UCONN | COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES

Connecticut's MS4 Permit:

What's New?

CAFM Conference
October 25, 2016

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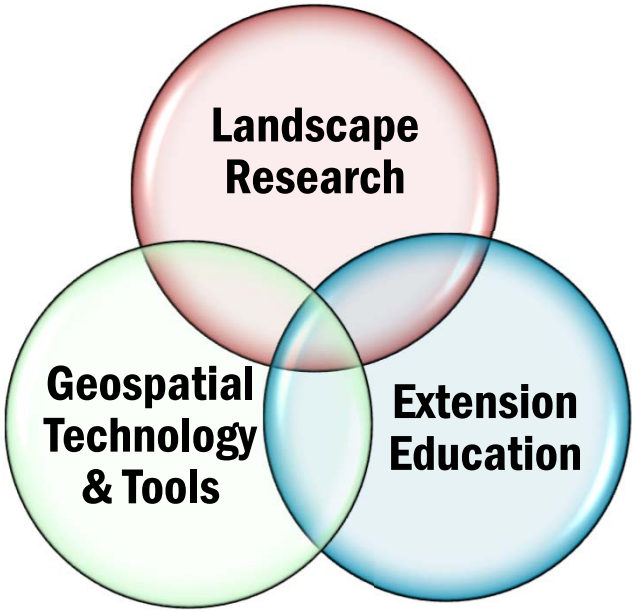
CT NEMO Program
Center for Land Use Education & Research

Center for Land Use Education and Research (CLEAR)

- Water
- Land use & climate adaptation
- Geospatial (mapping) technology



http://clear.uconn.edu

CLEAR/DEEP Partnership

CLEAR
Center for Land Use Education & Research

CONNECTICUT ENERGY ENVIRONMENT

- 5 year MOA
- Provide multi-faceted support to MS4 towns

MS4 Basics: The Big 6

Minimum Control Measures

1. Public education & outreach
2. Public participation
3. Illicit discharge detection & elimination (IDDE)
4. Construction site runoff control
5. Post-construction stormwater management
6. Pollution prevention/good housekeeping

New Permit - More "Detailed"

Old Permit – 17 pages

New Permit – 68 pages

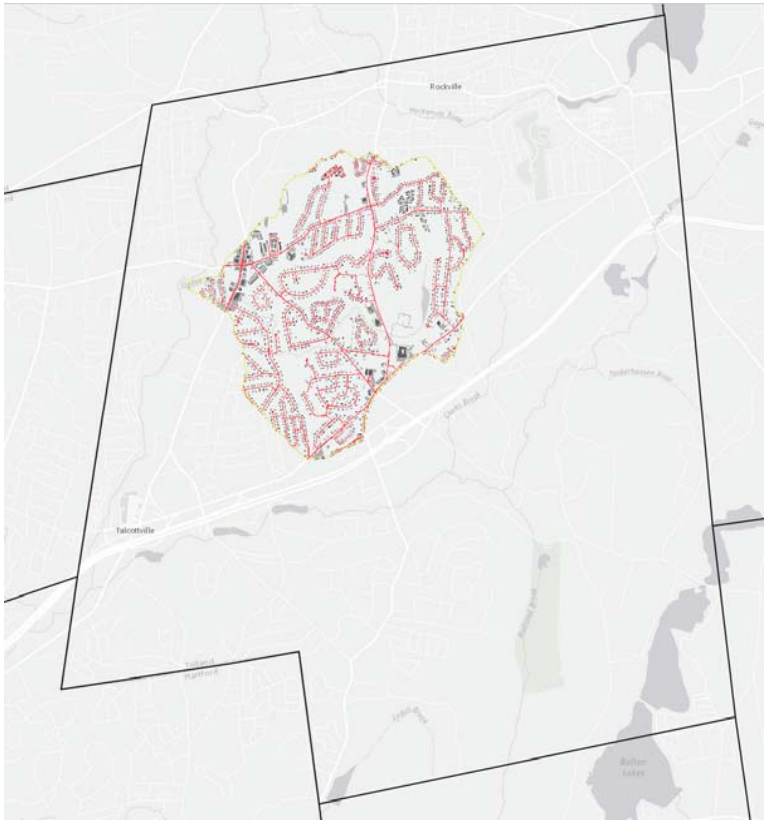
NEW

Scope of Activities- New Permit

Townwide by Default

"Priority Areas"

- Urbanized Areas
- Outfall to impaired waters
- Catchment area with DCIA > 11%



Vernon, CT

NEW

Directly Connected Impervious Area

Directly Connected

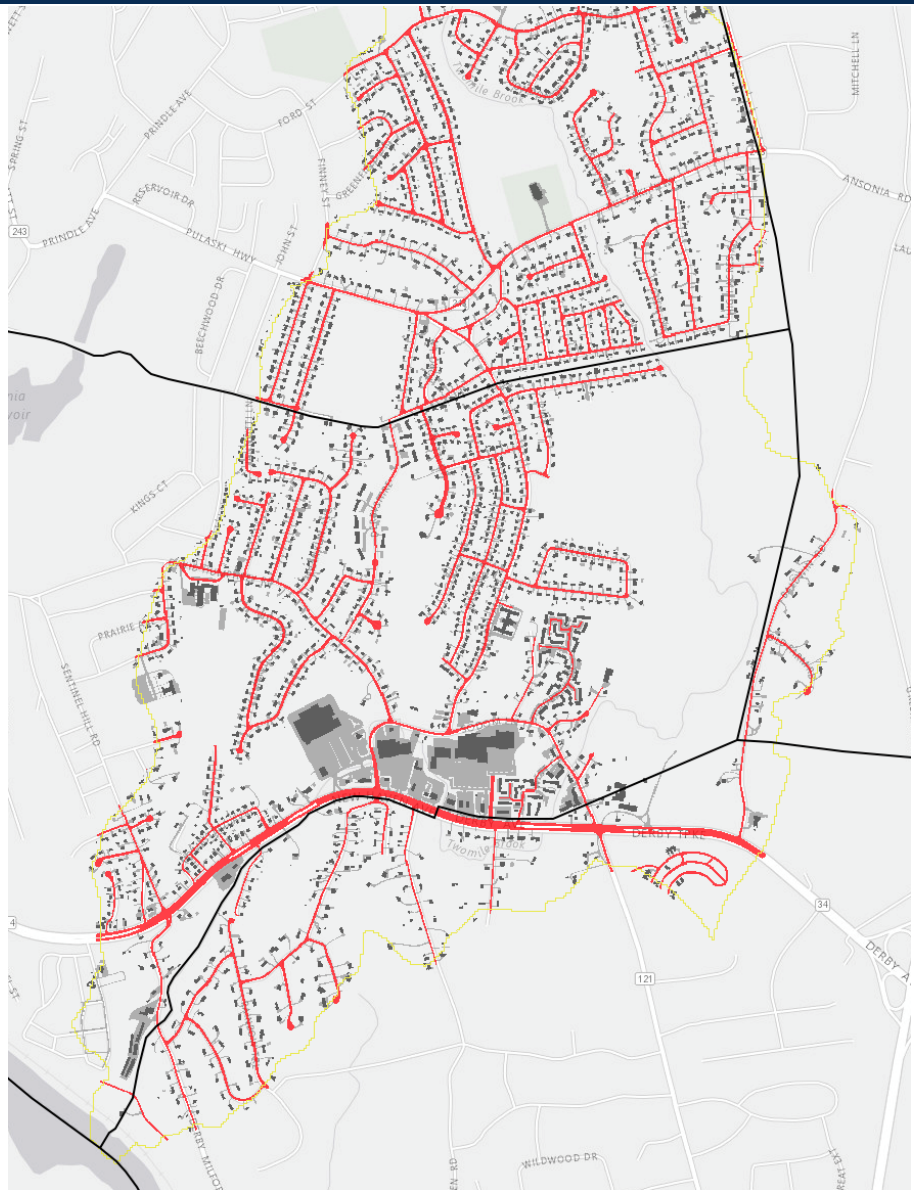
Disconnected

NEW

Directly Connected Impervious Area

Calculating DCIA

- Delineate every outfall's "watershed"
- DCIA within that watershed
- Methods:
  - Estimation
  - Field test



Six Minimum Control Measures

City of South Portland

NEW

Public Education

Required topics

- Pet waste
- Fertilizer, herbicides, and pesticides
- Impervious cover
- Illicit discharges

Regional collaboration ok

Additional topics

- Topics based on impairments for nitrogen, phosphorus, bacteria, mercury

Stormwater Pollution Solutions

Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

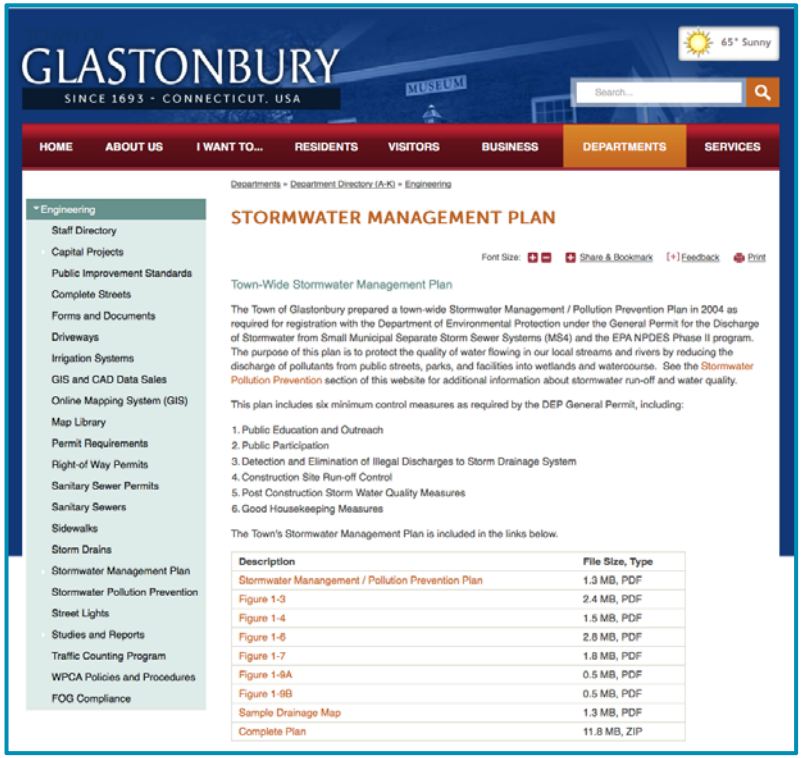
Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

NEW

Public Involvement/Participation

New

- Annual notice of SMP & annual report by Jan. 31
- Required 30 day comment periods



NEW Illicit Discharge Detection & Elimination

New

- Priority areas
- Develop written program -IDDE “protocol”
- Citizen reporting program
- Expand local legal authority (including penalties)
- Map ALL outfalls
- Address septic systems where phosphorus, nitrogen, or bacteria impairment

NEW

Construction Site Runoff

Expanded Legal Authority

- Require consistency with:
  - CT Stormwater Quality Manual
  - All DEEP Stormwater Permits
  - 2002 Soil Erosion and Sedimentation Control Guidelines
- Provide for inspections
- Long term maintenance plan & compliance

NEW

Construction Site Runoff

Inspection/Review

- Site plan reviews must include stormwater impacts on water quality
- Must inspect sites – installation & maintenance
- Starting July 1, 2017

NEW

Construction Site Runoff

Notification

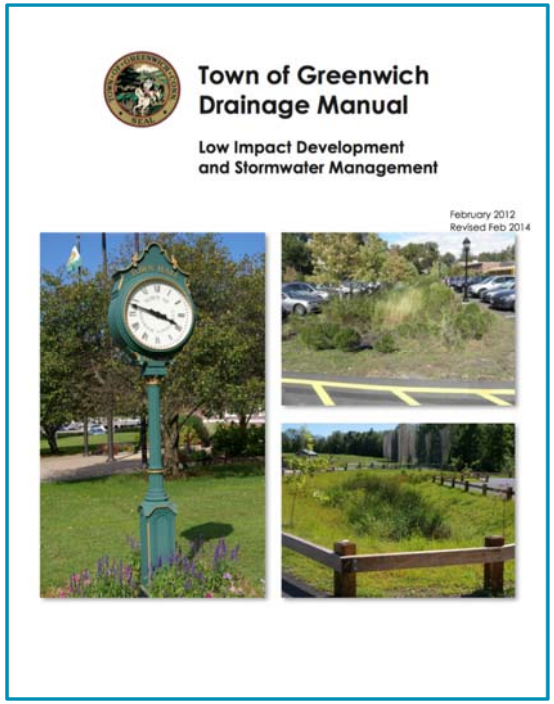
- Develop procedure for public input/reporting
- Develop notification procedure for developer obligations under **Construction General Permit**

NEW

Post-Construction Runoff

LID in Land Use Regulations

- Require consideration of low impact development (LID) 1st
- Consistent w/ CT Stormwater Quality manual
- Reduce/eliminate LID barriers in regs.
- Retain water quality volume onsite
  - Redevelopment of site >40% DCIA - retain ½ volume
  - Development or redevelopment of site <40% DCIA – retain ALL
  - If not – provide equivalent amount elsewhere



NEW

Post-Construction Runoff

Septic Systems

- Coordinate LID design with public health official & be consistent with State Standards

DCIA

- Calculate DCIA for every outfall

Maintenance

- Maintenance plan for stormwater ponds & other treatment structures in priority areas

NEW

Good Housekeeping

Disconnecting Impervious Cover

- Reduce DCIA by 1% per year starting 7/1/20
  - 5 year look back - take credit for disconnects from 7/1/12
- Develop retrofit prioritization plan by 7/1/20

NEW

Good Housekeeping

Town Operations

- Reduce/eliminate lawn fertilization
- Grass clipping & leaf disposal
- Pet waste management
- Discourage waterfowl
- Spill prevention
- Deicing material application & storage
- Enhanced requirements for nitrogen, phosphorus, & bacteria Impairments

NEW

Good Housekeeping

Catch Basin Cleaning

- Inspect catch basins
  - Priority areas by 7/1/20
  - All by 7/1/22
- Clean - No catch basin more than 50% full

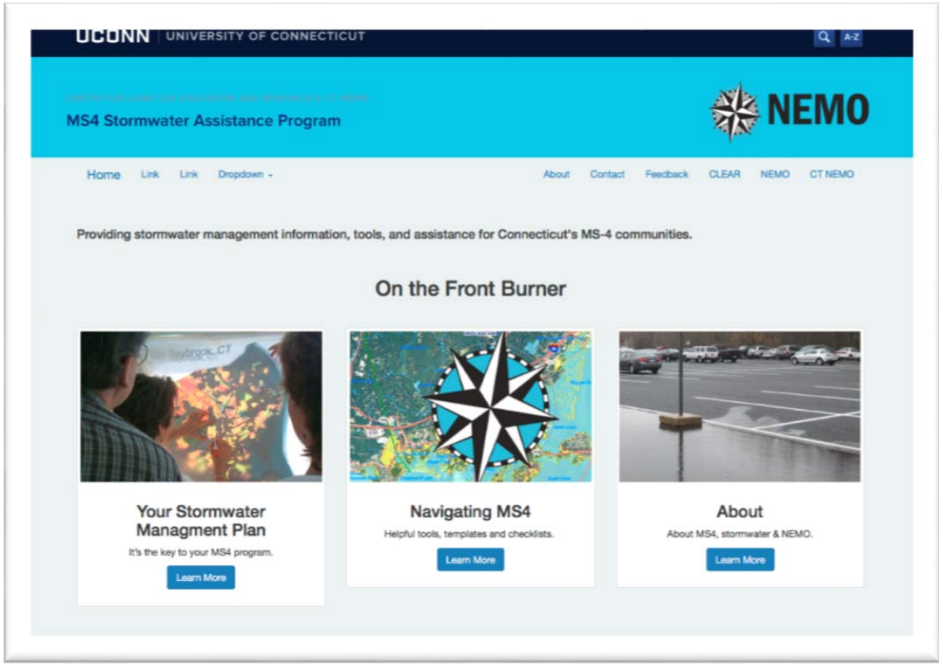
Street Sweeping

- Streets & parking lots in priority areas every spring (plan for other areas)

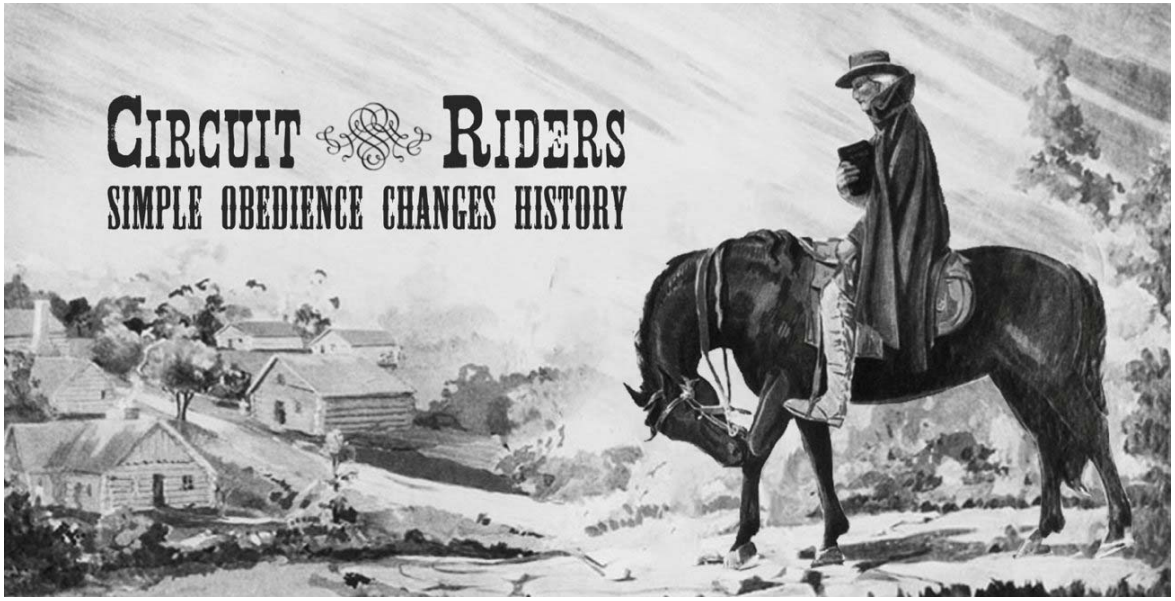
NEMO's MS4 support

MS4 Website

- Web-based MS4 guide organized around the 6 minimum control measures
- Will include fact sheets, public outreach material templates, video tutorials and other materials to help towns meet specific requirements
- Estimated arrival date: Fall 2016



Full time MS4 "circuit rider"



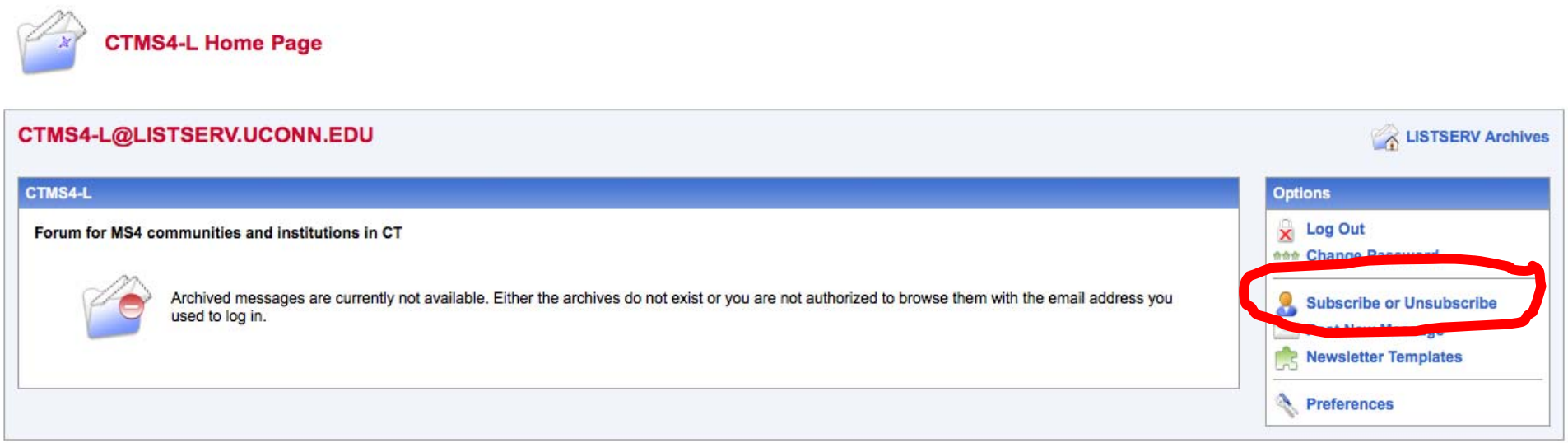
- Full time educator dedicated to helping CT communities deal with MS4 requirements
- Job search open now
- Estimated start date: ~~mid-summer~~ fall? 2016

MS4 Listserv

- Email list dedicated specifically to MS4-regulated issues
- Open forum – questions, announcements, approaches, examples, frustrations
- Available now!

http://s.uconn.edu/ctms4list

- **Click on "Subscribe/unsubscribe" on right**

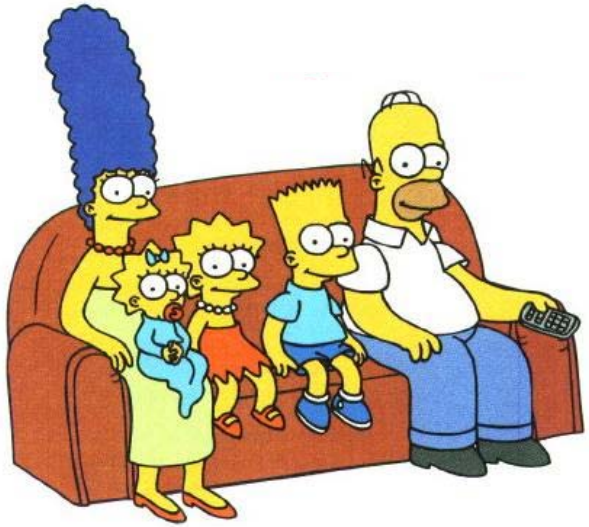


Workshops and Webinar series

Statewide hot topics workshops (1-2/yr)

& webinars (2/yr)

- Mapping
- IDDE
- Public Outreach



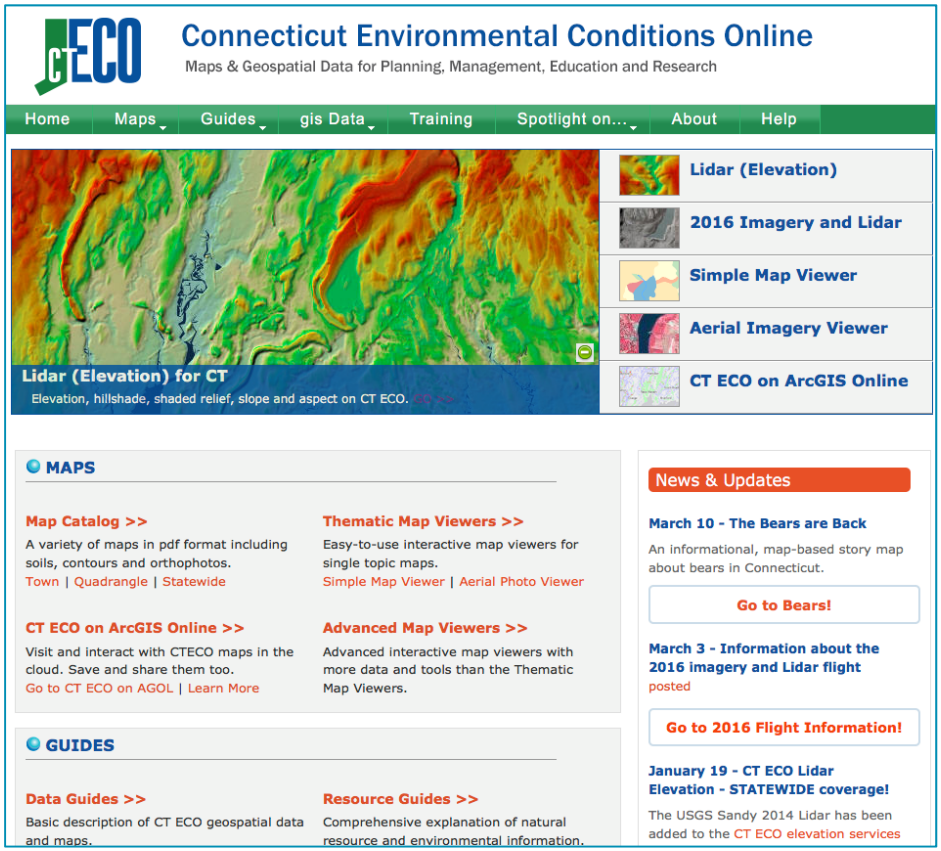
Other topic suggestions welcome

Handy-Dandy Checklists & Guides

- New vs Old MS4 requirements
- Permit requirement checklist & timeline

Mapping Resources - CT ECO

- New dedicated MS4 map viewer
- New high resolution impervious cover data (base data for required mapping) will be hosted on existing site
- Estimated availability: Spring/Summer 2017



http://cteco.uconn.edu

Geospatial training

Mapping Pilot Program

- Work with 4 pilot towns on mapping requirements

Workshops & video tutorials

- Outfall and catch basin mapping
- Watershed delineation
- Impervious cover mapping
- DCIA (Directly Connected Impervious Area) calculation

Expected availability: year 1

Mobile & Web-Based Tools

Online and/or mobile apps to assist communities in certain aspects of MS4 compliance

- Outfall, watershed, catch basin mapping
- IDDE reporting

Online version of Stormwater Quality Manual

Online, searchable and updated with relevant links

Estimated arrival date: Summer 2017

2004 Connecticut Stormwater Quality Manual

by
The Connecticut Department of Environmental Protection

79 Elm Street • Hartford, Connecticut 06106

Printed on recycled paper, 30% post consumer content.

In the Meantime . . .

http://nemo.uconn.edu

In the Meantime . . .

Examples of LID Regulations in CT

http://s.uconn.edu/stateoflid

Take the Survey!

http://s.uconn.edu/ms4needs

Thank you!

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