

SPECIAL POINTS OF INTEREST:

- **Upcoming Sustainability Committee meetings in Lowell: 6/20, 7/25, 8/15, 9/19**
- **June 21: First day of summer!**

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Native Plants for Home Landscapes: Conserve Water, Reduce Need for Fertilizer and Provide Essential Wildlife Habitat

By Julie Nace



Native Trumpet Honeysuckle (*Lonicera sempervirens*). A great alternative to Japanese Honeysuckle (*Lonicera japonica*).
Photo credit: Julie Nace

Using native plants in your home landscape is a great way to conserve water and reduce fertilizer usage. This is especially true if native plantings are used to replace grassy areas. Native plants are often available local nurseries and cover the full range of most homeowners' needs including flowering plants, grasses and trees.

According to the Long Island Native Plant Initiative (www.linpi.org), "Landowners that use native plants are going to have less to maintain in their landscape and save money on maintenance as well as help the environment. Native plants do not require the rigorous application of fertilizers and other chemicals that many gardeners mistakenly use. They also do not require much water or upkeep after the first year or two

after planting." So another bonus of using native plants and reducing turf area is a lower carbon footprint.

But beyond reducing the need for water and fertilizer, native plants provide essential habitat and food for animals that non-native plants cannot provide. It is becoming increasingly clear, that the decline of native plants is leading to a decline in animals such as birds and insects. A common example of this is the Monarch butterfly (*Danaus plexippus*) and its dependence on many species

of native milkweed (*Asclepias* spp). Though also affected by habitat loss, and use of pesticides, decreasing distributions of milkweed has greatly limited the ability of this butterfly species to reproduce. Monarch larvae have adapted to feed only on milkweed plant species, absorbing the cardenolides that make adult butterflies toxic and bitter-tasting to their potential predators. Without habitat for their eggs and larvae, Monarch populations are rapidly decreasing.

Homeowners can make small changes that make big differences. By adding a selection of native plants to their yards, homeowners can benefit from reduced water and fertilizer usage, a lower carbon footprint and an increased diversity of birds and insects. Check with your local extension agent for a list of available native plants for your local area.



Monarch butterfly larvae on native milkweed (*Asclepias tuberosa*).
Photo Credit: Julie Nace



EPA WaterSense Spring Watering Tips By Nick Cohen

Spring is the perfect time to step up your water conservation efforts, especially in landscaping and gardening activities. The EPA WaterSense initiative provides great information on how to save water when watering plants and gardens. According to EPA, “as much as 50% of the water we use outdoors is wasted from inefficient watering methods and systems.” The WaterSense website includes tips on improving sprinkler and irrigation systems, as well suggestions on timing your watering efforts to save water. For example, avoid watering during the middle of the day because the hot sun will evaporate more of the water before it can get to plants. For more information, visit the [EPA WaterSense website](#), including the [page on watering tips](#). Also, be sure to check out Lindsey’s article about rain barrels this month on page 7.

Energy- & Cost-Saving Tips for Summer By Heather Radcliffe

Avoid overheating this summer by following a few simple suggestions whether you’re staying inside or braving the hot sun.

Sometimes you just don’t feel like cooking when the weather is warm. But you can cook

without adding extra heat to your home. For starters, avoid using the oven. Try using a slow cooker instead. An added bonus: it costs about 21 cents to use your slow cooker for 10 hours compared to \$2.51 to operate an electric oven for two hours or \$1.49 for a gas oven. Another option: cook outside on the grill. You can make an entire meal without increasing the temperature inside.

More kitchen tips: keep your fridge full. Having lots of food in your fridge keeps it from warming up too fast when the door is open. Then your fridge doesn't have to work as hard to stay cool.

Throughout your home, set your thermostat five degrees higher when nobody will be home. Use fans to circulate cool air when you are home. Live like a vampire. Keep your blinds and

curtains closed throughout the day to naturally keep your home cooler. If you have a pool, install a timer to control your filtration system. Slowly reduce pool filtration time by 30 minute increments daily. Keep on reducing the time as long as the water appears clean. You probably only need to run your pool filter for a few hours a day. Spend more time outside of your home to reduce your home cooling needs and your energy consumption. Go swimming, have a picnic, take a walk, garden. Before you know it, winter will be back—so take advantage of the sun when you can!

Photo Credit: Jenn & Ava Sylvester



Drought By Jennifer Donnell

Imagine you have a very pleasant day at work. On the way home you have more pleasing thoughts about how well your pepper and tomato seedlings are doing, you think you might give them a good soak tonight, perhaps the lawn as well. You arrive home to find notices that your community is now on *drought restrictions*. Before you entertain any more thoughts of watering your lawn at 2:00 am under the moonlight (and watchful eyes), take a moment to educate yourself about what is behind the drought. Your local Public Water System will have some

answers. Droughts do not happen overnight, we can see them coming months before restrictions get set in place. Who has priorities with water usage during drought is difficult and fraught with emotions at every level. Public Water Systems perform an excellent job at looking at the larger picture. We need water for fire suppression (you need pressure and volume), drinking water and sanitation. *Preserving those is the priority*. You also need water for businesses, industrial cooling, environmental needs, and tourism. It might be nice to have fountains, water our gardens and continue to recreate on waterways the way we do

in summer. Droughts levels are monitored and updated every Thursday morning by the *US Drought Monitor* <http://droughtmonitor.unl.edu> (you can click on your state).

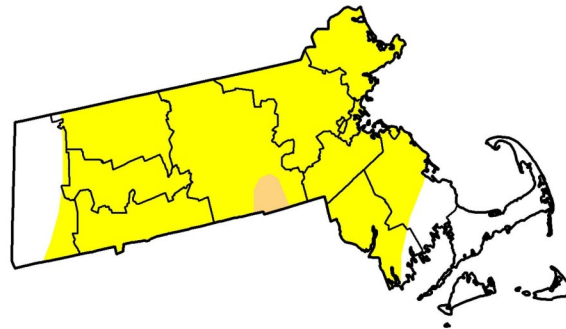
The *Drought Monitor* is one small piece. Your water source, whether it is a reservoir, lake, underground well, river or aquifer is experiencing chronic insufficient recharging from months of low precipitation and snow melt. Now, it is summer and the seasonal use is very high. **Take the time to find out about your water source, your Public Water System, and what you can do to contribute to water conservation when it is needed the most.**

U.S. Drought Monitor Massachusetts

May 28, 2013
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	20.79	79.21	1.45	0.00	0.00	0.00
Last Week (05/21/2013 map)	6.02	93.98	44.92	0.00	0.00	0.00
3 Months Ago (02/26/2013 map)	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year (01/01/2013 map)	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year (09/25/2012 map)	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago (05/22/2012 map)	8.17	91.83	25.41	0.00	0.00	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, May 30, 2013
Brad Rippey, U.S. Department of Agriculture

Enjoying our Local Harvest By Susy King

Rhubarb season is here! Local sources of rhubarb are now plentiful, allowing us to purchase fresh crops that don't have to travel long distances. Buying local not only cuts down on use of fossil fuels, but also supports small local farmers who are more likely to use sustainable farming practices. Rhubarb also boasts some great health benefits – it is high in fiber and contains vitamin A, potassium, and calcium. Perhaps most importantly, rhubarb is delicious. It is known as the “pie plant” because of its frequent use in this dessert. Need a recipe? A wonderful one is provided below. Enjoy!

Rhubarb Crumble Pie

(adapted slightly from marthastewart.com)

Ingredients:

1 prepared pie crust for a 9-inch pie (I use this recipe <http://www.howtocookeverything.com/recipes/flaky-piecrust>)

Filling:

1 $\frac{3}{4}$ pounds (about 6 cups) rhubarb, ends trimmed, cut crosswise into $\frac{3}{4}$ -inch pieces
 1 cup sugar
 2 tablespoons cornstarch
 $\frac{1}{2}$ tsp cinnamon
 Pinch of salt

Crumble Topping:

$\frac{3}{4}$ cup all-purpose flour
 $\frac{1}{3}$ cup packed light-brown sugar
 3 tablespoons granulated sugar
 Pinch of salt
 6 tablespoons cold unsalted butter (cut into small pieces)

Directions:

On a floured surface, roll out pie dough to a 14-inch round. Transfer to 9-inch pie plate, trim excess, and fold under. Refrigerate for 30 minutes.
 Prepare crumble topping. In a medium bowl, mix flour, light-brown sugar, granulated sugar, and salt. With your hands, work in butter until large, moist clumps form. Chill, covered, until ready to use.
 Preheat oven to 400°. In a large bowl, toss rhubarb with sugar, cornstarch, cinnamon, and salt. Pour into pie shell; sprinkle with crumble topping. Place pie on a baking sheet.
 Place pie in oven; reduce heat to 375°. Bake until topping is browned and crust is lightly browned, about 1 $\frac{1}{2}$ hours. (If topping or crust begins to brown too quickly, tent with foil.) Cool completely before serving.

Photo credit: Susy King



Submit an article for our September issue!

NEIWPC staff at the Lowell office started putting together the Eco-Office Bulletin newsletter in September 2012 as a way for the sustainability committee to update the rest of the office on their activities, as well as to share news and tips on sustainable practices at the office and home. Distribution was expanded to include all NEIWPC employees in December 2012, and volunteer writers from outside Lowell began contributing in the March 2013 issue. For future issues, we welcome article submissions from all employees. Please contact Heather Radcliffe if you are interested in contributing.

From the Chair: The Bottle Bill By Emily Bird



In 1982 the original Massachusetts Bottle Bill was passed resulting in the first statewide recycling program. The Bottle Bill requires Massachusetts retailers to pay distributors a 5-cent deposit for each container purchased including glass, plastic, aluminum and bi-metal containers holding *only* beer and other malt beverages, carbonated soft drinks, and mineral waters. It also requires that retailers pay a 2.25-cent handling fee to support recycling efforts. Consumers can return these containers and redeem the deposit. For containers that are not redeemed, the distributors and bottlers are required to turn over unclaimed deposits to the State, which *used* go towards the Clean Environment Fund to support local and statewide recycling efforts, but now go toward the State general fund. According to [MASSPIRG](#) 80% of bottles and cans covered under the Bottle Bill are recycled.

So what happens to the containers not covered under this Bill? Water, juice, sport, and energy beverages make up 30% of all beverages sold in Massachusetts today. [Massachusetts Department of Environmental Protection](#) (MassDEP) estimates of the 1.5 billion non-deposit beverages sold, 600 million or 40% are recycled, — the remaining one billion containers enter Massachusetts's waste-stream each year. It is estimated that if these containers were covered with a deposit, 80% or 1.2 billion of the 1.5 billion beverage containers sold would be recycled instead of dumped in a land fill or incinerated. Environmental activists, the public, and politicians alike seem to agree that it is time for these beverage containers to be included on the Bottle Bill. The updated Bottle Bill would expand the 5 cent deposit to cover beverage containers not covered by the current Bottle Bill (except milk). MassDEP's Commissioner Kenneth Kimmell expects that the reduction of waste and litter resulting from the expansion of the Bill would translate into a savings of \$6-7 million collectively for the public. It is no surprise that 199 of Massachusetts's 351 cities and towns support the expansion of the Bottle Bill, and according to a Center for Policy Alternatives survey – 84% of Massachusetts residents voiced support for the updated Bill.

The updated Bottle Bill has been filed in Massachusetts State Legislature with 95 co-sponsors – 75 in the House and 20 in the Senate. In May 2012 the Bill passed in Senate, and is now awaiting approval from the House. Massachusetts's Executive Office of Energy and Environmental Affairs Secretary Rick Sullivan has also proposed to increase the Bottler's Handling Fee charged to retailers from 2.25 cents to 3 cents supporting deposit redemption center businesses and providing incentive to expand the recycling services. It is anticipated that the bottling industry will challenge this addition to the Bill, but supporters of the Bill argue that a 1-cent increase is a small price to pay in recycling-costs for an industry that produces and profits from 3.3 billion bottles in Massachusetts annually.

It is important to keep in mind, while many municipalities offer curb-side pick-up or drop-off recycling services to their residents – public recycling services are often not available to private organizations/institutions and the existing Bottle Bill provides a financial incentive to divert at least some recyclable materials from the waste-stream. Luckily, at NEIWPC's office, located at the Wannalancit Mills in Lowell, Massachusetts, Farley White Management collects and recycles paper, cardboard, and returnable beverage containers. NEIWPC staff volunteer to carry home the remaining recyclables. The returnable beverage containers collected by Farley White donate the deposit returned to [Birthday Wishes](#), a charity bringing birthday parties to homeless children. If the updated Bottle Bill is approved, it will provide the incentive for the all sectors – public or private, residential or commercial – to increase their recycling efforts... and in the case of NEIWPC's Lowell office, increase the number of birthday parties for less-fortunate children – something we all can feel good about!

Sustainable Shredding By Erin Jacobs

NEIWPC's office in Lowell considers its environmental responsibility even when it disposes of sensitive office documents. A service called Shred-it™ collects, shreds, and recycles our sensitive documents. Shred-it™ claims that one tree is saved for every two security containers filled with paper. By participating the Shred-it™ shredding and recycling program, NEIWPC saved 37.72 trees from destruction in 2012.



CERTIFICATE OF ENVIRONMENTAL ACCOMPLISHMENT

This is to certify that

New England Interstate Water

participated in the Shred-it™ shredding
and recycling program and saved 37.72 trees from
destruction in 2012.

Shred-it congratulates staff members on the positive impact
this initiative has made towards saving our environment.

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How to Build Your Own Rain Barrel By Lindsey Walaski

A rain barrel is a storage system which captures rainwater from roof runoff to reuse for irrigation application, as mentioned in Jennifer Donnell's article, *Rain Collection*, in the March 2013 NEIWPCO Sustainability Newsletter. The benefits of using a rain barrel include diverting stormwater runoff and conserving potable water use, which can also reduce water use bills.

Materials:

One 55 to 90 gallon plastic barrel
Spigot – 3/4" thread inlet, 3/4" male hose end
Two 3/4" Galvanized Locknuts
Four 1" Washers
Teflon Tape
Silicon Caulking
4 Cinder or Wood Blocks
Window Screen Mesh (As big as the top of the barrel)
Downspout Elbow
Cinch strap
2" PVC pipe and elbow (Use the height of the rain barrel for the length of the pipe)

Tools:

Drill
Tin Snips or Heavy Duty Scissors for Cutting Screen
Adjustable Wrench
Hacksaw
Level

Construction:

Location: First select the area for the rain barrel. The rain barrel should be located at the downspout of a rain gutter and near areas requiring irrigation. The surface for the rain barrel must be level and not prone to erosion, since tipping is a risk. Once the location is determined, create a stable, level surface using the cinder or wood blocks for the rain barrel location.

Inlet: Cut a hole at the top of the rain barrel, which will collect the water from the downspout. The hole can be as large as the downspout or a series of smaller holes. Attach the mesh screen to the top of the barrel to filter out mosquitoes and debris. The connection of the mesh screen is dependent on the type of rain barrel used.

Overflow: Drill a hole at the top of the side of the rain barrel to direct overflow. The hole should be about 2" in diameter. Connect the pipe elbow to the rain barrel. To provide extra stability, use washers on both sides of the elbow and a locknut on the inside of the rain barrel. For a tight seal, use Teflon tape on the threads and silicon caulking around

the opening.

Outlet: Drill a hole at the bottom of the side of the rain barrel to install the drain spigot. Connect the spigot to the rain barrel. To provide extra stability, use washers on both sides of the spigot and a locknut on the inside of the rain barrel. For a tight seal, use Teflon tape on the threads and silicon caulking around the opening.

Downspout: Using a hacksaw, cut the downspout so the elbow will rest above the inlet of the rain barrel. Attach the elbow to the downspout using a screw. Place the barrel on the surface (making sure the barrel is level), and attach the barrel and the downspout to the house using the cincher strap. Cut and connect the overflow pipe to the overflow elbow so the overflow drains to the existing location, away from the house.

Use/Maintenance: After a rain event, use the bottom spigot to fill a watering can or to attach a hose to water your garden. Remove the debris on the mesh screen sporadically. Routinely check the barrel for leaks and the surrounding areas for erosion and surface infiltration.

Remember this water is not safe for consumption. Depending on the climate in your area, you may want to remove the rain barrel during cold temperatures and replace with the previous downspout.

(Adapted from guidance by the Environmental Sciences Program, Portland, Oregon.)



Photo credit: spinsheet.com

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