



# SOAKING UP THE RAIN IN WESTWOOD, MA

Sarah Bounty

Neponset River Watershed  
Association

# Neponset River Watershed Association

“NepRWA”

- The Neponset River Watershed Association is a grassroots, member-supported conservation group working to clean up and protect the Neponset River, its tributaries and surrounding watershed lands.



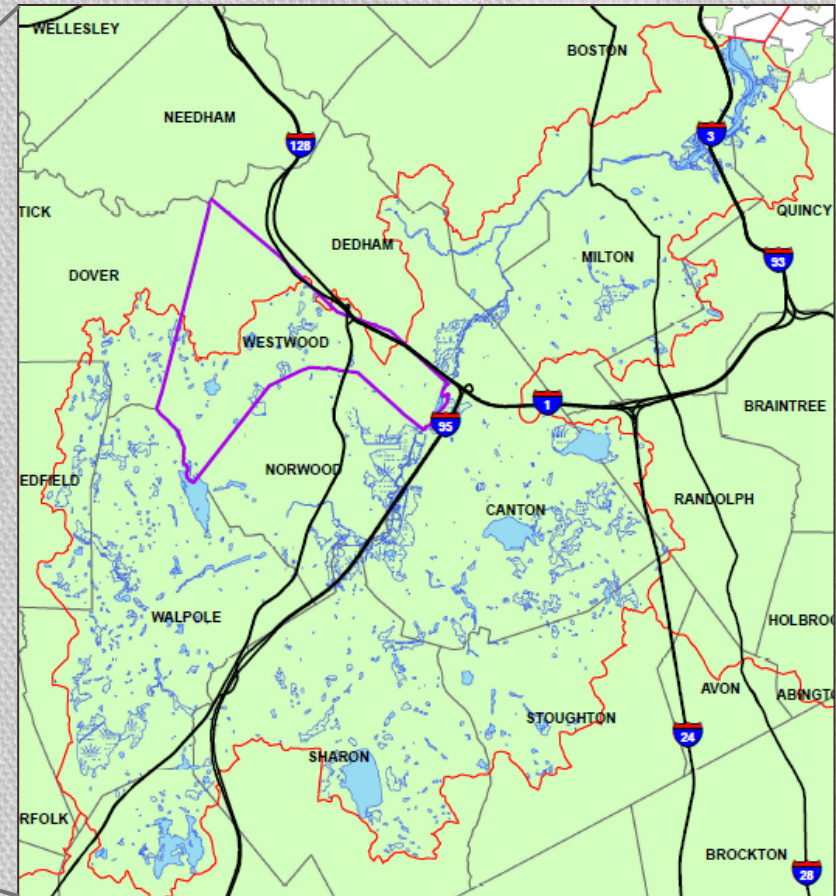
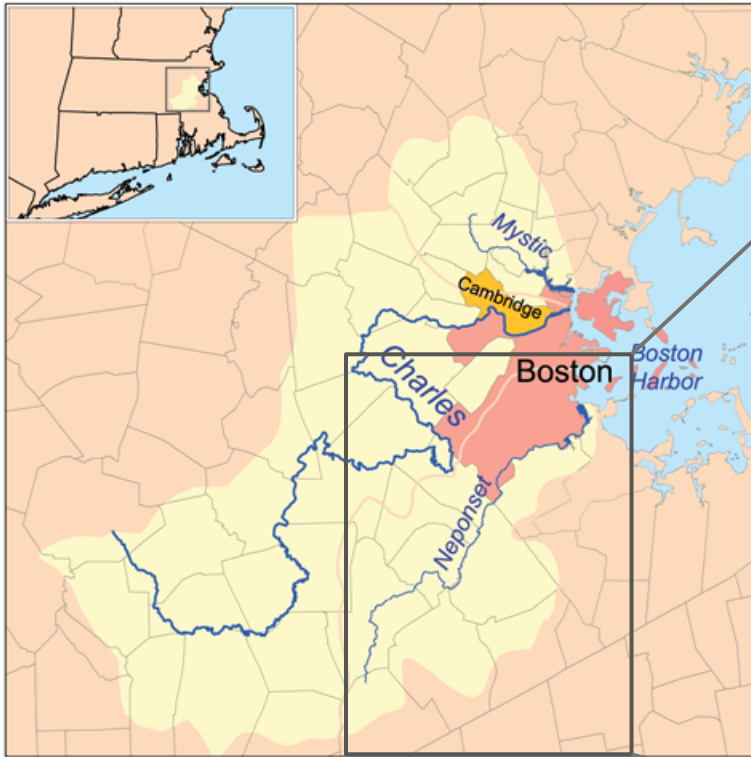
Dorchester Bay

Ponkapoag Pond



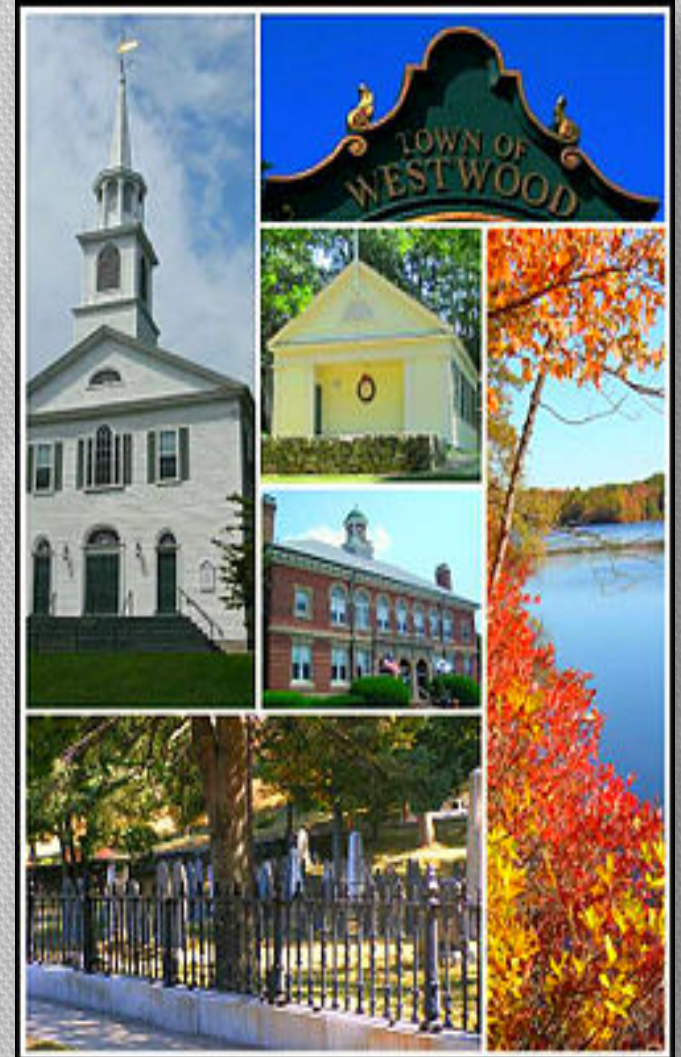
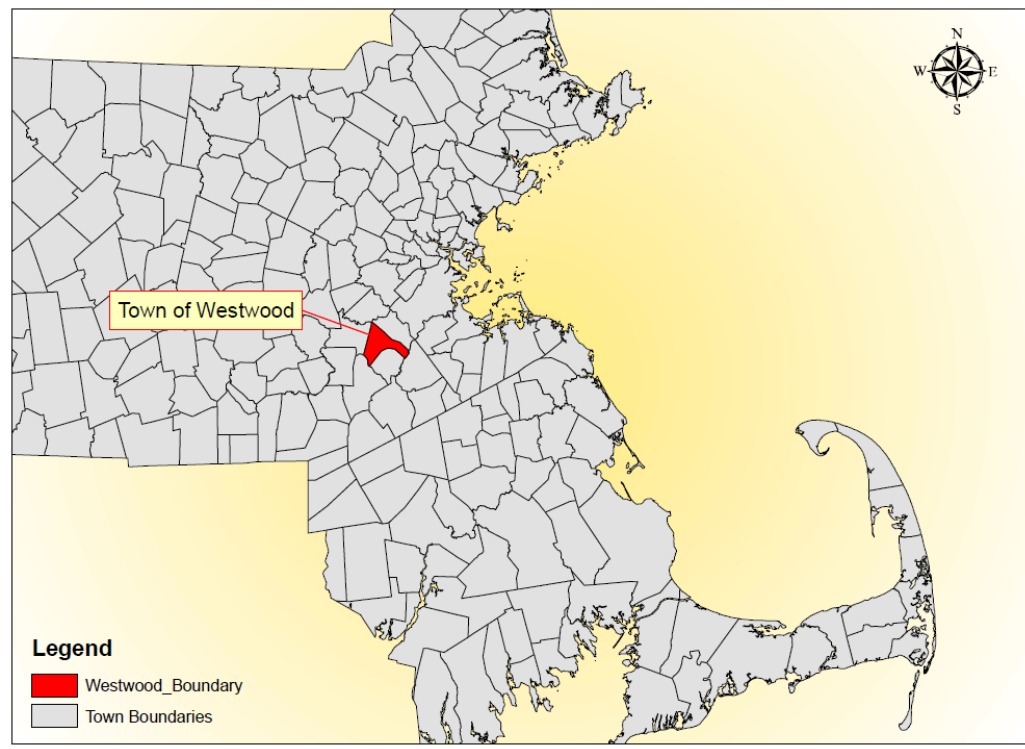
# Neponset River Watershed Association

## “NepRWA”



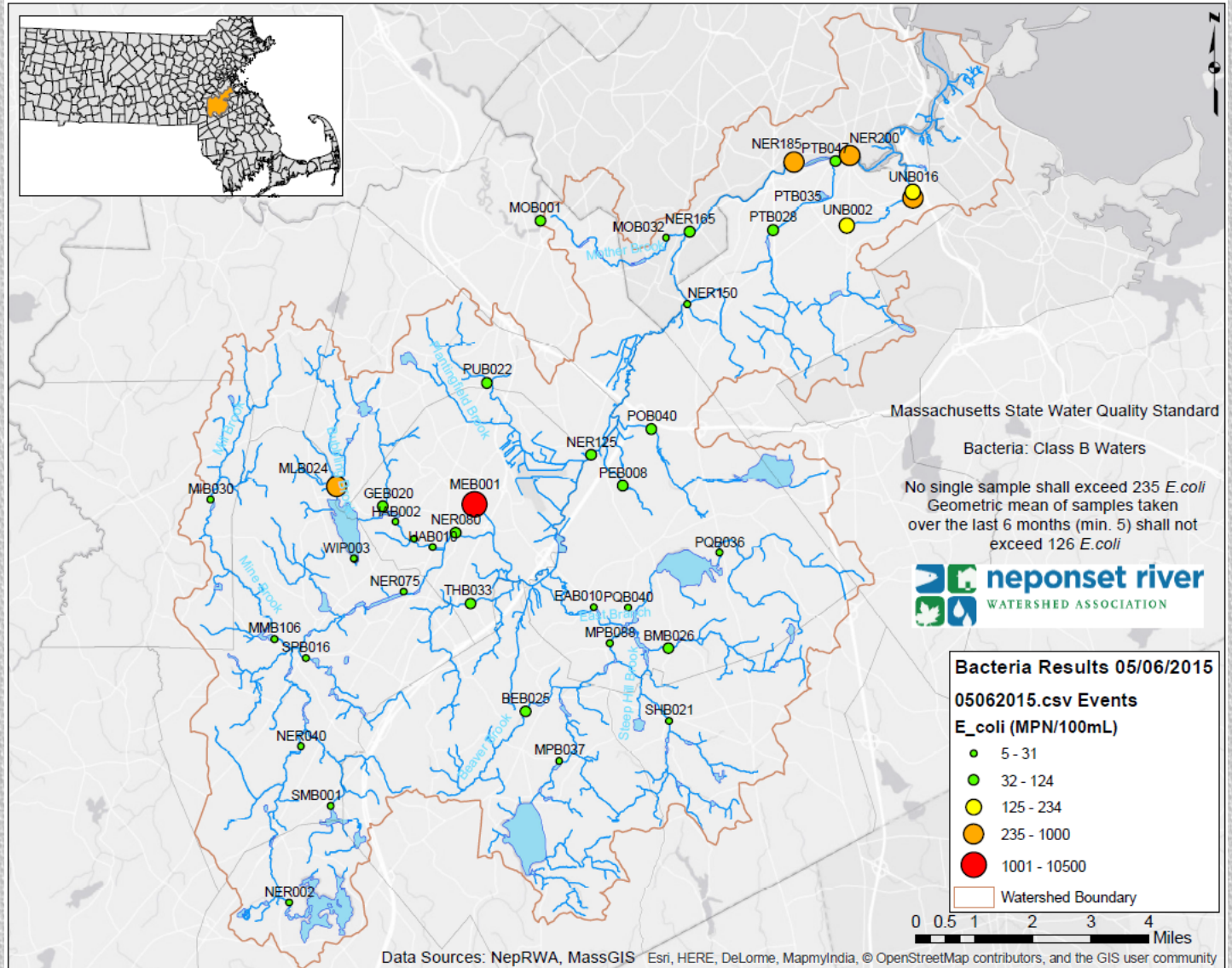
# Westwood, MA

- 12 miles SW of Boston
- Population 14,618 (2010)
- MS4 Phase II Community





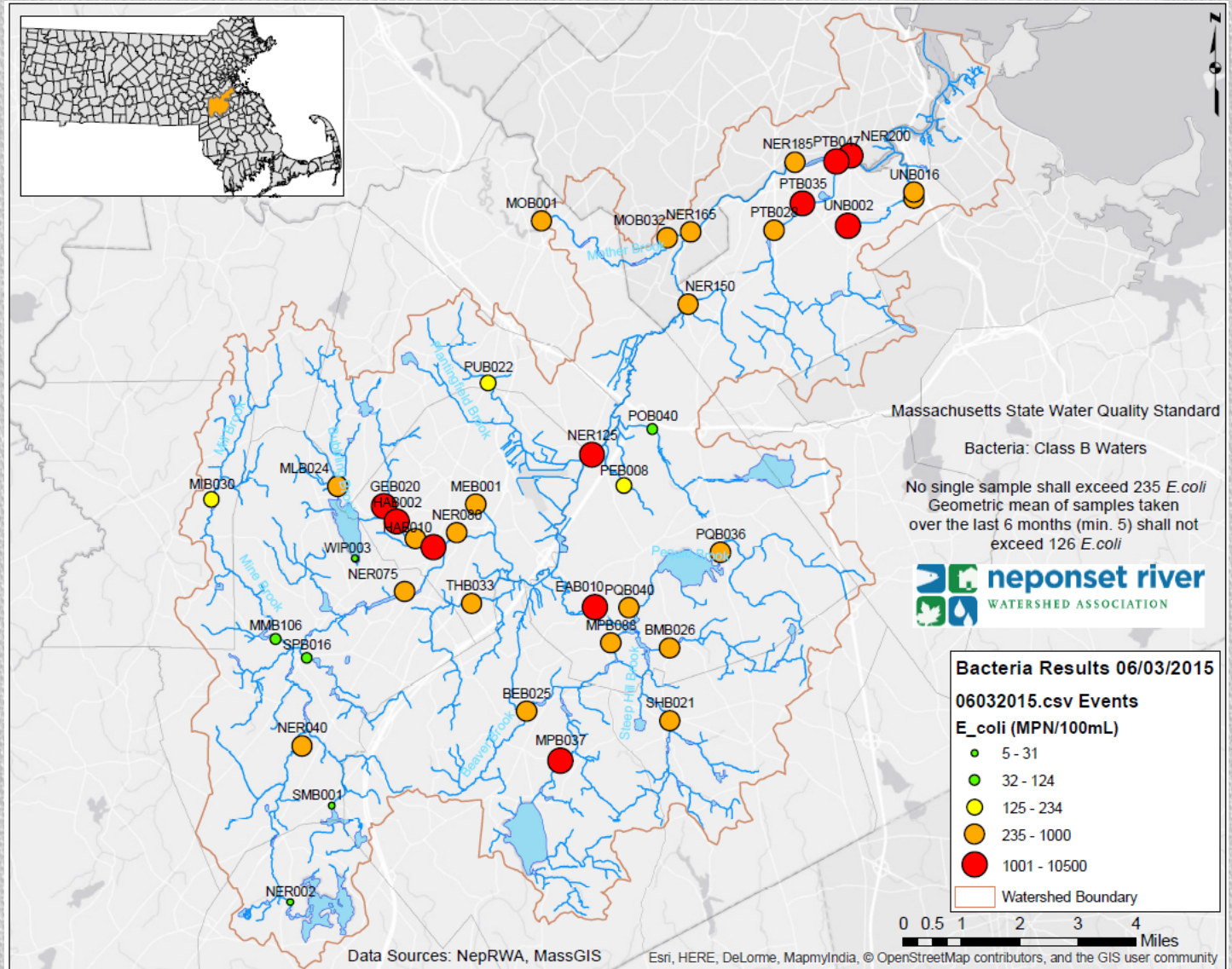
# Stormwater





# Stormwater

1.15" rain in previous 72 hours



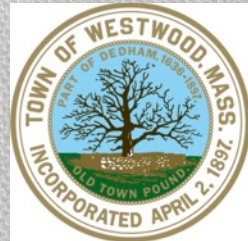
# Goals of Project

- Encourage green infrastructure on private property
  - Simple, low-cost
- Plan green infrastructure projects
- Educate homeowners on stormwater
- Construct demonstration rain gardens with volunteer groups



# 604 (b) grant funding and budget

- Funding from 604(b) grant program from MA DEP and EPA
- Total project budget of **\$24,000**






# Outreach

- Town Groups/Events
  - “Westwood Day”
  - Westwood Environmental Action Committee
  - Conservation Commission
  - Local Schools and Churches
- Town Wide Mailing
- Local news coverage
- Project website

HometownWeekly.net  
**Hometown Weekly**  
Hometown Publications, LLC 508-359-2200 est. 1996  
Medfield Walpole Westwood Dover Sherborn Needham Wellesley  
DOVER/SHERBORN | MEDFIELD | NEEDHAM | WALPOLE | WELLESLEY

**Citizen Volunteers Identify Water Pollution In Westwood**



According to the Neponset River Watershed Association, each of three water sampling sites in Westwood exceeded the state established limits for E. coli bacteria at least once during 2014. Water samples were gathered by volunteers with local conservation group the Neponset River Watershed Association.

This water sampling program, known as the Citizen Water Monitoring Network, identifies pollution in the Neponset River and its tributary streams with the help of

WESTWOOD

## Conservation group finds three sites in Westwood that exceed state's bacterial limits

Tweet Share Comments

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...on group that has collected water samples from local creeks and streams in ... and three sites exceeded state limits for bacterial contamination at least ... last year. As a result, property owners are being urged to take steps to ... ff. The Neponset River Watershed Association, using a volunteer ... network, identified three locations that had exceeded the e. coli bacteria ... tory Brook at Washington Street; the Neponset River at Dedham Street; ... k at Winslow Road, according to a news release. The water is not used as a ... supply. The sampling site of highest concern was at Purgatory Brook, ... d e. coli levels of seven times the state limit, according to the organization.

# Mailing

Dear Westwood Residents:

With more than 90% of our drinking water coming from local sources along the Neponset and Charles Rivers Westwood depends on clean waterways.



Healthy waterways are also important if you enjoy swimming at **Hale Reservation**, fishing at **Buckmaster Pond**, or watching our local birds and wildlife.

Like nearby communities, Westwood has a problem with **polluted stormwater runoff**—the polluted water that washes off roadways, parking lots and other hard surfaces when it rains.

The Westwood DPW is working hard to reduce polluted stormwater runoff and comply with strict new pollution rules that are coming from the US EPA.

We are encouraging residents and businesses to consider taking simple steps around your property to help stormwater runoff soak into the ground so it will be naturally filtered by plants and soil, instead of being discharged directly to local streams.

This spring we are offering **free technical assistance** for property owners who are interested in reducing stormwater pollution at their home or business.

Look inside to learn more about some of the things you can do to help Westwood “Soak Up the Rain.”

Thank you for making Westwood a great place to live!

Sincerely,

Todd Korchin, Director  
Westwood Department of Public Works

Learn more at: [www.neponset.org/soak-up-the-rain](http://www.neponset.org/soak-up-the-rain)

Working together, we can help to keep Westwood's waterways clean.



*Rain water goes down storm drains...*



*...and ends up—untreated—in streams, rivers, ponds, and lakes.*



*Implementing “Soak Up the Rain” projects around your property, such as rain gardens, rain barrels, and downspout redirection, keeps pollution from reaching our streams and rivers.*

Westwood Public Works Department  
in partnership with  
Neponset River Watershed Association  
2173 Washington Street  
Canton, MA 02021

Non-Profit Org.  
U.S. Postage  
PAID  
Boston, MA  
Permit No. 54080

\*\*\*\*\*ECRWSSDDM\*\*\*\*

POSTAL PATRON  
WESTWOOD, MA 02090

## Hey Westwood: It's your turn to “Soak up the Rain”!



# Mailing

## Westwood: It's Time to Soak up the Rain!

Join with friends and neighbors, and help to keep our local waterways and drinking water clean.



### How is Our Water Getting Polluted?

We are surrounded by acres of pavement, concrete and "impervious surfaces." It's everywhere—on our roads, parking lots, playgrounds, and rooftops.

When rain falls on these hard surfaces, it carries pollutants such as bacteria, fertilizers, oil, litter and grass clippings into storm drains, which lead to our local waterways—impacting the health of the water that we rely on for drinking and recreation. We call this dirty, untreated water polluted stormwater runoff.

### What Can I do to Help?

Besides keeping our pavement clean in the first place, the best way to deal with stormwater is to let it soak into the ground and be naturally filtered by plants and soil. This eliminates pollutants, reduces flooding and increases natural groundwater recharge.

This flyer contains simple and effective Soak up the Rain projects that you can try around your property.



### Free Assistance Available for a Limited Time

The Town of Westwood has partnered with the Neponset River Watershed Association to offer free evaluations of residential and business properties until June 30, 2015. They will calculate the amount of runoff at your property and suggest Soak up the Rain projects to try.

For far questions, or to schedule an on-site evaluation, please contact NepRWA Environmental Engineer, Sarah Bounty at [bounty@neponset.org](mailto:bounty@neponset.org) or 781-575-0354 x302.

### Become a Demonstration Site

The Town is also looking for several sites to create demonstration projects to help raise awareness about how to soak up the rain. Schools, churches, businesses or other visible and semi-public properties make ideal demonstration sites. If you are interested in having your project serve as a demonstration site, let the Watershed Association know! We may be able provide financial assistance to construct demo sites.



Learn more at [www.neponset.org/soak-up-the-rain](http://www.neponset.org/soak-up-the-rain)



This project is funded by a grant from the US Environmental Protection Agency and Mass Department of Environmental Protection. The contents do not necessarily reflect the views and policies of EPA or MassDEP.

### Redirect Your Runoff

The easiest way to soak up the rain is to redirect runoff from your roof, your driveway, or even the street onto a lawn or wooded area where it can soak in.

If your downspouts discharge onto a paved area, see if you can redirect them toward your



lawn, garden, or shrubs by adding a simple extender to your downspout. For a typical roof, this easy adjustment

will keep at least 40,000 gallons of polluted water from reaching our waterways every year. Ideally you want the area where you discharge to be 10 feet from your foundation, and you want the distance between the discharge and the nearest pavement to be as long as your roof is wide, to make sure the water will all soak in.

In addition to redirecting downspouts, check your driveway or even the street, to see if you can make runoff go into the lawn or woods rather than out to the storm drain. Sometimes a slight adjustment along the side of your driveway or street, is all that is needed to allow water to go into the grass, where it will soak in, rather than flow out to the storm drain.

If a lack of space or the layout of your yard prevents you from redirecting downspouts or pavement runoff don't despair, you may still be able to soak up the rain with a rain garden, dry well or rain barrel.

### Build a Rain Garden

Rain gardens are shallow, vegetated "basins" about six inches deep that collect and absorb runoff from rooftops, sidewalks, and streets. They are functional AND beautiful.

During rainstorms, runoff enters the rain garden and slowly filters into the ground

to provide moisture for the plants. The runoff is filtered and cleaned naturally by soil and plants.



Rain gardens are simple to create and can be installed in

almost any unpaved space. They are a great solution when there isn't enough space to redirect runoff into the lawn.

Rain gardens are built by digging a shallow depression and planting native species of plants that are tolerant of wet and dry conditions and which don't need artificial fertilizers.



Rain gardens are extremely flexible. They can be filled with formal garden plantings, or can be designed for minimal maintenance with native shrubs, small trees, or even grass. They can be mulched like a typical garden bed, or not. Ideally a rain garden would be about 6 inches deep and 10-15% of the size of the paved or roof area that drains into it, but they can be deeper, shallower, larger or smaller to suit your site and your tastes.

### Add a Dry Well

When there's no space for a rain garden, a dry well can be a good choice. A dry well is a hole filled with gravel that collects runoff so it can filter into the soil. A dry well is a good choice for redirecting roof runoff, or sometimes driveway runoff that is kept free of sand, but is not suitable for street runoff.

Remember to get an excavation permit from the DPW if you plan to dig deeper than three feet. Also, if you have a metal roof, check with the Dedham Westwood Water District to make sure you are not in the "zone II" drinking water area.



### Install a Rain Barrel

A rain barrel collects rain water runoff from your roof and stores it for later use. Rain water is naturally free of chlorine, lime, and calcium, which makes it a great water source for watering plants, or washing lawn furniture, garden tools, and cars.

A 1,000 square foot roof will yield about 620 gallons of water in a 1 inch rain event, which is enough to fill a 55 gallon rain barrel 11 times!

Using a rain barrel—or multiple rain barrels hooked together—is a great way to irrigate your garden, while preventing runoff, and conserving water at the same time.



Discounted rain barrels are available from the Dedham-Westwood Water District. Details at [www.dwwd.org/rain-barrels](http://www.dwwd.org/rain-barrels)

### Use Pervious Pavement

If you are installing a patio or driveway, consider using pervious materials instead of traditional pavements. Modern materials like pervious concrete, porous asphalt, and permeable pavers, allow rain water to pass right through and recharge the ground.

For patios and walkways, consider pervious pavers made from concrete or cut stone, and available in several styles. Pavers are solid, but installed so that water drains between them. They are placed over a bed of sand or gravel, which filters the water before it percolates into the soil.



For driveways or parking areas, consider pervious pavers or open-cell concrete blocks, which are designed to support vehicles, but allow water to drain through. You can also use pervious concrete or asphalt, made with large aggregates and little or no sand, so water can pass.



Almost everything spilled, dumped or dropped on our pavement gets washed into our storm drains and discharged to our waterways.

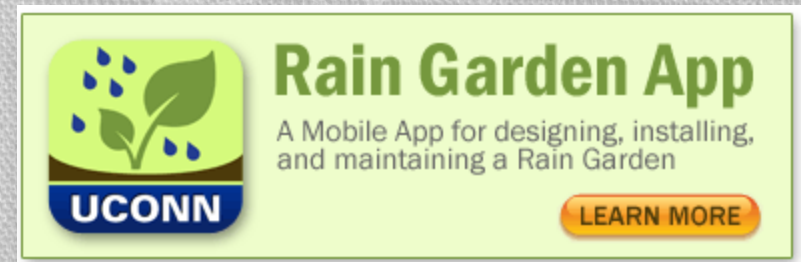
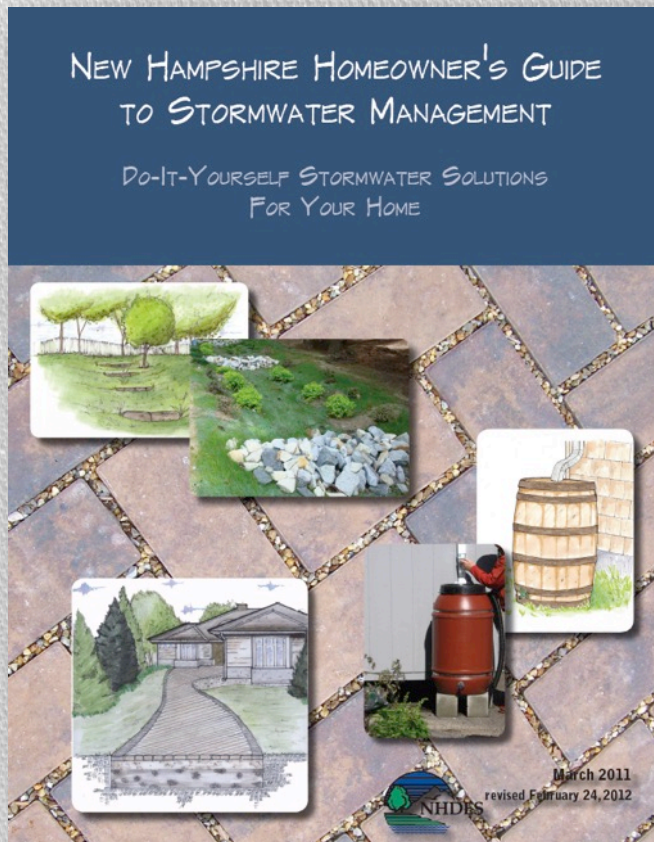


Let's get started! For more information and free technical assistance on your property, contact Neponset Watershed Association Environmental Engineer, Sarah Bounty at [bounty@neponset.org](mailto:bounty@neponset.org) or 781-575-0354 x302.



# Resources

- EPA “Soak up the Rain”
- NH DES Homeowner’s Guide to Stormwater Management
- UConn “NEMO” Garden Guide



# Technical Assistance

- Offered an on-site evaluation of runoff and possible projects



westwood

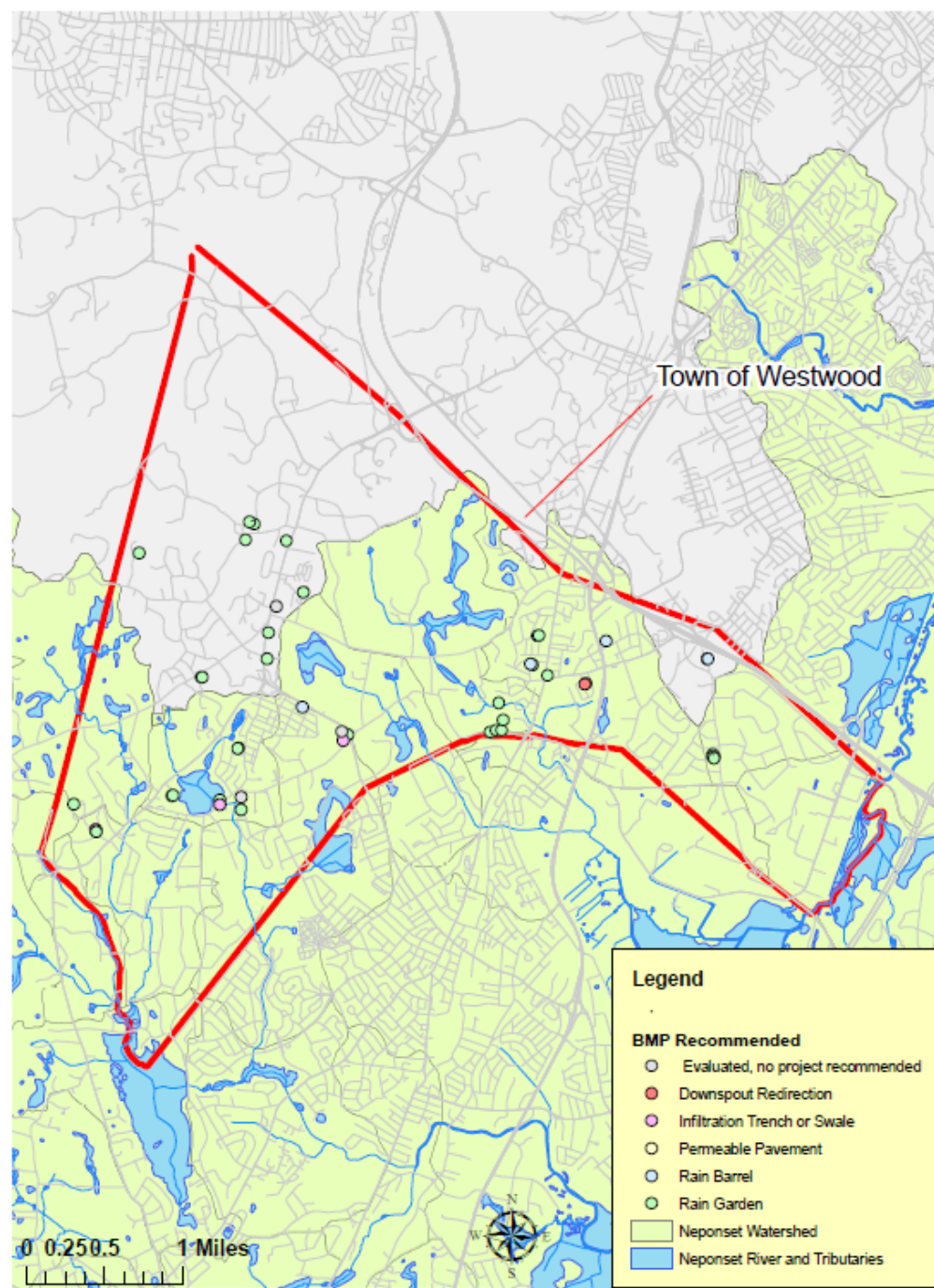
This screenshot shows the entry for survey data into the Geodatabase. Entries can be typed into the boxes provided to gather information about a particular site.

The screenshot displays a GIS application interface. At the top, the title bar reads "westwood". Below the title bar is a text box containing the instruction: "This screenshot shows the entry for survey data into the Geodatabase. Entries can be typed into the boxes provided to gather information about a particular site." The main area of the application is a map showing a residential area with various colored overlays (green, brown, orange) and lines representing roads and boundaries. A dialog box titled "BMP" is overlaid on the map. The dialog box has a close button (X) in the top right corner and a page navigation bar with "Page 1", "Page 2", and "Page" with left and right arrows. The dialog box contains the following fields:

- BMP\_Possible: A dropdown menu.
- BMP\_Type: A dropdown menu.
- Grading\_Necessary: A dropdown menu.
- Soil Type: A text input field.
- Area\_Available\_sq: A text input field.
- Drainage\_Area: A text input field.
- Constraint1: A text input field.
- Constraint3: A text input field.

At the bottom of the dialog box, there are three buttons: "ok" (green), "X" (red), and a button with a green grid icon.

# Results



# Volunteers Construct Rain Garden



# Students Construct Rain Garden





# Overall Results of Project

- **30** recommended projects
- **~25** rain barrels purchased
- **4** Rain Gardens constructed
- **20** homeowners' properties visited
- Follow-up planned in the spring



# Conclusions

- **Outreach** necessary
  - Rain Barrel Program
- **Project Partners** Important
- Future work
  - Include **incentive program** for homeowners
  - Organize neighborhood trainings
  - Look for future **grant** opportunities

