- 1:15 pm **Assessing barriers to LID in local regulations**
Aaron Budris, Naugatuck Valley Council of Governments
- 1:25 pm **Using a LID Checklist for site plan reviews**
Linda Painter, Town of Mansfield
- 1:35 pm **Greenwich Stormwater Drainage Manual**
Patricia Sesto, Town of Greenwich
- 1:50 **CLEAR State of LID StoryMap**
Dave Dickson, UConn CLEAR

Finding Retrofits

Wednesday, December 9th, 1 to 2 pm

- 1:00 pm **Disconnection strategies**
Chet Arnold and Dave Dickson, UConn CLEAR
- 1:20 pm **Roadway disconnection case study**
Judy Rondeau, Eastern CT Conservation District
- 1:35 pm **Parking lot disconnection case study**
Laura Pulie, Town of Fairfield
- 1:50 pm **Questions**

Keeping Track & Maintenance

Wednesday, December 16th, 1 to 2 pm

- 1:00 pm **MS4 2% disconnection IC goal explained**
Amanda Ryan, UConn CLEAR
- 1:05 pm **Tracking disconnections**
Mike Dietz, UConn CLEAR
- 1:25 pm **Maintaining LID**
- *Mike Dietz, UConn CLEAR*

LID in the MS4 Permit

Amanda Ryan

UConn CLEAR

Amanda.ryan@uconn.edu

MS4 support for you!

- UConn CLEAR provides MS4 support to towns:
 - Website – www.nemo.uconn.edu/ms4
 - Listserv
 - Circuit Rider
 - Workshops, webinars, templates

Webinar Archive

Getting to 2%: Case Studies in Impervious Cover Disconnection

November 14, 2019

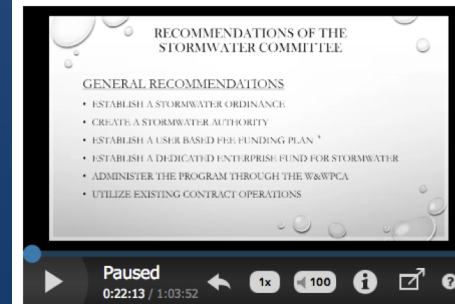
In this webinar, we highlight disconnection strategies from East Lyme and the UConn Storrs spreadsheet) for calculating total Directly Connected Impervious Area (DCIA) and describes they have used to get to the 2% disconnection goal. Then, Mike Dietz covers how he tracks practices treating stormwater runoff in Storrs.



Stormwater Utilities in CT?!

October 1, 2019

Stormwater utilities are used across the country as a way for municipalities to cover the cost of infrastructure. The concept has been slow to catch on in Connecticut - the state's one and only. This webinar features Joe Lanzafame from New London who shares how their utility works. We also hear an update from Randy Collins from the CT Conference of Municipalities (CCM) about municipalities with clear authority to establish their own stormwater utility.



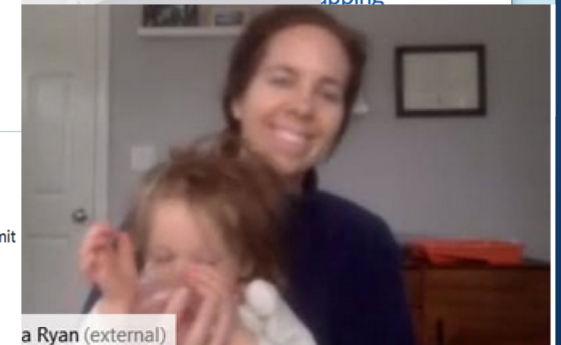
CT's MS4 Permit: What to do in Year 3

June 24, 2019

This webinar covers tasks coming due during the third year of the updated CT MS4 permit and the tasks due every year.



A screenshot of the NEMO website interface. The header includes a search icon, "A-Z", and the "NEMO" logo. Below the header, there are navigation tabs for "NEMO" and "CLEAR". The main content area features a map of Connecticut with various municipalities highlighted in different colors (blue, red, purple). To the right of the map, there is a text box that reads: "Developed by NEMO at the UConn Center for Land Use Education and Research with support from the Connecticut Department of Environmental Protection, a broad outreach effort including training, tools and other resources to help Connecticut MS4 municipalities comply with the new general permit. This permit is updated and materials released throughout the 5-year project (fall 2021) based on stakeholder requirements and requests." Below the text box, there are links for "Monitoring" and "Mapping".



CT's MS4 Permit in 60 seconds

CT DEEP

- Update Permit every 5 years
- Receive Permit registrations and Annual Reports
- Conduct inspections

MS4 Permit Structure

- 6 Minimum control measures plus monitoring

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CENTER FOR LAND USE EDUCATION AND RESEARCH & CT NEMO

Connecticut MS4 Guide

Home Basics Tasks Tools About MS4 News NEMO CLEAR

Public Education & Outreach

Public Involvement

Illicit Discharge Detection & Elimination

Construction Site Stormwater Runoff Control

Post-construction Stormwater Management

Pollution Prevention & Good Housekeeping

This guide was developed by NEMO program staff within the UConn Center for Land Use Education and Research with funding from the Connecticut Department of Energy and Environmental Protection (DEEP). It is part of a broad outreach effort to provide guidance, training, tools and other support to help Connecticut MS4 communities and institutions comply with the revised MS4 general permit. This site is frequently updated and materials will be added throughout the 5-year project period (Fall 2016 – Fall 2021) based on deadlines for various requirements and community needs or requests.

Monitoring

Mapping

Legal Authorities

Low Impact Development

- Maintain pre-development hydrology
- use many small-scale practices
- distributed throughout a site to manage runoff volume and water quality at the source



Rain Gardens
Permeable pavement
Dry wells
Tree box filters
Green roofs
And many more

LID in the MS4

Establish a legal authority
(*ordinance, bylaw, regulation,
standard condition of approval or
other appropriate legal authority*)
to:

1. Review local guidance & regulations for barriers
2. Developers shall consider LID first
3. Infiltrate first inch of rain on-site
4. If not possible, establish alternative options

Permit due date:

July 1st, 2021

* July 2022 for new MS4 towns
& institutions

1. Review local guidance & regulations for barriers to LID

Review guidance for barriers

- Ex. Zoning regulations, street design requirements, etc.

Reduce/eliminate barriers 'where appropriate'

Resources

Low Impact Development

Tools for reviewing and updating municipal regulations

- [Developing a Sustainable Community](#) by CT NEMO. An easy to use guide to help Connecticut communities craft plans and regulations that promote Low Impact Development and protect water quality.
- [LID Site Planning and Design Techniques: Municipal Self assessment](#) by RI NEMO. A comprehensive step-by-step guide for reviewing municipal regulations
- [Code and Ordinance Worksheet \(COW\)](#) by the Center for Watershed Protection. A tool to help communities evaluate their local development regulations to identify revisions that allow (or require) site developers to minimize impervious cover, conserve natural areas and use runoff reduction practices to manage stormwater runoff.

Tools for reviewing site plans

- [CT NEMO sample LID checklist](#) for site plans.
- [Town of Vernon LID checklist](#) for review of development applications to the Planning & Zoning Department.

LID Design templates

- [Tree well designs](#) from the Town of East Lyme.
- [15'x 5' Bioswale design](#) from the City of New Haven.
- [Bioswale cross section](#) from the City of New Haven.
- [CT NEMO's Rain Garden App and website](#).

<https://nemo.uconn.edu/ms4/tasks/post-construction.htm>

2. Developers shall consider LID first

- Prior to other local guidance
- Applies to new and redevelopment of sites ½ acre (or smaller if normally regulated)
- Site = extent of construction activities, including creation of new impervious cover
 - repaving or rebuilding on existing footprint without disturbing any soil would not be included

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3. Infiltrate first inch of rainfall on-site*

- Retain first 1" on-site if <40% DCIA
- *Retain first ½" on-site if >40% DCIA
- If not feasible...

Excuse me, what's DCIA?

- Directly Connected Impervious Area
- It's any impervious area that connects to storm sewer system like this parking lot:



4. Set-up alternative options

When stormwater infiltration standard can't be met:

- Developer explains why and:
 - Proposes alternative site / project to make up for rainfall volume not infiltrated
 - OR pays a fee to town

A Guide to Meeting the MS4 Post-construction Legal Authority Requirements

We compiled example regulatory language / mechanisms to help towns and institutions get started in meeting the legal authority requirements in the CT MS4 General Permit Section 6(a)(5)(A) and (B) – also known as the post-construction legal authority requirement.

This is one of the more complex sections of the permit and towns are sure to implement this requirement in many ways. The example regulatory language that follows may be adapted to fit the particular needs and circumstances in each town and by no means is any of this required to be used. **Finally, the resources we're providing don't constitute legal advice. Please be sure to consult your lawyer!**

What are the requirements?

In a nutshell, the post construction legal authority requires (to the maximum extent practicable) that MS4 towns and institutions establish a legal authority that:

1. Requires developers and contractors to default to using LID practices in their projects and prioritize LID over other municipal requirements or guidance. If LID isn't feasible on a particular site, the developer / contractor must explain why LID can't be used in their application to the town.

The Runoff Reduction Checklist can be used or adapted to review projects for compliance with this requirement.

2. Set the following minimum stormwater retention standards:
 - a. Water Quality Volume (WQV) for sites with less than 40% DCIA
 - b. ½ the WQV for sites with more than 40% DCIA

The Stormwater Retention regulatory language example below can be adapted and used to add this requirement to town regulations.

3. If the relevant stormwater retention volume cannot be achieved, then two options are offered:
 - a. Whatever remaining volume that cannot be retained may instead be retained by an off-site mitigation project;
See example regulatory language in the Off-site Mitigation regulatory language section below.

We recommend reviewing this reference from Massachusetts: [Guidance](#)

Thank you!

- Please add any questions you have in the chat box...
- Next, Aaron Budris from Naugatuck Valley Council of Governments