

- 1. Observe water.** Where is it coming from, and going? Look for signs of eroded soils and impacts to nearby streams, ponds, etc.
- 2. Identify a site.** Can you see and mark the contour lines? A slope with evidence of runoff needs structures that catch storm-water, or slow it down and guide it to the right places to infiltrate.
- 3. Dig a trench along the contour line.** Follow the contour. Start small and re-evaluate often. A swale can be shallow and wide, while a woodchip-filled trench can be 2-3 feet deep.
- 4. Mound the soil on the downhill side to create a berm.**
- 5. Test and adjust the swale.** Watch it in a heavy rain and make adjustments if needed. Is a spillway needed to prevent damage to the berm?
- 6. Plant the berm.** Cover bare soil as soon as possible with mulch, cover crop seed, and/or transplants.

From "Swale construction, step-by-step" (see Links on other side)



In the Northeast global warming is projected to affect water resources in the following ways.^{1,2}

- **Alter the timing and amount of stream flow**, which would create:
 - more high-flow events in winter, particularly under the higher-emissions scenario, with an associated risk of winter flooding;
 - earlier peak flows in spring—roughly two weeks earlier under the higher-emissions scenario and 10 days earlier under the lower-emissions scenario; and
 - extended low-flow periods in summer—nearly a month longer by late-century under the higher-emissions scenario, with little change under the lower-emissions scenario.
- **Increase winter precipitation** (much of which is expected to fall as rain) 20 to 30 percent by late-century under either emissions scenario.
- **Reduce snowpack and shorten the snow season** in the typically snowy northern states—up to 50 percent by late-century under the higher-emissions scenario and more than 25 percent under the lower-emissions scenario.
- **Increase the frequency of short-term (one- to three-month) droughts³** by late-century from an average of once every two to three years to once every year across the Adirondacks, Catskills, and most of New England under the higher-emissions scenario, with little change under the lower-emissions scenario.
- **Increase the frequency of extremely hot days** (which can increase water demand) roughly five-fold under the higher-emissions scenario and two- to three-fold under the lower-emissions scenario.
- **Increase the likelihood and severity of damaging rainstorms** under both scenarios.
- **Raise sea levels** between 10 and 23 inches under the higher-emissions scenario and 7 and 14 inches under the lower-emissions scenario, increasing the risk of saltwater intrusion into coastal aquifers.

Full report: www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/pdf/confronting-climate-change-in-the-u-s-northeast.pdf

Don't Guess...Get a Soil Test!

Follow these links for where to send soil and directions on how to collect the samples:

- UConn-Plant Science Lab
www.soiltest.uconn.edu
fee: \$12+, depending on added tests you can request (eg, lead)
- Comprehensive physical-chemical-biological soil analysis by Cornell Univ.
soilhealth.cals.cornell.edu
fee: \$60-170

Many other labs are available to you. If you are looking for other options or more information on these labs, contact ECCD (see other side).



Using the "Look & Feel Method" for determining soil moisture:

- 1. Dig** – get a small handful of soil from the root zone (6-12" down)
- 2. Squeeze** – does it hold together?
- 3. Bounce** – does it break apart?
- 4. Ribbon** – does it form a ribbon?
- 5. Rub** – sticky? Does it leave a watermark?

If you answer YES to most of these questions, then the soil has adequate moisture.

REMEMBER: *results are affected by soil type!* (sandy soils will not ribbon, and clayey soils will almost always feel sticky).

Links

WATER CONSERVATION

Irrigation techniques USGS Water Science School
water.usgs.gov/edu/irmethods

What is a swale?

www.tenthacrefarm.com/2014/02/using-swales-in-the-landscape-part-1/

Swale construction, step-by-step

www.tenthacrefarm.com/2014/02/using-swales-in-the-landscape-part-2/

US Drought Monitor – Connecticut

droughtmonitor.unl.edu/Home/State/DroughtMonitor.aspx?CT

Water Footprint Calculator

watercalculator.org

GENERAL

The New CT Farmer Alliance

newctfarmers.com

Eastern CT Community Garden Association

getgrowingct.org

New Farms and Farmers

newfarms.extension.uconn.edu

USDA Natural Resources Conservation Service (NRCS) - CT

www.nrcs.usda.gov/wps/portal/nrcs/site/ct/home

Northeast Organic Farming Assoc. of CT

www.ctnofa.org

Rodale Institute

rodaleinstitute.org

CT Dept. of Agriculture

www.ct.gov/doag

More workshops this spring!

Saturdays, 10-12:30

➤ **MAY 6**

Water Conservation & Water Quality

➤ **May 27**

Composting

➤ **June 24**

Integrated Pest Management

For more information about these workshops and the Urban Agriculture Conservation Initiative, contact us:

GROW Windham

872 Main St, Willimantic, CT

www.growwindham.org

(860) 423-4534 x312

Eastern CT Conservation District (ECCD)

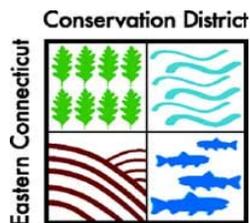
238 West Town St, Norwich, CT

www.conservect.org/eastern

(860) 319-8809

Lauter Park's Urban Growers

Workshop Series is supported by:



Lauter Park's Urban Growers Workshop Series



Water Conservation

Spring 2017 ♦ Willimantic, CT

THE BASICS TO CONSERVING WATER...

Build and maintain healthy soils

It's still about the soil! Healthy soils reduce water use because:

- They have pore space, so water gets into the soil ("infiltration") and moves through it.
- The high organic matter greatly increases its ability to hold water ("retention").
- They lose much less water since they are covered - by cover crops, mulch, etc.

Rain is free, don't let it get away

Prevent runoff. Build healthy soils and design fields/beds to catch rainwater.

Water plants only when they need it

Check soil moisture before watering. Not only wasteful, over-watering can harm crops.

Choose methods that conserve water

The best practices, like drip irrigation and hand watering, deliver water right to the plant's base. Avoid overhead sprinklers.