

# *Ebb&Flow #20*

# June, 2014

#### An electronic newsletter from the Mass. Department of Fish and Game's Division of Ecological Restoration (DER) http://www.mass.gov/der

Welcome Letter <u>Feature Article</u> <u>DER News and Project Updates</u> <u>Grant, Prize, Contest, Fellowship, Award and Fundraising Opportunities</u> <u>Calendar</u> <u>On-line Resources</u> <u>Non-Governmental On-line Resources</u> <u>Publications, etc.</u> <u>Last but not Least</u>

Greetings, restoration friends and colleagues:

With the onset of summer, one can't help but brim with optimism, and with my return from a fellowship at Harvard's Kennedy School of Government I can say that I have never been so optimistic about the state of ecological restoration in Massachusetts. While I was away, DER's talented staff and partners brought in millions of dollars of grants, forged new alliances, and furthered the discipline of restoration in ways not yet seen. Many thanks to the leadership team of Hunt Durey and Eileen Goldberg, who relentlessly advanced DER's mission in my absence.

On the home front, we are enthusiastic that Kristen Ferry has joined DER as a Restoration Specialist. Kristen worked for the NOAA Restoration Center and was a fisheries biologist for the Division of Marine Fisheries. Kristen replaced our friend and long-time colleague Jeremy Bell, who moved to Maine. Some of Jeremy's great work is highlighted in an <u>article (on pp.12-14) in the Spring 2014 edition of Mass. Audubon's *Sanctuary* Magazine.</u>

Dispelling the myth that river restoration, and in particular dam removal, takes years to plan and implement, in this issue of *Ebb&Flow*, Franz Ingelfinger reports on an amazingly-quick dam removal project in Harwich. Updates on several river and tidal wetland restoration projects are also provided in the **DER News and Project Updates** section. Related to restoration projects, DER has accepted <u>eight new Priority Projects</u>.

Finally, I am proud to announce that DER has received 4.5 million dollars in funds from US Department of the Interior, via a National Fish and Wildlife Foundation Coastal Resiliency grant (see our special announcement below). This grant will support 10 partner-based, river and floodplain restoration projects statewide.

See you on the water --

Sincerely,



Tim Purinton, Director

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# Restoration in the News

- The National Fish and Wildlife Foundation (NFWF), working on behalf of the U.S. Department of Interior (DOI), recently let DER know of a favorable action in response to our application for funding from the *Hurricane Sandy Coastal Resiliency Competitive Grant Program*. We have been awarded \$4,500,000 in federal funding in support of our Enhancing Nine Communities, Ecosystems, and Infrastructure Resiliency by Removing Ten Fish Barriers Project. Click here to read the DOI press release, here to access the complete nationwide list of grant awardees and projects, and here to read the Mass. Executive Office of Energy and Environmental Affairs (EEA)'s press release about the grant to DER.
- Earlier this spring, DER's Nick Wildman took part in a "Living Lab" radio program about **salt marsh** restoration, airing on <u>WCAI</u> (the Cape and Islands public radio station) and hosted by Heather Goldstone. Click <u>here</u> to listen to an archived version of the show and/or to read a thoughtful article about salt marshes by Ms. Goldstone.
- At the opposite end of the state, radio station <u>WAMC</u> (which includes the Berkshires in its listening area) ran a story covering an event taking place last month that celebrated the restoration of a free-flowing section of Sackett Brook within Mass. Audubon's Canoe Meadows Sanctuary in Pittsfield. Click <u>here</u> to listen to and/or read the story.
- Also earlier this spring, several news items came out relating to DER's current and future work to restore the free-flowing nature of tributaries to the Taunton River, along with tangible proof of how DER's work in paying dividends in terms of restoring migratory fish passage and habitat. Click <u>here and here</u> to read news stories about the planned removal of the Cotton Gin Mill Dam, on the **Satucket River** in East Bridgewater, and <u>here</u> to see **dramatic video footage of sea lamprey spawning in the Mill River** in Taunton, in the restored reach just above the Hopewell Mills Dam Removal.

# Restored content on DER's website: Fact sheets on the Functions and Values of Riparian Areas

One of the most highly valued resources posted at the **Riverways Program** (now part of the Division of Ecological Restoration)'s Technical Assistance page was a **series of** <u>nine fact sheets on the ecological and other beneficial</u> <u>functions of naturally vegetated riparian areas</u>. These fact sheets have (in whole or in part) been reprinted and/or linked to on others' websites (see, e.g., <u>River Network's</u>), and have even been incorporated by reference into local wetlands bylaws (see, e.g. the <u>Town of Sudbury's</u>). After more than a year's absence, and in response to requests, we are happy to let you know that the <u>nine fact sheets are back online, in updated form</u>, on DER's web page.

Researched and written primarily by the Riverways Program (now DER)'s Rivers Advocate, Russ Cohen, and originally published in 1997, the fact sheets **substantiate the sound science justifying the protections afforded riparian areas by the passage of the <u>Rivers Protection Act</u> in 1996 and the issuance of regulations implementing the Act in 1997. The Rivers Act amended the Wetlands Protection Act (<u>Mass. General Laws Chapter 131, §40</u>) by** 

creating a new wetland resource area, the <u>Riverfront Area</u>, along both sides of all perennially-flowing rivers and streams. Riverfront Areas are presumed to be significant for each of the <u>eight enumerated interests of the Wetlands</u> <u>Act</u>: protection of private or public water supply, protection of groundwater, flood control, prevention of storm damage, prevention of pollution, protection of land containing shellfish, protection of wildlife habitat, and protection of fisheries.

The generic term "**riparian area**" (the **lands adjacent to, and/or interacting with, rivers and streams**) used in the DER fact sheets is intended to apply to the specific land areas (Riverfront Area Resource Area) subject to regulatory jurisdiction under the Rivers Act. [See the <u>wetlands regulations</u>, especially 310 CMR 10.58, the main regulatory provision relating to Riverfront Areas.] To facilitate the applicability of the science set out in the DER fact sheets to the implementation of the Rivers Act and regulations, the first eight fact sheets (#s 1-8, see below) correspond with the eight enumerated interests of the Wetlands and Rivers Act. Fact Sheet #9 was prepared to substantiate the sound science justifying the necessity for a "rivers" protection act to apply to smaller brooks and streams as well as to the larger rivers.

While the nine fact sheets were especially valuable in the days when the Rivers Act and regulations were new, and conservation commissioners and others were acquainting themselves with the new law, the nine fact sheets continue to be relevant today in educating municipal officials, riparian land owners and managers, and others about why protecting/maintaining/restoring naturally-vegetated riparian areas is critical to safeguarding their ecological and other beneficial functions.

The main URL for the web page where the nine Riparian Area fact sheets now live is <u>http://www.mass.gov/eea/agencies/dfg/der/publications/technical-resources</u>

Here are the links (to download a document in .pdf format) for each specific Riparian Area fact sheet:

Fact Sheet #1:	Flood Control
Fact Sheet #2:	Storm Damage Prevention
Fact Sheet #3:	Wildlife Habitat
Fact Sheet #4:	Fisheries Protection
Fact Sheet #5:	Protecting Public and Private Water Supplies
Fact Sheet #6:	Groundwater Protection
Fact Sheet #7:	Protection of Land Containing Shellfish
Fact Sheet #8:	Pollution Prevention
Fact Sheet #9:	The Importance of Protecting Riparian Areas along Smaller Brooks and Streams



# **Feature Article**

# 20 Days Start to Finish: DER Helps the Town of Harwich Remove a Failing Dam and Protect and Restore a Section of Cold Brook

By Franz Ingelfinger, DER Restoration Ecologist

Massachusetts rivers and streams are interrupted by over 3,000 dams. The majority of these dams no longer serve their original purpose and many simply lie abandoned, passively clogging the ecological arteries of our landscape. Bereft of maintenance, several dams fail each year – often unnoticed by the general public.

The Carding Mill Dam on Cold Brook in Harwich was just such a structure. Once supporting a grist and wool carding mill, and later acting as a water control for cranberry agriculture, the dam had been all but forgotten. That is until March 5th, when staff from the Division of Ecological Restoration (DER) led a group on a site visit. Standing

eight feet high and spanning eighty feet across Cold Brook, this dam was being considered for removal as part of a larger habitat restoration project at the <u>Bank Street Bogs Nature Preserve</u>, a property of the Harwich Conservation Trust.

Upon viewing the Carding Mill Dam, it was immediately evident that it was about to collapse into the brook. In addition to being a safety hazard, collapse of the non-jurisdictional dam would have resulted in environmental damage and partial blockage of the brook. Allowing the dam to simply fall into the river, spilling several hundred cubic yards of fill and blocking flow and fish passage, was not an option.



Cold Brook in Harwich before (see above) and after (see below) the removal of the Carding Mill Dam. Photos by Franz Ingelfinger.



The group immediately took action. On March 10th, the Harwich Board of Selectmen ordered the issuance of an emergency certification for removal of the dam, and DER worked with the Harwich Conservation Commission and other regulators to secure the required emergency approvals. DER contracted with Stantec Consultants to prepare a

design for the safe demolition of the dam to facilitate regulatory approval. DER also supplied and helped construct water management and turbidity controls.

On March 25th, with a blizzard fast approaching, the Harwich DPW mobilized equipment and began the demolition. DER and representatives from Stantec Consultants provided construction oversight, and together, the project team removed the Carding Mill Dam in a single day. Just twenty days after the initial site visit, the Carding Mill Dam was safely demolished and a portion of Cold Brook restored. The result is one of the fastest dam removals ever accomplished in the Northeast. This project is a great example of how state-local teamwork can protect a community from the hazards of failing infrastructure while restoring ecological health.

Next up is restoration of the <u>Bank Street Bogs Nature Preserve</u>, a DER Priority Project since 2011. Located just upstream of the former Carding Mill Dam, this retired cranberry bog complex provides important habitat for many species of fish and wildlife. Cold Brook itself is an important catadromous fish passage and migration run for American eel, and portions of the Preserve have been designated as Core Habitat and Critical Natural Landscape by the Mass. Division of Fisheries and Wildlife's Natural Heritage & Endangered Species Program. Still in its design phase, the project will restore natural habitat conditions within the brook and its floodplain, improving the ecological functions of surrounding wetlands. Click <u>here</u> for additional info about DER and partners' ongoing work to restore the Cold Brook, and <u>here</u> to see a **time-lapse video and other explanatory photos of the Carding Mill Dam removal in action** from start to finish (in less than three minutes!)

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# **Division of Ecological Restoration News and Project Updates**

# Town Creek Salt Marsh Restoration and Flood Improvement Project, Salisbury

By Georgeann Keer, DER Wetland Scientist and Project Manager

After a long painful winter, spring is here in full force and we are marching quickly towards summer. Gardens are awash in the pinks and purples of early bloomers and singing birds fill the air. In the salt marsh, this muchanticipated season is delayed by cold waters, carried in by the ocean tides. As the marsh slowly warms, emerging algae first signals spring's arrival, taking advantage of the light between tides, blanketing the exposed peat and mudflats. If you blink, you just might miss the verdant carpet that erupts before the summer growth of grasses shades the marsh surface and truncates spring's arrival. This is an exceptionally welcome sight at Town Creek in Salisbury, MA, where the marsh surface has been, until recently, slumbering under the dark depths of impounded waters.

Construction of the Town Creek Salt Marsh Restoration and Flood Improvement Project, initiated this past winter, is nearing completion. Dating back to the 1800's, the abandoned rail bed, with its out-dated wooden flap-style tide gates and deteriorated culverts, posed both a significant flood-hazard as well as a chronic environmental stressor. While recent flood events between 2005-2007 resulted in emergency culvert repairs, Town Creek's ability to convey both tidal waters supporting upstream marsh, and manage flood waters to protect upstream businesses and Route 1, remained significantly impaired. In response, the Town partnered with State and Federal agencies and local businesses to develop a habitat restoration and flood mitigation project for the Town Creek system. The project replaces the existing culvert with two larger culverts equipped with modern tide control gates, greatly reducing flood risk. The design will also enhance tidal flushing to 55 acres of the estuary, improving water quality and habitat conditions for many important species of fish, birds and other wildlife.



Left photo: Aerial view (from 2005) of the abandoned rail bed, where the antiquated tide gate and undersized culvert required repeated repairs. Center photo: View of impounded upstream marsh in winter, as Town Creek construction was initiated. Right photo: View from upstream marsh in the channel, with first culvert open.



Left photo: View of Town Creek looking upstream at the first culvert, with the tide gate open. Right photo: View of Town Creek, looking downstream (west) from the first culvert.



Left photo: View from top of first open culvert facing upstream marsh with DER staff deploying monitoring equipment. Right photo: View in Town Creek channel at upstream marsh, note emergence of algae on channel bank and mudflat.

In mid-May, the first of the two culverts was cautiously opened, initiating a return of tidal waters from the Merrimack River and Town Creek to the upstream marsh. Timing of the first opening facilitated the drainage of impounded waters and exposure of the tidal creeks and mudflats coincident with the onset of spring. We are excited to watch the exposed tidal creek meander its way through the drained impoundment, and the arrival of the spring algal bloom on the marsh banks. As the second culvert is completed and tide gates are opened further, DER will assist the Town in monitoring the restoration of tidal flows upstream.

DER's partners on this project are the Town of Salisbury, the Massachusetts Emergency Management Agency (MEMA), the Federal Emergency Management Agency (FEMA), the Mass. Office of Coastal Zone Management (CZM), the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration (NOAA), Eight Towns & the Bay Committee, Conservation Law Foundation, and the Massachusetts Audubon Society.



# Bartlett Pond Dam Removal is Complete (Lancaster)

By Alex Hackman, DER Project Manager

After approximately two years of planning, design, permitting, and fundraising, contractors began on May 5 to dismantle the deteriorated Bartlett Pond Dam in Lancaster. Within two weeks, the dam was gone, and Wekepeke Brook was freely flowing again. DER congratulates the Town of Lancaster, PARE Corporation (engineer), and Kaszowski Brothers (contractor) on a job well done!



View (looking upstream) of the Bartlett Pond Dam and impoundment on Wekepeke Brook, before the dam removal



View (looking upstream) of the Bartlett Pond Dam and impoundment on Wekepeke Brook, during the dam removal



View (looking upstream) of the freely-flowing Wekepeke Brook and floodplain following the removal of the Bartlett Pond Dam.

Removal of the Bartlett Pond Dam was assigned *Priority Project* status by DER in late 2012. Since that time, DER has provided technical assistance (design review, sampling, analysis, permitting work, field oversight) and direct funding to support the effort. Help and support along the way has also been provided from the Lancaster Conservation Commission, the Nashua River Watershed Association, and the Massachusetts Division of Fisheries and Wildlife.

From an ecological perspective, this dam removal provides significant gains. Wekepeke Brook is a quality coldwater stream with native brook trout, BioMap Core Aquatic Habitat, and wetland core habitat located in the watershed. The dam was located at the outlet to the watershed, and interrupted the movement of organisms, sediment, and organic matter to the Nashua River immediately downstream. With the dam now gone, fish are moving upstream to eighteen miles of re-connected stream habitat. Eel and other fish were, in fact, seen moving through the project area during the dam removal! Downstream habitat will also benefit from an influx of sediment, leaves and twigs (food for insects!), and large wood formerly trapped in the dam's impoundment. The project employed an 'in-stream' approach to sediment management, and let nature do the work of forming the new channel upstream. A mudflat just a few weeks ago, the upstream area is now quickly turning green, as the accompanying "after" photo attests.

Beyond the ecological gains, the project also has successfully eliminated risks associated with aging and failing infrastructure. Classified as a Significant Hazard by the Mass. Office of Dam Safety, the dilapidated structure contributed to flooding and posed a risk of failure and downstream damage during storm events. Wekepeke Brook now flows uninterrupted under the Route 117 bridge, and a restored floodplain is now again available during large storm events.

This project was one of the first to receive financial support (a zero interest loan) from the <u>Dam and Seawall Repair</u> and <u>Removal Fund</u>, administered by the Massachusetts Executive Office of Energy and Environmental Affairs. Total project cost, including related improvements to the adjacent park (including new stormwater management), is approximately \$175,000. An event that celebrated the completion of the dam removal took place on **Tuesday**, **June 24 at 1:30 PM** at the Robert Frommer Conservation Area in Lancaster (click <u>here</u> to read the press release). Please contact DER project manager Alex Hackman [(617) 626-1548 or <u>alex.hackman@state.ma.us</u>] for more info.

Last but not least: big thanks to Mass. Division of Fisheries and Wildlife colleagues Rich Hartley and Mark Brideau for performing in-stream sampling to document changes in the Wekepeke Brook fish community immediately after the Bartlett Pond Dam removal. **Just five weeks** after the May 5 start of the removal, sediment mobilization, and natural channel re-formation, **brook trout** representing 4-5 different age classes were documented below and above the former dam, including the restored reach in the former impoundment! Such an incredible finding speaks to the healing power of the natural world if given a chance, and motivates us all for more dam removals like this one.

# Contractors are Putting Finishing Touches on the Off Billington Street Dam Removal

(Plymouth) By Nick Wildman, Priority Projects Coordinator



View (looking downstream) of the new Off Billington Street bridge over Town Brook, Plymouth. A rock façade is being applied to the bridge, whose "open bottom" design facilitates the up- and downstream passage of fish and wildlife.



The freely-flowing Town Brook, looking upstream from the new Off Billington Street bridge, Plymouth. After a bitterly cold winter removing the Off Billington Street Dam on town Brook in Plymouth, river herring enjoyed their first obstacle-free passage through the site in over 200 years! The failing dam has now been replaced with a fish and wildlife-friendly, open-bottom span that carries updated utilities to the residents on the south side of the Brook. Thousands of river herring were observed traversing the site this spring, and now the native plantings are taking off, greening the former impoundment.

A historically-appropriate stone facade on the bridge and new roadside plantings are among the final touches that the contractors from SumCo Eco Contracting are installing this month. SumCo will also install special earth grading to control storm water runoff and install a commemorative plaque on the bridge. With these final elements being taken care of, the project partners are now looking to the removal of the Plymco Dam just upstream later this summer. It is very likely that Plymco Dam will be gone and replaced with a bridge similar to the Off Billington Street Bridge pictured here before the 2015 herring run! Busy times at Town Brook for DER, the Town of Plymouth, NOAA Fisheries, and the US fish and Wildlife Service who are working with the support of numerous organizations toward the full restoration of Town Brook's ecological functions.



# River Instream Flow Stewards (RIFLS) Update

By Laila Parker, Watershed Ecologist

DER's River Instream Flow Stewards (RIFLS) program has been working with the <u>Ipswich River Watershed</u> <u>Association</u> (IRWA) since May 2012 to better understand streamflow impacts on the upper Ipswich River. RIFLS maintains gages at two sites in North Reading: the Ipswich River at Haverhill Street, and Martins Brook at Park Street. The latter gage was monitored by the United States Geological Survey (USGS) from 2007-2009. IRWA's Ryan O'Donnell organizes a committed crew of local volunteers, who regularly read water level at the staff gages and enter data online via the www.rifls.org website, where it is converted into streamflow via rating curves maintained by RIFLS staff.

This spring, the <u>Nor'East Chapter of Trout Unlimited</u> joined our efforts, by purchasing pressure transducers to record and store water level data at these two sites. These transducers will provide high-resolution data that will

allow us to better correlate streamflow to groundwater pumping records and to data collected at downstream gages operated by the USGS. RIFLS volunteer readings will continue to be critical: to check the transducer data, provide more real-time information, and spot any issues on the river. Together, these data will further RIFLS and IRWA's ability to understand impacts to the river and prioritize restoration actions to lessen those impacts.

On a chilly day in May, staff from DER and IRWA, along with John LeJeune of the Nor'East Chapter, installed these transducers, with encouragement from some late-afternoon fishermen. We all look forward to learning more.



Left photo: Laila Parker installs a new transducer on the Ipswich River at Haverhill Street, North Reading, with help from Ryan O'Donnell (Photo credit: John LeJeune). Right photo: Laila Parker and John LeJeune of the Nor'East Chapter of Trout Unlimited, getting ready to place a transducer at the RIFLS gage on the Ipswich River at Haverhill Street, North Reading. (Photo credit: Ryan O'Donnell.)

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# **Resources and Grants**

## Grant, Prize, Fellowship, Contest, Award, Fundraising, etc. Opportunities

(presented in rough chronological order by application/nomination/entry deadline)

The South Carolina-based company <u>Blackbaud</u>, known for providing donor management, fundraising and other tools for nonprofits, established its <u>Community Matters Grants Program</u> in 2013 to provide funding to nonprofits in other communities where the company has offices. As one of these locations is Cambridge, MA, nonprofits "in the Boston metropolitan area and outskirts" are eligible to apply for funding. Metro Boston nonprofits with annual budgets less than \$2 million and that have been in existence for >1 year are eligible to apply for a grant up to \$2,500. Click here to read the full list of Guidelines, here to see the 2014 application deadlines [the metro Boston **deadline** is **June 30**], and here to download and fill out an online application for funding.

Have you been mulling over a great project idea to help transform your neighborhood? Are you ready to take the next step to make it a reality? The <u>Center for a New American Dream</u> is now accepting applications for the **2014** <u>Get2gether Neighborhood Challenge</u>. New Dream will help your team raise funds for a project to improve your neighborhood and will match the funds raised by each selected team up to \$2,000. "Once again, we'll be partnering with <u>ioby</u>, a crowd-resourcing platform for citizen-led, neighborhood idea can raise tax-deductible donations, recruit local volunteers, and share ideas with a like-minded community. All selected winners will begin the project process in August 2014 by attending two custom, ioby-led webinar trainings on crowdfunding. Whatever amount the teams raise through this process will be matched dollar-for-dollar by New Dream up to \$2,000. The winners typically reach their goal and more within four weeks! Last year's winners were able to raise more than \$25,000 combined for their work. You can find some project ideas <u>here</u> or check out <u>last year's winners</u> for some inspiration." The **deadline** to submit your application is **June 30, 2014**; click <u>here</u> for more info. [Click <u>here</u> to download a podcast about the use of crowdfunding by nonprofits.]

Regina Frankenberg, who died in the early 1990s, directed that the remainder of her estate be used to establish a foundation (since named the <u>Regina Bauer Frankenberg Foundation</u>) to support organizations and programs that promote the care, conservation, treatment, well-being and prevention of cruelty to animals. The Foundation makes grants for animal welfare, which includes "efforts to protect endangered and threatened species by supporting conservation and research". Proposals should be received no later than July 1st; decisions are made before the Foundation's fiscal year end, which is December 31st. Grant seekers should click here for details on the contents of, and how to, submit an online application. Any questions should be directed to: The Regina Bauer Frankenberg Foundation, c/o Ms. Carolyn O'Brien, Grants Manager [carolyn.r.obrien@jpmorgan.com], JPMorgan Chase Bank, N.A. Private Foundation Services, 270 Park Avenue, 16th floor, New York, NY 10017.

The **Pulling Together Initiative**, a program of the National Fish and Wildlife Foundation (NFWF), supports projects that will assist in the control of invasive plant species (terrestrial and aquatic), primarily through the work of public/private partnerships such as Cooperative Weed Management Areas [Examples of these already in existence in Massachusetts are the <u>SuAsCo CISMA (Cooperative Invasive Species Management Area</u>) and the <u>Westfield</u> <u>Invasive Species Partnership (WISP</u>).] Funded projects must prevent, manage, or eradicate invasive and noxious plants through a coordinated program of public/private partnerships, and increase public awareness of the adverse impacts of invasive and noxious plants. The focus should be on a particular well-defined Weed Management Area, such as a watershed, ecosystem, landscape, or county. All grants must be matched by non-federal contributions from project partners, either cash or in-kind, on at least a 1:1 basis. Nonprofit organizations and government agencies are eligible to apply. Pre-proposals must be submitted online by **July 1, 2014**. Applicants who are invited to submit a full proposal will receive instructions by August 1st, 2014, via e-mail for accessing the full proposal form. Full proposals, invite only, are due on **September 12, 2014**. Click here for more info.

The <u>Funders' Network for Smart Growth and Livable Communities</u>, in partnership with the <u>Urban Sustainability</u> <u>Directors Network</u>, has announced the fifth round of its <u>Partners for Places grant program</u> (formerly the Local Sustainability Matching Fund). Partners for Places provides matching funds for sustainability projects that build partnerships between local governments and place-based foundations. The grant program will provide investments between \$25,000 and \$75,000 for one-year projects, or \$50,000 and \$150,000 for two-year projects, with a 1:1 match required by one or more local foundations. The program will support 8 to 12 projects in 2014. The Funders' Network has identified a variety of priorities for the 2014 Partners for Places competition, which were set out in an informational call on May 28</u>. The deadline for applications is July 3, 2014; click here to download the Partners for Places RFP, here to download the FAQ page, and here for more details on the application process.

Is your organization using innovative techniques to manage stormwater? The Water Environment Federation (WEF) wants to hear about it and share your success with others. Send the WEF a link to a YouTube video of your program, project or product, and it will be added to WEF's Stormwater Playlist. Submitted videos will be featured on WEF's YouTube Channel and WEF's Stormwater Report website. Top videos in each of four categories will be selected by a judging panel from WEF's Stormwater and Watershed committees. These top videos will be featured in a special awards session in the Stormwater Pavilion Theater at the WEFTEC® 2014 convention in New Orleans. In addition, winners in each of the four categories listed below will receive complimentary registration to WEF's Stormwater Congress, held in conjunction with WEFTEC 2014. The submission deadline is Friday, July 11, 2014; click here for more info, and here to view a map of video projects from the 2012 and 2013 StormTV Projects.

Recently announced by USDA Secretary Tom Vilsack, a new conservation program, called the **Regional** <u>Conservation Partnership Program</u> (RCPP), authorized in the 2014 Farm Bill, will competitively award funds to conservation projects designed by local partners. Eligible partners include private companies, universities, nonprofit organizations, local and tribal governments and others joining with agricultural and conservation organizations and producers to invest money, manpower and materials to their proposed initiatives. RCPP will address **Mass. state priorities, including: water quality degradation, soil quality degradation, soil erosion, plant condition degradation, inadequate fish and wildlife habitat, energy use inefficiency and insufficient water**. "Local decision making is empowered through this program – bringing together conservation groups, cities and townships, sportsmen groups, universities, agricultural associations and others – to design conservation projects that are tailored to our needs here in the Commonwealth," said Christine Clarke, NRCS State Conservationist in Massachusetts. This program is a prime example of how government can serve as a catalyst for private investment in natural resource conservation." The announcement of program funding can be found on <u>Grants.gov</u>. Preproposals are due **July 14, 2014**, and full proposals are due **September 26, 2014**. Click <u>here</u> to access the RCPP funding announcement on Grants.gov, and <u>here</u> for Massachusetts-specific info on the RCPP.

With its belief that "film can inspire a better world", the New York-based <u>Fledgling Fund</u> "primarily supports the **development and execution of outreach and audience engagement campaigns for social issue documentary films**". The Fund's key issue areas include **Environment** (i.e., "projects that highlight the impact of policy, corporate, and personal decisions on communities and the world and that inspire action" – click <u>here</u> to see examples of Fledgling-supported films covering environmental topics). Application deadlines occur twice/year; the next **deadline** for letters of inquiry is **July 15, 2014**. Prospective grant seekers should click <u>here</u> for more details as well as read the <u>FAQ page</u>.

The <u>Ramsar Convention on Wetlands</u> recently announced that nominations are currently being sought for the sixth edition of the <u>Ramsar Wetland Conservation Awards</u>, which will be presented at the 12<sup>th</sup> meeting of the Conference of the Contracting Parties in Punta del Este, Uruguay, in June 2015. Three Awards will be given, each with the cash prize of \$10,000: a) The Ramsar Convention Award for Wetland Wise Use; b) The Ramsar Convention Award for Wetland for Young Wetland Champions. The **deadline** to submit a nomination is **July 15, 2014**; click <u>here</u> for more info.

The Kresge Foundation's Environment Program will soon invite applications from community-based nonprofits positioned to help influence local and regional climate-resilience planning – and related policy development and implementation – so that it to reflects the knowledge, priorities and needs of low-income communities. Grants of up to \$100,000 will go to community-based nonprofits with records of effective work in low-income communities and an interest in deeper involvement in local and/or regional climate-resilience efforts. The planning grants will support the development of multiyear work plans describing how the respective organizations will engage in climate-resilience planning, policy development and implementation efforts with the goal of ensuring that such efforts reflect the interests of low-income community members. Click here for more info.

The U.S. Fish and Wildlife Services (USFWS)'s Ecological Services Program provides Federal financial assistance on a competitive basis to States, other Federal agencies, landowners, educators, non-profit organizations, researchers, and other partners to secure information about endangered, threatened or candidate species, to aid in the recovery of these species, to avert listing of species pursuant to the Endangered Species Act, and to help conserve the ecosystems upon which these species depend. Recovery Implementation Grants are intended for projects that will contribute to the recovery of FWS-managed endangered and threatened species in the U.S., and is limited to projects carrying out actions described in a species approved recovery plan, in the implementation schedule of a species approved recovery plan, actions recommended in a completed 5-year status review of the species or in a spotlight species action plan, or projects documenting species, implementing restoration actions that will lead to delisting of a species, help prevent extinction of a species, or aid in the recovery of a species. Projects that address species response to climate change will receive additional consideration. Applications are accepted on an ongoing basis through July 31, 2014; click here or contact USFWS Northeast Recovery Coordinator Mary Parkin [(617) 418-3331, mary\_parkin@fws.gov] for more info.

The Mass. Executive Office of Energy and Environmental Affairs (EEA)'s <u>Division of Conservation Services</u> (DCS) is seeking applications for Fiscal Year 2015 <u>Landscape Partnership</u> grants. The Landscape Partnership Grant Program "seeks to preserve large, unfragmented, high-value conservation landscapes including working forests and farms, expand state-municipal-private partnerships, increase leveraging of state dollars, enhance stewardship of conservation land, and provide public recreation opportunities. The program offers competitive grants to municipalities, non-profit organizations, and EEA agencies acting cooperatively to permanently protect a minimum of 500 acres of land." The application deadline is July 31; click <u>here</u> or contact Celia Riechel [(617) 626-1187 or <u>celia.riechel@state.ma.us]</u> for more info.

The <u>Massachusetts State Office of the U.S. Department of Agriculture's Natural Resources Conservation Service</u> (NRCS) recently announced the availability of up to \$130,000 in **Conservation Innovation Grant** (CIG) funding to stimulate the development and adoption of innovative on-the-ground conservation, including pilot projects and field demonstrations, while leveraging the federal investment in environmental enhancement and protection in conjunction with agricultural production. For fiscal year 2014, Massachusetts NRCS will consider proposals for projects that address energy conservation, **invasive species control**, soil health and **water quality**. Additional topics may be considered at the State Conservationist's discretion. NRCS will fund single and multi-year projects. Funds will be awarded through a statewide competitive grants process. Projects are not to exceed three years with an anticipated project start date of September 1, 2014; award amounts for individual projects will range between \$10,000 and \$75,000. Eligible entities include federally recognized Indian tribes, state and local units of government, and non-governmental organizations and individuals in Massachusetts. Click here to download the full grant announcement, or look for funding opportunity number 10.912 at <u>www.grants.gov</u> or on the NRCS Massachusetts website. Proposals must be received at the NRCS Massachusetts State Office by 4:00 pm on **July 31, 2014**. Click here or contact Deb Johnson [(413) 253-4368, <u>deb.johnson@ma.usda.gov</u>] for more info.

The <u>Arthur L. & Elaine V. Johnson Foundation</u> makes grants for seeing-eye dogs as well as supports "organizations that provide for the preservation, care and benefit of wildlife and the world's natural resources". In this area, the Foundation's highest priority is for direct conservation (e.g., preservation or

restoration of natural land, animal conservation or preservation) and **science-based conservation activities** (i.e., research designed to lead to better land and wildlife management). While the annual **deadline** for applying for a grant is **August 1st**, prospective grant seekers are encouraged to **submit a letter of inquiry at least a month beforehand** to ensure their funding needs fit with the Foundation's priorities. Click <u>here</u> and <u>here</u> for more info.

The <u>M. Edward Morris Foundation, Inc.</u> seeks to fund organizations that support the care and protection of animals, **preservation of natural resources**, and the health and welfare of human beings. Thirteen grants are distributed each year, with an average size between \$1,000 and \$5,500. While applications are accepted year-round; they must be submitted by **August 1** to be reviewed at the annual grant meeting, which occurs in October. Prospective grant seekers should click <u>here</u> for more info.

The Sterling, MA-based <u>George A. Ramlose Foundation</u> makes grants (generally in the \$3-5,000 range), with a preference for funding equipment purchases or special projects undertaken by to small-to-medium sized nonprofit organizations and/or projects located in **New England** and Georgia. The Foundation's areas of interest include children/youth and civic affairs. The Foundation accepts applications during the time period of **July 1-August 31**. Prospective grant seekers should click <u>here</u> for info on the application process and <u>here</u> to read the Foundation's FAQ page.

The Boston-based John H. and H. Naomi Tomfohrde Foundation makes grants to support the work of charitable institutions, organizations and agencies in New England that are dedicated to the cultural, social and civic betterment of the community and particularly which foster the advancement of higher education, the classic arts, scientific research in biomedicine and the improvement of community health. In 2014, the Foundation will focus the majority of grants on programs and projects that address the educational, economic and community health needs in the following Massachusetts Gateway Cities: Brockton, Chelsea, Fall River, Lawrence, Lowell, Lynn and New Bedford. The Trustees may continue to make grants in other areas, but on a limited basis. The remaining 2014 deadlines for Preliminary Application-Concept Cover letters are April 15th and August 15th; click here or contact Grants Coordinator Susan T. Monahan [(617) 951-1108, smonahan@rackemann.com] for more info.

The Chevy Chase, MD-based **Frank M. Ewing Foundation** (no web page) makes grants (typically around \$5,000) to nonprofit organizations throughout the U.S. in a number of areas, including education, environment and animal welfare. Types of support include general operating and project support. Interested applicants should submit a letter that describes the organization and the purpose for which funds are being requested. Applicants should also include a copy of the IRS tax-exempt letter. As the review process takes place each year in October. Requests for funding should be received by the **end of August** to be considered. Send them to: Frank M. Ewing Foundation, 5610 Wisconsin Ave. #PH20C, Chevy Chase, MD 20815.

The <u>Cathay Bank Foundation</u> was initially founded in 2002 for the purpose of raising and administering funds for community-based nonprofit organizations in the communities the bank serves in California, Illinois, **Massachusetts**, Nevada, New Jersey, New York, Texas, and Washington. The Foundation's areas of interest include the following: Community and Economic Development, Education, **Civic and Community**, and Health and Welfare. Grants generally range from \$1,000 to \$10,000. While the Foundation does not accept unsolicited full grant proposals, **initial letters of intent may be submitted at any time**. The application **deadline** for invited full grant proposals is **August 30, 2014**. Visit the <u>Foundation's website</u> to learn more about the Foundation's focus areas and the application process.

The <u>Hardwood Forestry Fund</u> promotes hardwood timber growth, management, and education, as well as environmentally sound uses of renewable forest resources. The Fund supports projects on public land, including state, local, or university land, or on property owned by nonprofit organizations. Grants are provided for the planting and/or management of commercial hardwood species, giving **preference to black cherry, red oak, white oak, hard (aka sugar) maple, and black walnut** (click <u>here</u> to see the complete list of eligible tree species). The land must be allocated for multiple uses. Examples of planting sites include idle land being converted to forest; sites

damaged by wildfire, insect or disease, ice, or wind storms; and naturally regenerating sites lacking desired stocking or species composition. Prospective applicants are encouraged to discuss project ideas with Hardwood Forestry Fund staff before investing time in the application process. The grant application **deadline** for spring 2015 planting is **August 31, 2014**; click <u>here</u> for more info.

The outdoor clothing and gear company <u>Patagonia</u>'s <u>Environmental Grants Program</u> supports grassroots organizations with §501(c)(3) status (or a fiscal sponsor with such status) that have provocative direct-action agendas and are working on multi-pronged campaigns to preserve and protect the environment. Grants of up to \$12,000 will be awarded for projects that are action-oriented, build public involvement and support, focus on root causes, and demonstrate a commitment to long-term change. The annual application **deadlines** are April 30 and **August 31**. [In addition to this corporate grant program, <u>each Patagonia retail store</u> administers a local grants program. Retail store grant applications are accepted year round.] Click <u>here</u> for complete program guidelines, application requirements, information on previous grant recipients, and for the retail store locator.

The <u>Cabot Family Charitable Trust</u> makes grant awards in the \$5,000 - \$50,000 range to \$501(c)(3) tax-exempt organizations active "in arts and culture, education and youth development, environment and conservation, health and human services, and civic and public benefit. Within these fields, as appropriate, the trustees prefer programs mainly serving youth and young adults, with a special interest in programs focused on insuring the healthy growth and development of infants and young children, as a foundation for their future success. Grant awards are made in the city of Boston and contiguous communities, as well as to organizations in which the Cabot family has philanthropic interest." Prospective grant seekers should contact the Trust to obtain copies of the Concept Paper form. The deadlines for submitting the completed form are February 1 and September 1. If those dates fall on a weekend or holiday, applications are due the next business day by postmark or email. The Trust will consider grant applications for general support, support for specific programs and activities, and for capital campaigns (for the February 1 deadline only). The trustees will notify applicants by email if further information is needed to complete their consideration of a request. Applicants will be notified by email on a rolling basis if their requests will not be funded. Concept papers must be emailed or postmarked by the close of business on the deadline date to: Katherine S. McHugh, Executive Director, Cabot Family Charitable Trust, 70 Federal Street, (7th floor), Boston, MA 02110 Telephone: (617) 226-7505 kmchugh@cabwel.com. Click here for more info.

The **Seth Sprague Educational and Charitable Foundation** (no web page) gives primarily to a wide range of cultural, educational and environmental organizations in several regions, including **greater Boston and Cape Cod**. Types of support include general operating and project support. Grants range in size from \$2,000 - \$20,000, but can occasionally be considerably larger. Interested applicants should submit a request with the following information: a three- to five-page proposal describing the mission of the organization, the specific population served, and the expectation of the outcome of the project for which funds are requested; a budget for the program; the most recent financial statement (preferably audited); a copy of the most recent Form 990; and, a list of the organization's board members. Send it to: Ms. Gloria Shuler, Grants Administrator, Seth Sprague Educational and Charitable Foundation, c/o Christine O'Donnell, U.S. Trust, 114 West 47th Street, NY8-114-18-02, New York, NY 10036. (646) 855-3195 (voice), (646) 855-5463 (fax). The annual application **deadlines** are April 1 and **September 1**.

**Island Press** is partnering again with the **Society of Ecological Restoration** (SER) to offer a **"Why Restore"? Student Video Contest**. Produce a video no longer than four minutes that addresses the question "Why restore?". You can share details of an ecological restoration project you started, facilitated, or in which you participated that explores restoration, its importance to ecology and the broader environment, and its impact on the community at large. The Contest is open to students and early-career professionals no more than two years out of school. The person(s) who created the winning video will receive a total of \$750 to apply towards travel expenses associated with attending the <u>SER Northwest/Great Basin Joint Conference</u> in Redmond, Oregon, October 6-10, where the winner will be announced. The entry **deadline** is **September 3, 2014**; click <u>here</u> or <u>here</u> for more info. [Last year's co-winner, <u>Teresa Pereira</u>, details her contest experience in this <u>blog post</u>; and click <u>here</u> to watch her and the other submissions to the 2013 contest.] The John and Alice Tyler Prize "is awarded for environmental science, environmental health and energy conferring great benefit upon mankind." Prizes are awarded for any one of the following: the protection, maintenance, improvement or understanding of an ecological or an environmental condition anywhere in the world; the discovery, further development, improvement, or understanding of known or new sources of energy; and medical discoveries or achievements with such worldwide implications that they significantly benefit environmental aspects of human health. The nomination deadline is Friday, September 12, 2014; click here to access a nomination form and for more details on the prize (self-nominations are not accepted).

The <u>Walmart Foundation's State Giving Program</u> provides grants to 501(c)(3) organizations, ranging from \$25,000 to \$250,000. The Walmart Foundation has a State Advisory Council in each state, made up of Walmart associates representing local communities. Each Council helps identify local needs within its state, reviews all eligible grant applications and makes funding recommendations to the Walmart Foundation. Councils base recommendations on alignment with Foundation focus areas, state or community needs and program eligibility criteria. [N.B.: Significant changes to the State Giving Program are in place for the 2014 funding year. Be sure to read the <u>State Giving Guidelines</u> and <u>State Giving FAQs</u> prior to applying.] Applications for "Community Engagement" grants for projects located in Massachusetts will be accepted from Sept. 7, 2014 to Sept. 13, 2014; click here for more info. [Walmart also has a <u>Community Grant Program</u>, with a much smaller grant range (\$250 to \$2,500), but whose application deadline isn't until December 31, 2014; click here for more info.]

The New England Grassroots Environmental Fund (NEGEF) "is the only organization of its kind dedicated to inspire, connect, and support community-based environmental projects throughout New England. NEGEF's niche is to help those on-the-ground, everyday people for whom grassroots work is a passion and whose volunteer time is a priceless contribution to the common good." NEGEF's Seed grants "are geared to groups launching new projects and/or evolving the scale of an existing project. Applicants may apply for Seed grants at any time (expect a decision in 4 weeks), and the grant award range is \$250 - \$1,000. NEGEF's Grow grants "are geared to established groups who are ready to expand the scope of their work. 'Grow' groups often have 1+ year experience running community projects and are ready to take on (pieces of) local system strategy around their issue". For the Grow Grants, there are two annual application deadlines (March 15 and September 15 - expect decisions early June & December, respectively), and the grant award range is 1,000 - 3,500. In both cases, the grants "are intended to support community groups who represent the most exciting energy in the environmental movement that are not being reached by traditional funders. The Fund interprets the word 'environment' broadly and will provide funding for a wide range of activities. Whole systems-thinking is critical to initiatives focused on making our environment better, healthier and more sustainable." Click here to see if your group and funding need is eligible for a NEGEF grant, and (if so) to help you decide whether to apply for a Seed or Grow grant. NEGEF also offers a fiscal sponsor program, which enables groups that are unincorporated, ad hoc (i.e. don't have §501(c)(3) taxexempt status) to receive tax-deductible contributions via NEGEF. Participating groups can have an online donation form on their NEGEF group profile to assist in community fundraising.

Water: Take 1, a film contest presented by Ventura Water, "is an exciting and important initiative that highlights our relationship with water: How we look at it, how we use it and how we share it. Submit your film NOW and help draw attention to the current water crisis as we work towards solutions through education and partnerships". The Water: Take 1 competition "presents the best water-themed short films – narrative, documentary, comedy, drama, animation, live action – to a distinguished jury made up of leaders in water and environmental issues, entertainment professionals and influential members of the community. The "early submission deadline" is September 15 and the "final submission deadline" is November 1st, 2014. The voting for the Audience Choice Award closes six weeks after the final submission deadline, so your friends and fans can keep voting for your film even after the deadline has passed. The earlier you submit your film, the more time your project has to gather votes and win, and the video with the most votes wins an IPad 2. Click here for more details, here to read the press release announcing the 2014 contest, and here to see the award-winning and other entries from the 2013 contest.

Mass. Audubon is holding its 2014 <u>Picture This: *Your Great Outdoors* photo contest</u>, open to all participants. They welcome "striking digital images that highlight the beauty and diversity of Massachusetts wildlife, habitats, and people in nature". Judges will select up to 12 winners (two in each of six categories). Entries are due by September 30; click <u>here</u> for more info and <u>here</u> to see the winning photos from 2013.

As set out in a <u>press release</u> from this past March, U.S. Department of the Interior (DOI) Secretary Sally Jewell issued a <u>secretarial order</u> formalizing the <u>21st Century Conservation Service Corps</u>, which seeks to "empower young Americans and Veterans to serve outdoors and preserve America's public lands and waters, neighborhoods, communities and national treasures". 21CSC projects will "protect, restore and enhance public and tribal lands and waters as well as natural, cultural, and historical resources and treasures. By producing high-quality, cost-effective project work, the 21CSC will also increase public access and use while spurring economic development and outdoor recreation." The DOI currently (until **September 30**) welcomes organizations interested in <u>becoming a 21CSC</u> program operator to submit a letter of interest (click here to see the list of Massachusetts organizations already participating in the 21CSC). Click <u>here</u> to read the FAQ page, or contact Ms. Merlene Mazyck at <u>21CSC@fs.fed.us</u> for more info. Individuals interested in participating in the 21CSC should click <u>here</u>, and entities seeking to <u>hire a</u> <u>21CSC crew</u> for a conservation project should click <u>here</u>. [See also the related <u>Corps Network</u> website.]

The mission of the MA/NH Seacoast-based <u>Horne Family Foundation</u> "is twofold: First, to preserve and maintain the legacy of the Horne Family by supporting various community efforts in the **Massachusetts Merrimack Valley region** and in southern New Hampshire; and Second, the foundation seeks to find opportunities designed to augment progress and improve the future by supporting initiatives in the areas of **conservation**, education, health, economic stability and **environmental sustainability** both in the national arena and on a global level. The annual application deadlines are March 31 and **September 30**, and awarded grants range in size from \$2,500 to \$25,000. Click <u>here</u> to apply or for more info.

Grants made by **An Environmental Trust, Inc.** (no web page) are "limited to corporations or associations organized and operated for charitable, scientific or educational purposes **for the protection and enhancement of the environment**". Grants range in size from \$2,500 to \$10,000 and are for general operating support. The annual application **deadline** is **September 30**. Prospective grant seekers should request guidelines from: Rebecca A. Ramsay, An Environmental Trust, Inc., P. O. Box 4185, Washington, PA 15301. Telephone: (724) 225-8655.

Wild Ones, a nonprofit environmental education and advocacy organization, is currently accepting applications from projects designed to strengthen an appreciation for nature in young people. Through the Lorrie Otto Seeds for Education Fund, grants of up to \$500 will be awarded for projects that emphasize the involvement of students and volunteers in all phases of development. Examples of appropriate projects include the establishment of a native plant community in an educational setting such as an outdoor classroom, developing and maintaining an interpretive trail landscaped with native plant communities, and/or developing a wetland area to study the effect of native vegetation on water-quality improvement. Schools, nature centers, and other nonprofit places of learning that focus on educating elementary through high school students in the United States, including houses of worship, are eligible. Qualified applicants must have a site available for the project. The annual application deadline is October 15; Click here or here for more info.

The NC-based **Hillsdale Fund** (no web page) makes grants (generally in the \$5,000 to \$25,000 range) to a variety of conservation and other \$501(c)(3) tax-exempt organizations throughout the U.S. Prospective grant seekers should contact Mary Scott, Hillsdale Fund, P.O. Box 20124, Greensboro, NC 27420, Telephone: (336) 274-5471, for more details on the application process and **deadlines** (typically two/year, one in the spring and one in the fall).

The mission of the New York City-based <u>Heineman Foundation for Research, Education, Charitable and</u> <u>Scientific Purposes</u>, established in 1948 by Dannie and Hettie Heineman, is to **provide seed money** to start-up projects and new projects within existing organizations for a maximum of three to five years. Among the Foundation's general areas of interest are **environmental research that will help prevent, reduce and/or**  eliminate water degradation. Prospective grant seekers should click <u>here</u> to begin the online application process and to learn what other materials need to be submitted along with your application.

One of the funding priorities of the Louisville, KY-based <u>C., E. & S. Foundation</u> is "**Urban Environmental Improvement**: projects that improve living conditions and/or enhance the lives of people in their communities. Urban parks, recreation facilities, and pilot projects in low-income neighborhoods are examples of the types of projects supported. As the majority of grants made in this area focus on Louisville, organizations serving other urban areas should seek the counsel of Foundation staff before submitting formal proposals." Prospective grant seekers should click <u>here</u> and <u>here</u> for more info.

The Memphis, TN-based **Jeniam Foundation** (no web page) makes grants to \$501(c)(3) tax-exempt organizations for several purposes, including **wildlife conservation**. The Foundation emphasizes "venture capital philanthropy", including feasibility studies and start-ups, as well as funding for capital projects, which are hard to finance through traditional sources or operating budgets. The Foundation emphasizes funding leverage through challenge grants, matching funds and participating with other foundations. There are no formal application guidelines; requests should initially be in a written summary format (1-2 pages), and should include budget information. The Foundation will request more specific details later, as appropriate. Send it to: Hugh Killin, III, The Jeniam Foundation, 270 Bremington Place, Memphis, TN 38111. Telephone: (901) 454-7080.

The Nathan Cummings Foundation "is rooted in the Jewish tradition and committed to democratic values and social justice, including fairness, diversity, and community. We seek to build a socially and economically just society that values nature and protects the ecological balance for future generations; promotes humane health care; and fosters arts and culture that enriches communities"(click here for more details). The Foundation has recently modified its priorities to place a greater emphasis on addressing climate change as a consequence of progress in human development and economic prosperity, and seeks to fund "promising work that helps activate American ingenuity in pursuit of three interrelated goals: increasing access to modern energy for the world's poor; stabilizing greenhouse gas concentrations in the atmosphere at a low level; and improving resilience for those most vulnerable to the negative consequences of climate variability and change. Prospective grant seekers should click here to see if there is a good fit with the Foundation's funding priorities.

The NH-based **Dorr Foundation** (no web page) makes grants (typically in the \$15,000 - \$20,000 range) primarily to educational institutions and conservation groups in New England. Prospective grant seekers may contact: Barbara McMillan, Dorr Foundation, 84 Hillside Drive, Portsmouth, NH 03801. Telephone: (603) 433-6438. There are no specified application forms or deadlines.

The New Jersey-based **Steve J. Miller Foundation** (no web page) makes grants for general operating purposes, generally in the \$2,500 - \$10,000 range, to a variety of nonprofit organizations, including one engaged in **river conservation**. Prospective grant seekers should submit a written request to: Ms. Deirdre Snyder, Steve J. Miller Foundation, c/o Michael Fox, P.O. Box 1501, Pennington, NJ 08534. Telephone: (609) 274-1979.

Believing in "**the power of ordinary people to do extraordinary things**", the <u>Pollination Project</u> makes seed grants of \$1,000 each throughout the year to social entrepreneurs with a practical vision for doing good in the world: for projects in the **environment**, justice, human rights, arts and culture, animal rights and welfare, and community health and wellness. Grants will not support established organizations or corporations; grantees' time or services; projects that have already raised over \$10,000 since inception; scholarships and training fees; and projects where the primary benefit is to the grantee or to any one individual. Click <u>here</u> to read the Funding Guidelines, and <u>here</u> to read the FAQ page. Prospective grant seekers should fill out the <u>pre-screening questionnaire</u>, and if you pass this eligibility quiz, you will be invited to download and fill out an online application for funding.

Each month, the energy bar maker <u>Kind</u> donates \$10,000 to a specific "crowdsourced" cause. Advocates can submit projects and causes for consideration, and then the project/cause receiving the most votes gets the \$10,000.

Click <u>here</u> for more details. [See also the company's <u>Do the Kind Thing</u> blog, which reports on kind acts by its customers and others.]

The **Darden's Restaurant** <u>Community Grants Program</u> "is a local grants initiative that helps support nonprofit organizations in the hundreds of communities Darden and its restaurant brands serve. In partnership with the **Darden Foundation**, every restaurant in the Darden family – **Red Lobster**, **Olive Garden**, **LongHorn Steakhouse**, **The Capital Grille**, **Bahama Breeze**, **Seasons 52** and **Yard House** – awarded a \$1,000 grant to an exceptional nonprofit organization in its local community. In its third year, the program resulted in grants to 1,135 exceptional nonprofits across the United States and Canada. These community grants will fund local projects across three focus areas" [one of which is the <u>preservation of natural resources</u>]. Prospective grant seekers should click here (scroll down to p. 24) for details on how to apply and to learn about past grant award recipients. Requests should be sent to: Ms. Pattie Pitchford, Darden Restaurants, Inc. Foundation, 1000 Darden Center Drive, Orlando, FL 32837. Telephone: (407) 245-5366.

The **EPA's** online <u>Catalog of Federal Funding Sources for Watershed Protection</u> was recently updated in **April 2014** to include the latest information about FY2014 federal funding allocations for programs focusing on watershed protection and restoration. The site houses an easy-to-use, searchable database of 85 programs in which financial assistance sources, including grants, loans and cost-sharing, are available to fund a variety of watershed activities. Information about each funding source includes a program description, details on program contacts, funding history, typical past award amounts, eligibility requirements, application deadlines, and matching funds/criteria requirements. Users can search by keyword, type of assistance, match-requirement, and more.

Last but not least: **Do you need funding for your latest brainstorm? Are you short on time to look for grant opportunities that fit?** <u>Water Words That Work, LLC</u> offers a "<u>Revenue Roadmap</u>" <u>service</u> to nonprofit organizations, government agencies, universities, and other organizations that are typically eligible for grant funding. "For just \$240 (Nonprofit Organizations) or \$320 (all others), we'll interview you about your organization, the project you want to start, and the types of funding you need to make it happen. Based on your direction, we will comb through various grant databases looking for private, corporate and government funding opportunities that fit your situation. Once we're done, we'll provide you with a list of funding sources ranked on strength of the match, application deadlines, and full contact information for each funder." Click <u>here</u> for more info.

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#### Calendar

(sorted chronologically by date of event, submission deadline, etc. Descriptive text for events provided below is obtained from the events' web pages.)

A screening of the documentary film *DamNation* will be taking place at the Images Cinema, 50 Spring Street in Williamstown, at 7:00 PM on **Monday, June 30**. Tickets are \$10, and all proceeds from this event, sponsored by <u>Nature's Closet</u>, will be donated to the <u>Hoosic River Watershed Association</u> (HooRWA). Click <u>here</u> for more info. [Click <u>here</u> for info on additional upcoming screenings of the *DamNation*, or <u>here</u> for info on how to host your own; <u>here</u> for info on how to rent or own a copy of the film; and <u>here</u> to learn more about and participate in a petition drive inspired by the film.]

<u>Meet the Neponset: A Photography Exhibit of the Neponset River Watershed in Hyde Park</u> is an exhibit by area photographers of the Neponset River, Fowl Meadow, Mother Brook, and surrounding areas. The photos also depict the urban landscape within Hyde Park, and of neighbors working together to keep the River clean. The exhibit will be on display at the Bean & Cream Cafe, 680 Truman Parkway in Hyde Park (see map) through the months of **July, August, and September**. New work will be on display each month. Click <u>here</u> for more info.

The <u>Charles River Conservancy</u> (CRC) and the Mass. Department of Conservation and Recreation (DCR) are collaborating on two <u>Charles River Swim</u> events this summer: Saturday July 12, 2014 and Saturday, July 26, 2014. Both events will run from 10:00 AM – 3:00 PM, with five one-hour swimming slots available each date. The event take place at the Fiedler Dock on the Esplanade. Click <u>here</u> to sign up to take part in the 7/12 swim, and <u>here</u> for the 7/26 swim. [Volunteers are needed in both the mornings and the afternoons, to help check in swimmers; if interested, please contact Theresa Doherty at <u>tdoherty@thecharles.org</u> or (617) 300-8175.]

Accurate and thorough administration of current grants is one the biggest predictors of success in getting future grants for your organization. *Sailing Right Through Grant Administration*, a GrantStation-sponsored webinar scheduled to take place on Thursday, July 17, 2014 from 2:00 PM – 3:30 PM, will give participants a complete tutorial in the administration of foundation, corporate, state, and federal grants. The presentation will include the following topics: the grant agreement, financial recordkeeping, environmental review, labor standards, performance reporting, evaluation, retention of records, and the monitoring visit. In addition, some general distinctions will be drawn between the grant administration requirements for foundation and corporate grants as opposed to government grants. Click here to sign up or for more info on this and other upcoming GrantStation webinars.

A workshop entitled *Hydric Soils: How to Know 'Em When You See 'Em*, sponsored by the Mass. Association of Conservation Commissions (MACC), is scheduled to take place on **Thursday, July 17, 2014** (Rain date: July 24, 2014) from 8:30 AM – 4:00 PM, somewhere in the Worcester area (exact location TBD). "Gillian Davies and Art Allen present a new, one-day workshop on hydric soils, which will be a great introductory class or refresher for consultants and regulators, including conservation commissioners and agents. A morning classroom session will be followed by an afternoon in the field getting your hands dirty and putting your new knowledge to work. Topics to be covered include: soils of Massachusetts; geologic history and its influence on our soils; soil texture, color, describing soil profiles, and estimating depth to seasonal high water table. The afternoon field trip will involve working in teams to describe soil pits on a wetland – upland transect using MassDEP Methodology. Morning refreshments and lunch are included. Bring your own field equipment if you have it, such as an auger or spade and a Munsell color book, and dress for the woods and wetlands." Click here to register or for more info on this and other MACC-sponsored workshops, including *Wetland Plant Identification*, with senior botanist Ted Elliman, taking place at (and co-sponsored by) the New England Wild Flower Society (NEWFS)'s Framingham headquarters on **Thursday, July 17** (from 6:30-8:30 PM) and **Friday, July 18** (from 10:00 AM- 2:00 PM).

<u>River Network</u>'s *Fall 2014 Clean Water Act 101 Institute* "is designed to help the staff and volunteers of watershed organizations and others develop an action-orientated understanding of a powerful tool for river restoration and protection – the Clean Water Act. The Act's programs and citizen engagement requirements can lead to huge on-the-ground improvements in water quality and habitat, but the law can be intimidating. Through this Institute, we help people feel confident with the core programs of the Act, understand how they are applied in their watershed, and feel empowered to make change for the better using the Act. Starting this **September**, River Network will provide a 6-month course (consisting of monthly webinars and supporting materials) to a cohort of 30-40 staff and volunteers from watershed groups, community organizations and others. Please reserve your space by **July 18, 2014**. Single webinar reservations will become available once we are certain the full Institute will run. Have questions? Contact Merritt at (801) 486-1224 or Gayle at (503) 542-8387".

A workshop entitled <u>Project Native: The Balance and Beauty of Natural Ecosystems</u>, sponsored by the <u>Ecological Landscape Alliance</u>, is scheduled to take place on **Monday, July 21, 2014** from 10:30 AM – 12:30 PM at <u>Project Native</u> (see map). "Join us in picturesque Great Barrington, Massachusetts, to explore Project Native's native plant nursery and wildlife sanctuary. In this diverse and beautiful natural ecosystem, Project Native inspires a love of nature that motivates visitors to create, restore, and maintain healthy landscapes". Click <u>here</u> to sign up and <u>here</u> for more info.

**National Moth Week** (NMW) "is a citizen science project, celebrating moths and biodiversity. NMW is held worldwide on the **last full week of July** [in 2014 that is **July 19-27**]. Moth Week brings together everyone interested in moths to celebrate these amazing insects. Groups and individuals from all the across the world will spend some time during Moth Week looking for moths and sharing what they've found. During Moth Week, attend a Moth Night event [like this event on 7/22, sponsored by the Lloyd Center for Environmental Studies in South Dartmouth], start one, get some friends and neighbors together and check the porch lights from time to time, set up a light and see what is in your own backyard, read literature about moths. But no matter what, participate; the richness of moths is sure to fascinate." Click here or here for more info on *National Moth Week*, here to view the **Butterflies of Massachusetts** website, and here to read *Butterflies and Moths: Busting the Myths*, a recent posting to Mass. Audubon's <u>"Your Great Outdoors" blog</u>.

Sponsored by the Eagle Hill Institute, a course entitled *Tidal Marsh Restoration: A Traveling Course from Rhode Island to Maine* is scheduled to take place from Monday, July 21, 2014 – Sunday, July 27, 2014. This class, which includes lectures, discussions, and field excursions, will begin in Providence, RI and terminate at Eagle Hill, Steuben, Maine. Each day will include visiting at least one field site highlighted in the book, *Tidal Marsh Restoration* (Roman and Burdick, eds., 2012). Field sites will be selected based on travel logistics and availability of chapter authors to meet with the class. The class will also monitor one metric common among all the sites to assist in project evaluations. Additional advanced monitoring techniques will be demonstrated as appropriate to each site. Case studies will examine hydrologic alterations, invasive species, barriers to upslope migration, and fish and wildlife habitat value. A substantial portion of most days will be spent in the field. Due to the nature of the course itinerary, the schedule will be followed rain or shine. Lecture material will rely heavily on *Tidal Marsh Restoration* but also will include a basic review of salt marsh ecology, hydrology, chemistry and wildlife. Upon arriving at Eagle Hill on Friday evening, students will be assigned a "restoration challenge." They then will design a detailed restoration and monitoring plan to be presented to the class on Saturday evening. Click here to register, here for more info, and here to view a calendar of other Eagle Hill-sponsored programs on various natural history topics, which includes *Climate Change: Seas Level Rise and Temperature Change*, taking place from July 13-19, 2014.

Are you searching for ways to increase the success of your grant proposals? Do you need to win more funding for your organizations cause? Whether you're new to grant writing or someone with years of experience, the upcoming free webinar <u>Grant Finding Fundamentals</u>: <u>Mastering the science of writing compelling grant proposals</u> <u>that win funding</u> and scheduled to take placed on **Thursday**, July 24, 2014 at 2:00 PM, is designed to inspire you and to help you understand and refocus on the fundamental elements of developing a winning grant proposal. Debbie Divirgilio of <u>Abila</u> will cover her ten key best practices to apply to your grant writing that will ensure your grant success.

Across the continent, centuries of unsustainable activities have damaged the aquatic, marine, and terrestrial environments that underpin our economies and societies and give rise to a diversity of wildlife and plants. In response, *CEER: Conference on Ecological and Ecosystem Restoration*, will be held from **July 28-August 1**, **2014**, in New Orleans. CEER, a collaborative effort of the leaders of the National Conference on Ecosystem Restoration (NCER) and the Society for Ecological Restoration (SER), will bring together ecological and ecosystem restoration scientists and practitioners to address challenges and share information about restoration projects, programs, and research from across North America. This conference supports SER and NCER efforts to reverse environmental degradation by renewing and restoring degraded, damaged, or destroyed ecosystems and habitats for the benefit of humans and nature. CEER is an interdisciplinary conference and brings together scientists, engineers, policy makers, restoration planners, partners, NGO's and stakeholders from around the world actively involved in ecological and ecosystem restoration. Click here for more info.

Source control is the most cost effective way to improve the quality of our surface waters. Public education and outreach programs have proven to be helpful in improving water quality by changing public behavior so that fewer pollutants enter surface waters. A free webinar entitled *Public Education and Outreach Programs*, scheduled to take place on **July 29, 2014** from 10:30 AM-11:30 AM EDT, will review the primary approaches to public education, practices and tools. Case studies of successful public education efforts will be included. Click here to

register for this webinar or to access an archived version of a previous webinar, <u>Innovative Financial Strategies for</u> <u>Stormwater Green Infrastructure</u>.

Co-sponsored by Trout Unlimited and the U.S. Forest Service, a workshop entitled <u>Large Wood Structures for</u> <u>Aquatic Ecosystem Restoration and Management</u> is scheduled to take place from July 29 - August 1, 2014 in Pocahontas County, West Virginia. Click <u>here</u> or contact Gary Berti of TU (<u>gberti@tu.org</u>) or John Rothlisberger of the USFS [(414) 297-1749 or jrothlisberger@fs.fed.us] to indicate your potential interest in taking part in this workshop.

The <u>Chronicle of Philanthropy</u> is hosting a webinar entitled <u>How to Create a Website That Appeals to Donors</u> on **July 31, 2014** from 2:00 PM – 3:30 PM. "We'll explain which types of information donors want before they donate and how to make it easier for people to give. We'll identify pitfalls to avoid by sharing videos of young donors testing a variety of nonprofit websites, and we'll offer real-time critiques of select nonprofit websites." Click <u>here</u> to register or for more info, and <u>here</u> to view the schedule of the Chronicle's other upcoming webinars.

The <u>Merrimack River Watershed Council</u> (MRWC)'s second annual <u>Merrifest</u> will be held at the Mass. Department of Conservation and Recreation (DCR)'s <u>Lowell Heritage State Park</u> (500 Pawtucket Boulevard in Lowell) on **Saturday August 9, 2014** from 11:00 AM -3:00 PM. This family-fun day will include bands, artists, food, publicity, a silent auction, kid's games, and information about rivers, watersheds and land conservation. Click <u>here</u>, <u>here</u> or call the MWRC at (978) 655-4742 for more info. [See also the <u>Mighty Merrimack Swim</u>, taking place on 8/31/14.]

A workshop entitled <u>*The Trouble with Earthworms*</u>, sponsored by the <u>Ecological Landscape Alliance</u>, is scheduled to take place on **Tuesday, August 12, 2014** from 6:00 PM – 8:00 PM at the New England Wild Flower Society's Garden in the Woods in Framingham. "Using leaf litter as mulch builds soil organic matter, and fosters a healthy soil food web. It is a sound horticultural practice with many benefits; but, it also may be encouraging localized populations of **invasive earthworms**, which in turn destroy soil structure, speed up nutrient cycles, and favor invasive plant growth. Join tour guide, Mark Richardson, who will discuss Garden in the Woods' ecological management practices as well as research aimed at slowing down the booming population of earthworms in the Garden." Click here to sign up and here for more info. [For more background on the problems posed by invasive earthworms to forests and other native plant communities, you may want to read <u>*The Worm Has Turned:*</u> *Invasive earthworms can't wriggle their way out of the blame for destroying our forest topsoil***, a recently published article in <u>OnEarth</u>, the magazine of the <u>Natural Resources Defense Council</u> (NRDC).]** 

Since its commissioning at the Fisherville Mill Canal in Grafton, Mass. in 2012, the combined technologies of an Eco-Machine<sup>TM</sup> with a mycelial loop and Canal <u>Restorer</u> have treated have treated over 300,000 gallons of petroleum-contaminated waters and sediment. The system is remediating 95% of the hydrocarbons left behind by 200 years of industrial abuse. The Living Systems Laboratory facility is a unique and living example of the power of the ecological design. Today we are in possession of an incredible resource and opportunity to use this site as a teaching landscape. The project is building a bridge between a toxic legacy and a healthy, abundant world. A workshop entitled **Principles of Ecological Design & Vertical Filtration Construction with Biochar at the** Living Systems Laboratory, Grafton, MA taking place on August 14-15, 2014 (Thursday-Friday), includes classroom learning led by Dr. John Todd, internationally recognized pioneer in ecological wastewater treatment, on the principles of ecological design and the history of his groundbreaking work. The second day of the workshop is spent constructing a vertical filtration system incorporating biochar and mycelium for the remediation of nutrients and contaminants in the canal waters. Vertical construction responds to the need to maximize treatment capabilities within spatially-constrained environments. Participants are invited to get as hands-on and as dirty as they would like! We encourage experiential learning, team-building, collaboration and personal lines of inquiry into the systems. Click here or contact Lauren Valle [(508) 548 2545 or lauren@toddecological.com] to RSVP or for more info on the workshop and the Fisherville Project, or click here or here to read articles about this project.

The <u>Wildlife Habitat Council</u> (WHC) is sponsoring a webinar entitled "<u>Turning Waste Water Treatment and</u> <u>Storm Water Collection Areas into Wildlife Habitat</u>" on Wednesday, August 20, 2014 from 1:00 PM - 2:00 PM EDT. "Join Kathryn Sommo of Roux Associates, in conversation with Colleen Beaty of the WHC for a presentation exploring ways to turn wastewater treatment and stormwater collection areas into quality wildlife habitat. Roux Associates will illustrate techniques and examples with case studies from WHC-certified programs and others. Click <u>here</u> to register and <u>here</u> for more info.

**Grant Proposal writing** is the skill most sought after by savvy nonprofit staff members. On the one hand, writing a grant proposal is quite simple and follows a basic formula. However, submitting a proposal may be your only chance to put the case for funding your organization in front of a foundation, so you want to be sure to do it right. In the webinar *How to Craft a Proposal to a Foundation*, Judith Margolin provides invaluable tips on developing a compelling proposal narrative, what your proposal package should include, how to let your funder take the lead, and advice on writing and submission techniques that get your proposal noticed by foundation decision makers. This webinar is for beginning and intermediate grantwriters who want to learn specifically about proposals to foundations. The webinar will be held on **Thursday, August 28, 2014**; click here to sign up.

**Stream restoration** has been used for many years and with various objectives and outcomes. Increasingly, it has become important to quantify the various benefits of practices such as stream restoration. The science behind this quantification of benefits can be tricky, however, especially for pollutant reduction performance. Several updated studies and performance evaluation techniques, now make this performance data more accessible. The webinar *Stream Restoration as a Pollutant Reduction Strategy*, hosted by the <u>Center for Watershed Protection</u> (CWP) and scheduled to take place on **September 10, 2014** from 1:00 PM – 3:00 PM, will explore several protocols to quantify and verify the benefits of stream restoration for pollutants such as sediment and nutrients over time. Click here to register and here for more info.

The Land Trust Alliance (LTA) will be holding its <u>2014 Rally</u>, a national gathering of land trusts and other land conservation practitioners and service providers, from September 18-20 in Providence, RI. Click here for more info and here to download the conference brochure. Scholarship awards (ranging from \$500 to \$1,000) are available to qualifying staff and board of LTA member land trusts to help offset the cost of attending Rally, particularly those with staff hired within the past 12 months; board members who have never attended Rally; and those doing or planning projects in urban areas. The deadline for submitting applications is Wednesday, July 16; click here to apply or for more info. The LTA is also looking for volunteers to assist as meeting monitors on Friday, September 19 and Saturday, September 20. Volunteers who work one of the two days will be able to attend workshops the other day, and will receive a complimentary basic registration. Click here or contact Scott Still at sstill@lta.org with any questions.

The <u>Wild Trout XI Symposium</u>, scheduled to take place from September 22-25, 2014 just outside of Yellowstone National Park, will bring together a broad and diverse audience of governmental agencies, non-profit conservation groups, media representatives, educators, anglers, fishing guides, and business interests associated with trout fisheries to exchange technical information and viewpoints on wild trout management and related public policy. Held every three years, each symposium has led to innovative wild trout management approaches. *Wild Trout XI* offers a unique forum for professionals and anglers to interact, where participants are exposed to the latest wild trout science, technology and philosophies. This conference will equip participants to better manage, preserve, and restore these significant but declining resources. Click here for more info.

A two-day course entitled <u>Environmental Forensics in Water Resources</u> is scheduled to take place in Boston on **October 1-2, 2014**. Sponsored by the <u>Northwest Environmental Training Center</u>, this course "will provide useful information for a large range of professionals who deal with environmental water resources, especially legal liability and changes in stream water quality, shallow water table, drainage, wetlands, and sedimentation issues. Course attendees will gain an understanding of the basics of forensic science and the main environmental forensic techniques available and how they apply to complex inverse condemnation, regulatory takings, and environmental damage cases. The forensic techniques explored in this course include: Water quality and shallow water table modeling; Hydrologic Modeling for shallow groundwaters and wetlands; Sediment transport modeling of streams

and rivers; Tracing pollutants in watersheds; Wetland drainage; Complex wetland delineation; Riparian rights; Sediment age dating; Bacterial Fingerprinting; and more. Click <u>here</u> to register or for more info.

"When your non-profit was brand-new, did it have tremendous energy provided by eager founders? Did it have lots of seed money from donors and foundations? As the years passed and the goals of your organization were not yet achieved (you didn't completely eradicate racism or save the planet), did founders and early donors slip away? It often happens. To prevent this, you need to have a long-term fundraising strategy from the beginning." Learn how to do that and more in *Fundraising for the Long Haul: Advanced Tools for Activist Organizations*, a course offered by and at the <u>Rowe Center</u> and scheduled to take place from **October 21-23, 2014** (Tuesday-Thursday). "Kim Klein, author of the classic book *Fundraising for Social Change*, will teach you how to conduct a capital campaign, launch an endowment, project income into the future, and ask your long-time donors for more money. For the greatest benefit, come with a colleague or a board member from your organization. If your non-profit organization is tired of lurching from one funding crisis to another, if you want to organize programs without first having to figure out how to finance them, then you need this essential, interactive, very practical session with one of the nation's best-known fundraising trainers." Click <u>here</u> to register for the workshop and <u>here</u> for more info.

Taking place from **October 24-26, 2014** in downtown New Bedford, the <u>10th Annual Connecting for Change: A</u> <u>Bioneers Network Event</u>, presented by the <u>Marion Institute</u>, is an annual solutions-based gathering that brings together a diverse audience to create deep and positive change in their communities. This internationally-acclaimed event summons environmental, industry and social justice innovators to bring focus on food and farming, health and healing, green business, indigenous knowledge, environmental and social justice, women and youth empowerment, spirituality and sustainability, all working to catalyze a movement to heal our world. Click <u>here</u> for more info on the local event, and <u>here</u> for info on <u>Bioneers</u>, which hosts the <u>national Bioneers Conference</u>.

Coastal restoration and management go hand-in-hand by providing services and benefits via natural and built environments. They are pivotal for creating a pathway for sustainable job creation and economic growth, both of which are particularly critical at this time. *Inspiring Action, Creating Resilience: the 7th National Summit on Coastal and Estuarine Restoration and 24th Biennial Meeting of The Coastal Society*, a conference organized by <u>Restore America's Estuaries</u> and <u>The Coastal Society</u>, is scheduled to take place from **November 1-5**, **2014** at the Gaylord National Convention Center, just outside Washington, DC. Click <u>here</u> for more info.

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# **Online Resources**

(Descriptive text provided is obtained from the web pages themselves.)

*Improving Community Resiliency with Green Infrastructure*, a fact sheet recently put out by the U.S. EPA, highlights green infrastructure projects from around the country. Green infrastructure uses vegetation, soils, and natural processes to manage water and create healthier urban environments. [Click here for info on <u>A Seminar</u> <u>Series on Green Infrastructure, Climate, and Cities</u> webinars; here to read a <u>Resources for the Future</u> (RFF) publication <u>Building Resilience to Climate Change through Green Infrastructure</u>; here to access a recording of <u>Conservation Innovation: Investing in Resiliency</u>, a webinar from this past May in which staff from the <u>Mass. office of The Nature Conservancy</u> (TNC) and the <u>Open Space Institute</u> (OSI) discussed their work to help identify and protect places that will continue to host biodiversity even as the climate changes; and <u>here</u> to download TNC's <u>Reducing Climate Risks with Natural Infrastructure</u> report.]

The U.S. EPA recently updated its **national recommended** <u>water quality criteria for human health</u> for 94 chemical pollutants to reflect the latest scientific information and EPA policies. The EPA will accept written scientific views from the public on the draft updated human health criteria until **July 14, 2014**. Once finalized, EPA water quality criteria will provide recommendations to states and tribes authorized to establish water quality standards under the Clean Water Act. Click <u>here</u> for more details on the proposed changes, and <u>here</u> to read the Federal Register notice for info on how to file comments on these proposed changes.

<u>Greening CSO Plans: Planning and Modeling Green Infrastructure for Combined Sewer Overflow (CSO)</u> <u>Control</u>, recently released by the EPA, provides tools for municipalities and sewer authorities to help develop and evaluate CSO control alternatives that include green infrastructure practices. Green infrastructure is considered an attractive way to reduce stormwater flows going into the sewer system to help reduce costs at sewage treatment plants. The resource also explains how to use modeling tools such as EPA's <u>Storm Water Management Model</u> to optimize different combinations of gray and green infrastructure to reduce both sewer overflow volume and the number of overflow events. [Click <u>here</u> for info on upcoming and archived EPA webinars on green infrastructure, <u>here</u> for related studies looking at the economic costs and benefits of green infrastructure, and <u>here</u> to access an archived version of a **stormwater asset management** webcast (from Forester Publications).]

<u>A Quick Guide to Developing Watershed Plans to Restore and Protect Our Waters</u>, released by the EPA late last year, is a helpful introduction to the info presented in EPA's 2008 <u>Handbook for Developing Watershed</u> <u>Plans to Restore and Protect Our Waters</u>. The Quick Guide also describes recently released data and social media resources. The Quick Guide is intended for a wide audience: from the novice to experienced practitioners working on watershed-related issues at the federal, state, tribal, and local levels. It is also intended for managers involved in other integrated resource planning efforts, such as water and wastewater utilities, transportation departments, and local zoning offices. Both the Handbook and the Quick Guide are accessible via this link.

Also in 2013, the EPA released *Getting in Step: Engaging Stakeholders in Your Watershed*. This publication, a second edition of the popular 2001 *Getting in Step* guide, presents the tools watershed practitioners need to effectively engage stakeholders in efforts to restore and maintain healthy environmental conditions through community support and cooperative action. The 91-page stakeholder guide is intended primarily for federal, state, tribal, and local agency personnel, as well as members of nongovernmental organizations involved in watershed management activities. Click here to download *Getting in Step* and related material intended to assist outreach and stakeholder engagement efforts; see also the **EPA's Nonpoint Source Outreach Toolbox**. [The EPA sponsors 1-to 2-day *Getting in Step* outreach training workshops, which have been held across the country continuously since 1998. They continue to be quite popular, and are regularly updated and customized for local and regional audiences. For more info about planning a workshop in your area, contact Don Waye at waye.don@epa.gov.]

Also in 2013, the EPA released <u>Stormwater to Street Trees: Engineering Urban Forests for Stormwater</u> <u>Management</u>. This guide focuses on the use of integrated siting and design elements, along with case studies, to provide education on enhanced tree management systems to improve stormwater management and retention. The guide illustrates proper tree planting and maintenance techniques and technologies. It also provides info on using engineered systems and offers guidance such issues as maximizing root growth area, choosing growth media, considering permeable pavements and overall site drainage, managing right-of-ways, and accounting for utilities. The document will be of particular interest to municipal public works engineers, arborists, water utility planners, state and local water quality agencies, and nonprofit organizations focused on urban stormwater protection. [Click here to see the results of a recent survey conducted by the <u>New England Stormwater Collaborative</u>.]

One way to describe a "brownfield" would be to say that it is a property where redevelopment or reuse might be complicated by the presence (or likely presence) of contamination. Many cities are interested in revitalizing urban areas by redeveloping vacant parcels and brownfield sites. Integrating green infrastructure into these sites can provide many environmental and community benefits. EPA's new guide, *Implementing Stormwater Infiltration Practices at Vacant Parcels and Brownfield Sites*, walks decision makers through six questions to determine whether infiltration or other stormwater management approaches are appropriate for a specific brownfield property.

The EPA's *Climate Change and Water E-Newsletter* features news and information from EPA and other federal activities related to climate change and water. Partner activities, as well as <u>a calendar of related events</u> and publications, are also included. The climate change and water e-newsletter is sent out every two weeks to

subscribers. Click <u>here</u> for info on how to subscribe to the newsletter, as well as to read archived editions of past newsletters. [Click <u>here</u> to access the EPA's <u>Climate Impact on the Northeast U.S</u>. web page.]

The May, 2014 issue of the EPA's *Technology News and Trends* newsletter (EPA 542-N-14-001) highlights how remedies for contaminated sites may be vulnerable to the impacts of climate change and how measures may be taken to adapt remedies to the impacts. Potential impacts include extreme or sustained changes in temperatures, increased flood events or droughts, increased wind intensity, more frequent and intense wildfires, and sea level rise. The U.S. EPA Superfund program has developed an approach that raises awareness of the vulnerabilities and applies climate change science as a standard business practice in site cleanup projects. Articles featured in this issue examine vulnerabilities at three National Priorities List sites, describe the effects of intense weather events at these sites, and detail adaptation measures already implemented or planned to increase the remedies' resilience to climate change impacts.

"Living shorelines" are erosion control practices that protect the natural structure and function of shorelines through strategic placement of materials including native plants, sand, and stone. Unlike traditional erosion control structures (such as bulkheads and seawalls), living shorelines can stabilize shorelines while maintaining natural processes and land-water connections that are important for wildlife and clean water. Living shorelines help maintain wetlands by incorporating them into their design when appropriate and by allowing an opportunity for wetlands to migrate in response to sea level rise. As part of its observance of May as <u>American Wetlands Month</u>, the EPA hosted a free webinar entitled <u>Living Shorelines - Types, Tools, and Techniques</u>, which introduced living shoreline projects and explain the values of such projects and their implementation methodologies. The presentation covered site selection criteria, appropriate techniques for differing energy regimes, innovative practices, and implementation tools. Click here to access the archived version of the *Living Shorelines* webcast and supporting materials, here to read about a living shoreline installation in Rhode Island, and <u>here</u> to learn about a grant program to promote the installation of living shorelines in Maryland. [Click <u>here</u> to access related webinars and other info

The <u>Whitewater to Bluewater</u> project, "a collaboration between the <u>Atlantic Coastal Fish Habitat Partnership</u> (ACFHP), the <u>Southeast Aquatic Resources Partnership</u> (SARP), and the <u>Eastern Brook Trout Joint Venture</u> (EBTJV), aims to conserve fish habitat in the eastern U.S., from the smallest headwater streams to offshore habitat in the Atlantic Ocean. Through the collective effort by these three regional fish habitat partnerships, we will engage partners and improve fish habitat for brook trout, sea trout and other aquatics from Maine to Texas". Resources at this page include "species spotlight" pages on <u>Brook Trout</u> and <u>Atlantic Sturgeon</u>, and a <u>list and description of funded projects</u>.

The <u>Restoration Webinar Series</u>, a partnership between the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Fish and Wildlife Service (USFWS) hosted free webinars on various restoration topics. <u>Past</u> presentations in this series, <u>now available online</u>, include *Technical, cultural, and legal challenges associated* with implementing four barrier removal projects on a high priority tributary to the Taunton River in *Taunton, Massachusetts*, a webinar from this past February, in which Beth Lambert DER and Cathy Bozek of The Nature Conservancy (TNC) presented project objectives, highlighted major challenges/solutions and shared preliminary results of the <u>Mill River Restoration</u> Initiative. <u>Navigating State Regulatory Arenas: Differing</u> <u>Approaches for Permitting River Restoration</u>, another presentation in the series, is also available. Click here to view these and the other archived presentations. [The next webinar in this series, *Explaining Stream Behavior to the Public*, is scheduled to take place on **Thursday, October 16, 2014**; click here to register or for more info.]

The <u>Riparian Restoration Decision Support Tool</u>, an innovative riparian planting and restoration decision support tool, funded by the <u>Appalachian Landscape Conservation Cooperative</u>, is now available to the conservation community. "This user-friendly tool allows managers and decision-makers to **rapidly identify and prioritize spatially explicit forested communities along the banks of rivers, streams, and lakes for restoration**, making these ecosystems more resilient to observed impacts and future changes in climate. It will also help the conservation community invest limited conservation dollars wisely, helping to deliver sustainable resources. The tool works by

#### identifying vulnerable stream and riverbanks that lack tree cover and shade in coldwater stream habitats.

By locating the best spots to plant trees in riparian zones, resource managers can provide shade that limits the amount of solar radiation heating the water and reduces the impacts from climate change. This well-established management strategy will benefit high-elevation, cold-water aquatic communities." Click <u>here</u> to access the tool or for more info, <u>here</u> to download a fact sheet about the tool, and <u>here</u> to view a video presentation of <u>Jason Coombs</u> of UMass as he provides a detailed overview of how to use the tool.

The U.S. Geological Survey (USGS) recently developed an interactive <u>Sediment Data Portal</u> to improve the utility and accessibility of suspended sediment data for watershed managers, policy makers, researchers, and the public. This online database represents the best available compendium of suspended sediment data for U.S. rivers and streams. Ancillary information on streamflow condition, sediment grain size, sampling method, and landscape condition are also available within the portal. USGS has been collecting information on sediment transport in streams and rivers since 1889. As the amount and location of sediment monitoring has changed substantially over time, the sediment portal is designed to enable comparisons of historical and current sediment sampling locations and allow access to long-term data sets. Click <u>here</u> to access the Sediment Data Portal and <u>here</u> to access a guide to using the Portal.

Developed by the **U.S. Forest Service** (USFS), the <u>Climate Change Atlas</u> documents the current and possible future distribution of <u>134 tree species</u> and <u>147 bird species</u> in the eastern United States and gives detailed information on environmental characteristics defining these distributions. The Climate Change Tree and Bird Atlases have been updated with several new online features. New features include options for viewing and comparing maps, searching species, and visualizing species traits that will affect responses to climate change.

The U.S. Fish & Wildlife Service's <u>Wetlands Inventory Mapper</u> provides digitally mapped wetlands in the lower 48 states, Hawaii, dependent territories, and 35 percent of Alaska. It can be a useful decision tool for landowners, developers, permitting authorities, conservation organizations, and others to ensure wetland conservation and inform economic development. Click <u>here</u> to access this database and <u>here</u> to read a fact sheet explaining this mapping tool.

Since 2007, the Patrick Administration's unprecedented investment of \$280 million in land conservation has resulted in the permanent protection of 100,000 acres of land and the creation or restoration of 150 parks in 2,000 separate projects across the Commonwealth. For the first time, Massachusetts has more protected open space than developed land. *100,000 Acres of New Conservation Land and 150 New Parks: A Legacy for the Next Generation*, recently published by the Mass. Executive Office of Energy and Environmental Affairs (EEA), tells the story of how a grassroots effort of hundreds of people, land trusts and municipalities conserved parks and green spaces that are within a ten-minute walk for nearly 1.5 million people or 23% of our residents. These projects protect water supplies, wildlife habitat, save and create jobs in farming, forestry and tourism and provide many other public benefits. Land protection also contributes to our quality of life: attracting businesses to the state, as enhanced access to parks and open space helps kids and adults stay active and healthy. The stories told in this report document all the hard work done by so many to achieve these milestones. Click here to download the report.

The **Mass. Department of Conservation and Recreation** (DCR) utilizes volunteers, through events like its annual <u>Park Serve Day</u>, and throughout the year, to help maintain and beautify the state's system of forests and parks. DCR volunteers may belong to "Friends" groups, such as those in the <u>Mass. Forest and Parks Friends</u> Network, or be unaffiliated. DCR recently published a new, 22-page document entitled <u>Volunteers in Parks</u> <u>Program Guide: Guidelines, Requirements & Standards</u>. "The development of the *Guide* was largely prompted by the need to establish a consistent process for proposing and reviewing volunteer projects on DCR property as well as passage in 2007 of a bill entitled 'An Act Relative to Volunteers in State Parks', which became codified as <u>Mass. General Laws Chapter 21, §17G</u>. In addition to implementing the above-mentioned statutory provisions, the development of this guide provided DCR with an opportunity to achieve the goal of standardizing and simplifying the process for proposing all volunteer activities – whether under the supervision of the Department or a Nonprofit Organization – on DCR property statewide." While the *Guide* is primarily intended to apply to the use of volunteers on DCR property, there is much in the *Guide* that is potentially worthy of emulation by other land-holding agencies and organizations that utilize volunteers. [One of the major things volunteers do on DCR properties is **build and maintain trails**; click <u>here</u> to download the most recent (2012) version of the *Department of Conservation and Recreation Trails Guidelines and Best Practices Manual*.]

Massachusetts' <u>Chapter 61 Current Use Tax programs</u>, which provides a means to assess land at its current use (forest, agriculture, or open space/recreation) as opposed to its development value, can be a very helpful tool for reaching landowner goals and encouraging conservation. However, these programs are the source of many questions and misunderstandings. <u>Chapter 61 Programs: Understanding the Massachusetts Ch. 61 Current</u> <u>Use Tax Programs</u>, recently published by <u>UMass Extension</u>, with financial support from DCR, provides all the information on the Chapter 61 Current Use Tax Programs in one easy-to-read publication. Click <u>here</u> to download this document in .pdf format; or, to request free hard copies, contact <u>Paul Catanzaro</u>.

Last but not least: <u>Mass. Office of Geographic Information</u> (MassGIS)'s **OLIVER Online Data Viewer** enables anyone with a computer or other Web-enabled device to: access and query nearly all of the geospatial data contained in MassGIS' voluminous database; download up-to-date shapefiles, with legend files; overlay MassGIS data onto other base maps, such as <u>Google Terrain</u>; and much more – click <u>here</u>, or <u>here</u> (and scroll down) to learn about recent enhancements and upgrades. Also available are <u>Specialized and Thematic Viewers</u> on various subjects, such as the <u>dams in the Department of Conservation and Recreation (DCR)'s Office of Dam Safety (ODS)'s database</u>, a map of <u>DCR's Areas of Critical Environmental Concern</u> (ACECs), and a <u>map of state Senate and House legislative</u> <u>districts</u>. Programs finding MassGIS and <u>OLIVER</u> useful in their work include <u>Mass. Audubon's Ecological</u> <u>Extension Service</u>, who regularly utilizes various natural resources, infrastructure, and land conservation mapping data, and is finding the **newly-available statewide parcel data** to be of particular value. [Note that property lines and other detailed data layers accessible via OLIVER may not appear on your screen until you zoom in to view a specific area, like a town or neighborhood.] Click <u>here</u> or contact Paul Nutting [<u>paul.nutting@state.ma.us</u> or (617) 619-5611] for more guidance on using OLIVER.

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# Non-government On-line Resources

(in rough alphabetical order – the following are offered for information purposes only and are not an endorsement of the items listed below. Descriptive text provided is obtained from the web pages themselves.)

#### AmazonSmile

http://smile.amazon.com

AmazonSmile enables nonprofit organizations to receive a portion of the purchase price (.5%) of eligible items purchased by Amazon shoppers who designate them as the chosen beneficiary via Amazon Smile. Nearly one million organizations (including the <u>Mystic River Watershed Association</u>, the <u>Connecticut River Watershed Council</u>, and the <u>Opacum Land Trust</u>) are already enrolled in this program. Click <u>here</u> to read the FAQ page, and <u>here</u> to learn how your charitable organization can enroll to receive donations via the AmazonSmile program.

# Beautiful, Hard Working Rain Gardens

http://www.resource-media.org/wp-content/uploads/2013/09/Rain-Garden-Outreach-and-Communications-How-To-Guide.pdf

Produced last fall by the nonprofit, mostly West Coast-based <u>Resource Media</u>, <u>Beantiful</u>, <u>Hard Working Rain Gardens</u> is a visually-appealing, mobile-device-friendly communications guide designed to help communities develop effective outreach and messaging strategies for rain garden projects. The guide addresses best outreach practices,

effective messaging, and troubleshooting. Other resources on Resource Media's website include a <u>toolbox</u> of helpful guides, worksheets, and presentations on **strategic communications**: "time-tested tools and techniques that can help you change hearts and minds". [Click <u>here</u> to read a Boston Globe West article about rain gardens; and <u>here</u> to read an article about plant selection for rain gardens from the <u>Ecological Landscape Alliance</u> (ELA) newsletter; and here to download a guide from ioby entitled <u>Guide to Green Infrastructure, 5 Projects that any Community</u> <u>Can Do to Reduce Storm Water Runoff in 5 Easy Steps</u>.]

# Big Map Blog

http://www.bigmapblog.com

Curated by *The 59 King*, a sign-maker, geographer, and filmmaker, the Big Map Blog is an **online repository of historic maps**, with a "new" map posted nearly every day. The maps are searchable by category or location (a search of the site for "<u>Manhattan</u>" produces 10 resulting maps). While the website presents little information on the history or story of each map, it does present very large images of each map, which can be viewed in full-screen mode and zoomed into for extremely detailed views. Full-size downloads are allowed on the site, and where possible, the maps are fully cited, with links to the sourcing institution. Examples of Massachusetts maps posted here include <u>two Revolutionary War-era maps of Boston Harbor</u>; a <u>map of Turners Falls, MA from 1877</u>; a <u>map of Quincy, MA from 1877</u>; and a <u>map of Provincetown, MA from 1910</u>.

## Charity Miles

http://www.charitymiles.org/

Charity Miles is a free iPhone and Android app that enables people to earn corporate sponsorships for charity while walking, running or biking. Just launch the app, choose a charity and either walk, run or bike. The selected charity then earns money for every mile covered. Walkers and runners earn 25¢ per mile; bikers earn 10¢ per mile. Conservation organizations currently enrolled to accept donations via Charity Miles include <u>The Nature</u> <u>Conservancy</u>. Click <u>here</u> to read the FAQ page and <u>here</u> to read a Q&A with Charity Miles' founder Gene Gurkoff that ran in PC Magazine.

# Green Pro Bono

## http://www.greenprobono.org

A nonprofit organization dedicated to helping climate change-driven non-profit organizations and social entrepreneurs, Green Pro Bono's mission is to help these environmental change makers identify their legal needs and connect them with free legal assistance necessary for their success. Green Pro Bono aims to expedite the missions of these entities by providing vital legal assistance as they work to implement renewable, affordable and clean energy; to find avenues to be more energy efficient; to protect forests and sustainable uses of land; and to offer other innovative ideas and projects to combat climate change. Green Pro Bono is not itself a law firm; the organization instead acts as a clearinghouse to match specific legal talent with requests for legal assistance. Resources at this page include a <u>newsletter</u>, an <u>FAQ page</u> and a "<u>request for assistance</u>" form. [See also the Boston-based Lawyers' Clearinghouse for a similar service.]

#### Indiegogo

#### https://www.indiegogo.com

Founded way back in 2008, which makes it one of the earlier "crowdfunding" platforms, Indiegogo enables people and groups with good ideas to promote them and for people who like these ideas to support them financially (click here to learn how Indiegogo works). A quick search in the "Environment" category included such campaigns as Turning the Tide with the Deschutes Estuary Restoration Team; Hat Creek Restoration Project by California Trout; the Watershed Wildlands Project; and Seaside Explorers: inspiring children to preserve and protect. [Click here to download a <u>Chronicle of Philanthropy</u> podcast on crowdfunding by grassroots groups and individuals.]

#### localeikki

http://www.localeikki.com

localeikki is "a crowdsourced database to find and share outdoor recreation locations that are publicly accessible and locally recommended. "Input an address (city and state) and your activity choice, and localeikki will find local running, cycling, etc. locations others have shared. Not only will you know where to go, you'll also know what it looks like, and what amenities are available (e.g., bathrooms, drinking water, parking). Want to find a regularly scheduled ride or run? We have that information too! You can find us on the web and as an app for your mobile devices". While locallekki's initial focus is on outdoor endurance activities (running, walking, hiking, mountain biking, road cycling), other recreation options (such as paddling) may be added in the future. Click <u>here</u> to read the FAQ page, and <u>here</u> to read an interview with localeikki founder <u>Tracy McMillan</u>.

# Parking Forest

#### http://www.parkingforest.org

*"What if Mother Nature designed a parking lot?"* wondered Brian Wegener, a staff member of the <u>Tualatin Riverkeepers</u>, after learning that nearly 5,000 acres of impervious surfaces contributed nonpoint source pollution directly into Oregon's <u>Tualatin River</u>'s 712-square-mile watershed. In response, the Riverkeepers (with the assistance of <u>Depave</u>) established a "Parking Forest": a project designed to identify, demonstrate, and test innovative low-impact development practices to reduce stormwater runoff from parking lots using low-cost retrofit techniques that do not reduce parking capacity. Traditionally, parking lots are underlain by heavily compacted soils that prevent trees from growing properly. Conversely, Parking Forest design specifications incorporate linear tree wells that extend under parking areas. The Parking Forest. [Click <u>here</u> (and scroll down to p. 12) to read a feature article about the Parking Forest in <u>Issue #95 of the EPA's Nonpoint Source NewsNotes newsletter.</u>]

**Resources for the Future** (RFF) <u>http://www.rff.org</u>

Some human activities can harm the environment and may result in unwanted impacts to society in the form of damaged health, lower productivity, depleted natural resources, or reduced enjoyment of nature. A nonprofit organization, RFF utilizes applied environmental economics principles to quantify these impacts and determine the most efficient way to reduce them, as well as to compare the cost of environmental damage to the cost of mitigation. Resources at RFF's web page include its <u>Center for the Management of Ecological Wealth</u> (CMEW), which recently published (with the help of The Nature Conservancy) a new web page entitled <u>Conservation ROI:</u> <u>Maximizing Returns on Environmental Conservation Investments</u>, which in turn offers: a new Forest Conservation Targeting Tool to explore potential tradeoffs for conservation investments using interactive spatial mapping; a new discussion paper by CMEW director James Boyd, <u>Measuring the Return on Program-Level Conservation Investments: Three Case Studies of Capabilities and Opportunity</u>; and info on the use of <u>Return On Investment (ROI)</u> analyses for conservation projects.

#### Save the Habitat, Save the Hunt

http://www.nwtf.org/Save-the-Habitat-Save-the-Hunt

Recently initiated by the <u>National Wild Turkey Federation</u> (NWTF), the national <u>Save the Habitat, Save the Hunt</u> Initiative aims to mobilize science, fundraising, and volunteers to conserve and enhance more than 4 million acres of essential upland wildlife habitat, recruit 1.5 million new hunters, and provide access to 500,000 new acres for hunting, shooting, and outdoor enjoyment. The <u>Mass. Chapter of the NWTF</u> is working towards the goals of this Initiative with plans for habitat protection, hunter recruitment, and improved hunting access <u>here in the Bay State</u>. Preserving/restoring wild turkey habitat benefits many other game and non-game species with similar habitat needs. Click <u>here</u> to download the brochure, <u>here</u> to watch a 20-minute video and <u>here</u> for the 5-minute video.

#### See America http://seeamericaproject.com

Launched by the <u>Creative Action Network</u> and the <u>National Parks Conservation Association</u>, modeled after a New Deal arts program, and in anticipation of the <u>centennial of the National Park Service</u> (NPS) in 2016, the See America Project provides an opportunity for artists to create "poster-style" works of art inspired by **any affiliated area of the National Park System** (which includes National Historical Parks, National Seashores, <u>Wild and Scenic Rivers</u>, and <u>National Heritage Areas</u> – there are over 20 such areas in Massachusetts). Proceeds of artwork sold via the <u>See America store</u> benefit the NPS, with 40% going to the participating artist(s). Click <u>here</u> if you might be interested in submitting artwork to the See America Project, and <u>here</u> to see what NPS-inspired artwork has already been contributed for Massachusetts.

#### Shorecombers

http://www.shorecombers.org/

Set up by the Alabama-based <u>BJ Smith</u>, the Shorecombers website is intended to provide help to any person or group interested in organizing, raising money for (or through), and pulling off **successful river, coastline and other waterbody-improving cleanup events or campaigns**. Archived at this site is a tele-seminar from May 15 entitled "*Creating Trash Blasting Strategies that Build Powerful Fundraising Campaigns and Attract Quality Volunteers All While Doing More of What You Lovel*", based on the findings from a <u>Water Words That Work</u>-assisted <u>survey of groups conducting cleanups</u> intended to learn about their successes and challenges. Shorecombers is offering a ["<u>W.A.T.E.R. Trash Blasting Master Cleanup Planning</u>" 5-week online course; click <u>here</u> for more info.]

# Urban Naturalist Journal

http://www.eaglehill.us/programs/journals/urna/urban-naturalist.shtml

Recently launched by the Steuben, ME-based <u>Eagle Hill Institute</u> (which also publishes <u>Northeastern Naturalist</u>), in response to a growing interest in urban ecology, the Urban Naturalist Journal "is a peer-reviewed journal that **publishes original articles focused on all aspects of the natural history sciences as they pertain to urban areas**." Urban Naturalist is intended to fill the niche of the Brooklyn Botanic Garden's no-longer-active <u>Urban Habitats</u> journal. You are invited to submit a manuscript for publication in the Urban Naturalist; click <u>here</u> to access the formatting and procedural guidelines. Questions concerning submissions, subscriptions, and proposals for special issues should be directed to <u>keith.urna@eaglehill.us</u>. [You might also want to read <u>Habitat Restoration</u> <u>Projects Abound in Urban Settings</u>, an article appearing in a recent <u>Sustainable City Network newsletter</u>, which mentions the Urban Naturalist Journal.]

# U.S. Topo Maps Free app

com.atlogis.northamerica.free

Available for Android devices, U.S. Topo Maps Free is a user-friendly outdoor navigation app with free access to the best topographic maps (including **USGS 7.5' quadrangle maps**) and aerial images for the USA. The app gives you access to over 100,000 seamlessly stitched USGS topographic maps, easy to use as browsable map layer. A simple push of a button shows your location on the topo map. Downloading the app enables you to turn your Andoid Phone/Tablet into an outdoor GPS for trips into the backcountry. This app gives you similar mapping options as you might know from Garmin GPS handhelds. Click <u>here</u> for more info on this product, and <u>here</u> for info about a similar app available for Apple devices.

#### Virtual Volunteering Wiki

http://virtualvolunteering.wikispaces.com

**"Virtual volunteering"** is a term describing a <u>volunteer</u> who completes tasks, in whole or in part, off-site from the organization being assisted, using the Internet and a home, school, <u>telecenter</u> or work computer or other Internetconnected device. Virtual volunteering is also known as online volunteering and cyber service, and includes microvolunteering, crowd-sourcing, <u>telementoring</u>, <u>teletutoring</u>, and various other online activities undertaken by volunteers. Virtual volunteering is similar to <u>telecommuting</u>, except that, instead of online employees who are paid, these are online volunteers who are not paid, and they are working to benefit a <u>nonprofit</u> organization, school, government program or other not-for-profit entity, as opposed to a for-profit business. While this content-heavy site offers a wealth of resources, you might also want to get a hard or electronic copy of the book <u>The LAST</u> <u>Virtual Volunteering Guidebook: Fully Integrating Online Service into Volunteer Involvement</u>.

#### Xerces Society for Invertebrate Conservation

http://www.xerces.org

The Xerces Society is a nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat. For forty years, the Society has been at the forefront of invertebrate protection worldwide, harnessing the knowledge of scientists and the enthusiasm of citizens to implement conservation programs. Resources available at this website include the <u>Dragonfly Pond Watch Project</u>, which seeks to investigate movements of migratory dragonfly species in North America by compiling and analyzing data gathered by "citizen scientist" monitors based on their observations at local ponds. Is your community confronting another summer of mosquito spraying? You might want to check out the Xerces Society's new booklet, *How to Help your Community Create an Effective Mosquito Management Plan*, which offers insight into ecologically sound mosquito control. [See also the related document: *Ecologically Sound Mosquito Management in Wetlands*.]

Yale Environment 360 http://e360.yale.edu

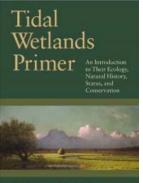
A publication of the <u>Yale School of Forestry & Environmental Studies</u>, *Yale Environment 360* "is an online magazine offering opinion, analysis, reporting and debate on global environmental issues. We feature original articles by scientists, journalists, environmentalists, academics, policy makers, and business people, as well as multimedia content and a daily digest of major environmental news." Recent articles include: <u>Mimicking Nature, New Designs Ease</u> <u>Fish Passage Around Dams</u>; <u>Rebuilding the Natural World: A Shift in Ecological Restoration</u>; <u>What's Damaging Marshes on U.S.</u> <u>Coast and Why It Matters</u>; <u>Urban Nature: How to Foster Biodiversity in the World's Cities</u> and <u>A Successful Push to Restore Europe's Long-Abused Rivers</u>. Click here to subscribe to the weekly newsletter.

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# Publications, Videos, etc.

(the following are offered for information purposes only and are not an endorsement of the items listed below. Descriptive text provided is obtained from the web pages themselves.)



At a time when more than half of the U.S. population lives within fifty miles of the coast, tidal wetlands are a critical and threatened natural resource. The purpose of the 2013 book *Tidal Wetlands Primer: An Introduction to Their Ecology, Natural History, Status, and Conservation*, written by Ralph W. Tiner and published by the University of Massachusetts Press, is to introduce the world of tidal wetlands to students and professionals in the environmental fields and others with an interest in the subject. Illustrated with maps, photographs, and diagrams, this volume provides a clear account of

the factors that make these habitats unique and vulnerable. It discusses their formation, the conditions affecting their plant and animal life, and the diversity of types across North America, as well as their history, use by wildlife and humans, current status, conservation, restoration, and likely future. The emphasis is on vegetated wetlands – marshes and swamps – with additional discussion of eelgrass meadows, rocky shores, beaches, and tidal flats. Click here to order the book in hard copy and here to access sections of the book posted online.



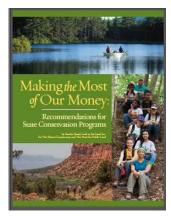
**Restoration Returns: The Contribution of Partners for Fish and Wildlife Program and Coastal Program Projects to Local U.S. Economies**, recently released by the U.S. Fish and Wildlife Service, details how habitat restoration through the agency's <u>Partners for Fish and Wildlife</u> and <u>Coastal Programs</u> help to create jobs and stimulate economic activity. *Restoration Returns* reports that these programs generated a return of more than \$15 and \$12 for every federal dollar spent, respectively. The Partners for Fish and Wildlife Program and Coastal Program created more than 3,900 jobs in Fiscal Year 2011, generating a total economic stimulus of \$327.6 million. Each year, the FWS completes more than 3,500 public-private partnership habitat restoration projects under the two programs, which leverage government dollars to generate private sector investment that is channeled into local communities. This report examined how the Service's restoration spending cycles through the economy via jobs, contractor income,

support services, indirect business taxes and labor force spending. Click <u>here</u> to access the report and related material, and <u>here</u> to read a statement in support of the report and its findings by <u>The Nature Conservancy</u>.

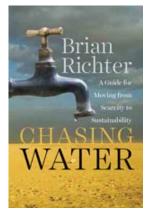


As America's coastal cities expanded throughout the 19th century, the wetlands were often considered a nuisance that stood in the way of progress and development. Marshy areas seemed little more than endless founts of pesky insects or quagmires blocking access between drier uplands and navigable waters. As cities outgrew their dry land footprints and sought additional space to grow, the obvious answer was to simply turn the wet places into dry places. The wetlands ecosystem provided numerous services to society that we now are beginning to sorely miss, however. The loss of wetlands is a human-caused problem, and we have the capacity to reverse this trend with smart, targeted investments. In addition to obvious environmental benefits, these investments provide economic returns in two categories. First, coastal restoration investments create jobs and stimulate spending. Second, but less studied: healthy, restored ocean and coastal wetlands ecosystems provide enhanced economic value. The recently-

released report *The Economic Case for Restoring Coastal Ecosystems*, put out by the <u>Center for American</u> <u>Progress</u> and <u>Oxfam America</u> delves into the second economic metric: the ongoing economic contributions provided by healthy, restored coastal ecosystems such as wetlands, seagrass beds, and oyster reefs. An analysis of three federally funded projects reveals that investing in well-designed coastal restoration can be highly cost effective, returning significantly more than the cost of the restoration project. Averaging the benefit-cost ratios across the three restoration projects studied, each dollar invested by taxpayers returns more than \$15 in net economic benefits. These benefits include buffering storm surges; safeguarding coastal homes and businesses; sequestering carbon and other pollutants; creating nursery habitat for commercially and recreationally important fish species; and restoring open space and wildlife that support recreation, tourism, and the culture of coastal communities. The benefits are not simply environmental; they are economic and social as well. They are particularly salient in lower-income communities, where individuals frequently rely on fisheries for employment and sustenance and lack the resources to construct costly (and frequently less effective) manmade flood barriers or water treatment facilities. Click <u>here</u> to download the report, <u>here</u> to view a video of a panel discussion about the report, or <u>here</u> to read an excellent article summarizing the report and its findings.

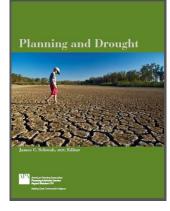


What makes some publicly funded, state conservation programs more successful than others? That is the central question addressed in <u>Making The Most Of Our</u> <u>Money: Recommendations For State Conservation Programs</u>, a recently released report based on a collaboration by the Conservation Finance Program of The Trust for Public Land (TPL) and Conservation Campaigns Team of The Nature Conservancy (TNC). Agency and nonprofit partners from the states in which TNC and TPL work wanted guidance on how to formulate new programs, or how to update and improve existing ones, to make the most of their states' limited funding. This report offers guidance on how create the best possible programs, ensure that money is spent on projects that best meet the public's expectations, and build an enduring legacy, based on a wide-scale analysis of successful state conservation programs. Click here to download the report and here for more info.

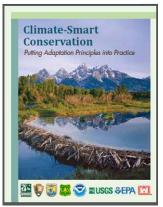


"Water scarcity is spreading and intensifying in many regions of the world, with dire consequences for local communities, economies, and freshwater ecosystems. To be durable and effective, water plans must be informed by the culture, economics, and varied needs of affected community members. In the new book <u>Chasing Water: A Guide to Moving from</u> <u>Scarcity to Sustainability</u>, international water expert <u>Brian Richter</u> argues that sustainable water sharing in the 21st century can only happen through open, democratic dialogue and local collective action. In <u>Chasing Water</u>, Richter tells a cohesive and complete story of water scarcity: where it is happening, what is causing it, and how it can be addressed. Through his engaging and nontechnical style, he strips away the complexities of water management to its bare essentials, providing information and practical examples that will empower community leaders, activists, and students to develop successful and long-lasting water programs. <u>Chasing Water</u> will provide local stakeholders with the tools and knowledge they need to take

an active role in the watershed-based planning and implementation that are essential for water supplies to remain sustainable in perpetuity." Click <u>here</u> to order the book or for more info, and <u>here</u> (scroll down to pp. 10-11) to read an excerpt appearing in the <u>June 2014 edition of International Rivers' *World Rivers Review* magazine.</u>



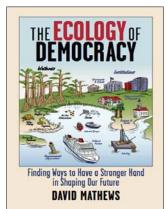
**Planning and Drought**, recently published by the <u>American Planning Association</u> (APA), offers a comprehensive guide for citizens, planners, and communities to explore what drought is, how to track it, its impacts, and how planners and communities can prepare to mitigate its effects. The publication includes eight case studies illustrating the range of drought's consequences and how different organizations have prepared for and responded to them. This publication is the result of a partnership between the APA, the National Drought Mitigation Center, and the National Integrated Drought Information System, which is part of the drought.gov website. Click here to download a free copy of *Planning and Drought*, to purchase a hard copy, or to access other drought-related info.



<u>Climate-Smart Conservation: Putting Adaption Principles into Practice</u>, recently published by the <u>National Wildlife Federation</u> in cooperation with more than a dozen other groups and agencies, offers conservation practitioners and natural resource managers guidance on carrying out conservation in a changing climate. *Climate-Smart Conservation* examines how climate change is already affecting the nation's wildlife and habitats, and addresses how natural resource managers will need to prepare for and adapt to these unprecedented changes. Developed by a collaboration of experts from federal, state, and non-governmental institutions, the guide offers practical steps for crafting conservation actions to enhance the resilience of the natural ecosystems on which wildlife and people depend. Click here to download *Climate-Smart Conservation* and to access related info, and here for info on a course based on this new publication.

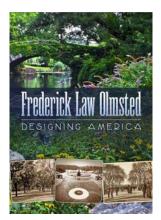


E. G. VALLIANATOS with McKAY JENKINS



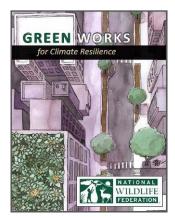
The recently published book *Poison Spring*, co-written by longtime EPA staffperson E. G. Vallianatos and environmental journalist McKay Jenkins, sheds light on the pervasive use of pesticides and other toxic chemicals in the U.S. and elsewhere, the persistent presence of these chemicals in the food we eat, the water we drink, and where we live, work and recreate, and the shortcomings of the regulatory process in mitigating the adverse impacts of these chemicals on public and environmental health. Click <u>here</u> to order the book, <u>here</u> to read an interview with Vallianatos about the book, <u>here</u> to read a review of the book from *Kirkus Reviews*, and <u>here</u> to read a review appearing in the *Seattle Times*.

The Ecology of Democracy: Finding Ways to Have a Stronger Hand in Shaping Our Future, by David Mathews, President of the Kettering Foundation, "is for people who care deeply about their communities and their country but worry about problems that endanger their future and that of their children. The political system is mired in hyper-polarization. Citizens feel pushed to the sidelines. Rather than giving in to despair and cynicism, some Americans are determined to have a stronger hand in shaping their future. This book is also for governmental and nongovernmental organizations, as well as educational institutions that are trying to engage these citizens. The Ecology of Democracy provides ideas about how to put more control in the hands of citizens and help restore the legitimacy of our institutions".



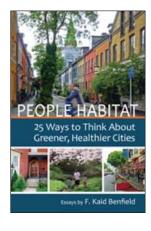
"As the designer of major urban parks [such as New York City's Central Park, and <u>Boston's Emerald Necklace]</u>, <u>Frederick Law Olmsted</u> made enormous contributions to the American landscape and is known as the father of American landscape architecture. To Olmsted, a park was both a work of art and a necessity for urban life. Olmsted's efforts to preserve nature created an environmental ethic decades before the environmental movement became a force in American politics. With gorgeous cinematography, and compelling commentary, the new documentary film <u>Frederick Law Olmsted: Designing</u> <u>America</u> presents the biography of a man whose parks and preservation are an essential part of American life." Click here to visit the PBS website for the film, which lists scheduled broadcast dates, other background info, and the opportunity to purchase a DVD of the film, and here to view segments of the original 90-minute film (such as <u>Photography and Design in Olmsted's Boston Parks</u>) that were cut when the film was shortened

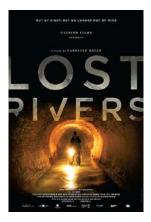
to a 60-minute length for broadcast.



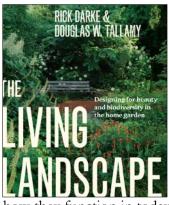
**Cities** are on the frontlines of climate change impacts, such as sea-level rise, drought, and extreme weather. Some coastal communities are responding by lining their shorelines with grasses, boulders, oyster reefs, and sand dunes. What sound like the components of an extravagant sandcastle are actually the key features of a **living shoreline** – a coastal resilience technique that uses natural and structural features to control coastal erosion and protect water quality. *Green Works for Climate Resilience: A Community Guide to Climate Planning*, a new report from the National Wildlife Federation (NWF), is a primer on nature-based approaches that communities can use to prepare for the impacts of climate change. These include **green infrastructure** and similar approaches that rely on enhancing, protecting, and restoring natural infrastructure, such as coastal wetlands and tree canopies, and techniques that

mimic natural processes. For example, although man-made, rain gardens and other low impact development approaches model the functions of natural infrastructure, such as by slowing the infiltration of stormwater to reduce flooding. *Green Works* also includes information about the **economic benefits** of nature-based approaches. Click <u>here</u> to download the report and for related info.





more info about the film.

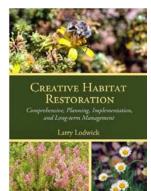


"With over 80 percent of Americans now living in cities and suburbs, getting our communities right has never been more important, more complicated, or more fascinating. In the new book *People Habitat: 25 Ways to Think About Greener, Healthier Cities*, longtime sustainability leader Kaid Benfield shares 25 enlightening and entertaining essays about the wondrous ecology of human settlement, and how to make it better for both people and the planet. *People Habitat* explores topics as diverse as: 'green' housing developments that are no such thing; the tricky matter of gentrifying inner cities; why people don't walk much anymore; and the relationship between cities and religion. Written with intellect, insight, and from-the-heart candor, each real-world story in People Habitat will make you see our communities in a new light." Click here to order the book and here to go directly to the *People Habitat* website, where more info is posted about the book and its author.

"Once flowing through nearly every developed city in the world, rivers provided the infrastructure upon which modern metropolises were built. But then many of the urban rivers and streams disappeared from view. Why? How? The documentary film *Lost Rivers* offers an adventurous and revelatory look into the disappearance and recent resurfacing of these historic waterways. *Lost Rivers* leads us down the drain into vast underground museums of urban development. Guiding us through the hidden river networks of London, Brescia (Italy), Montreal and Toronto, intrepid groups of subterranean explorers known as 'drainers' reveal the buried waterways that house the secrets of each city's past. Exploring recent initiatives to resurface and revitalize these forgotten waterways in Yonkers and Seoul, *Lost Rivers* brings to life an aspect of urban ecology that has long been kept secret." *Lost Rivers* is now available on a DVD, which includes the 72-minute film as well as bonus material and video extras. Click here to order the DVD, and here to view the trailer and

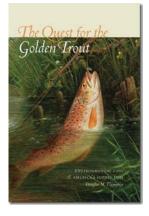
In the new book <u>The Living Landscape: Designing for Beauty and Biodiversity</u> in the Home Garden, co-authors <u>Rick Darke</u> (landscape designer and author of *The American Woodland Garden*) and <u>Douglas W. Tallamy</u>, (ecologist, entomologist and author of *Bringing Nature Home*) give meaningful definition to the idea of biodiversity, particularly as it relates to a suburban garden. The book addresses the question: is biodiversity about "just gardening with native plants?" The answer is no; biodiverse gardening means giving native plants a functional and life-giving role in sustaining gardens. The authors highlight the less appreciated but critical role that natives can play, including cooling, tapping into ground water, and providing shelter for wildlife. They also assert that because suburban sprawl has created profound environmental change, "It's time to stop worrying about where plants come from and instead focus on

how they function in today's ecology." They dispel the false dichotomy that a garden can be either all natives and therefore healthy or filled with exotic plants and not naturally sustainable. Including 500 color photos, the book offers guidance for creating beautiful landscapes that will be durable and "support life without sacrificing aesthetics." Click <u>here</u> to order the book and <u>here</u> to read a blog posting on this topic.

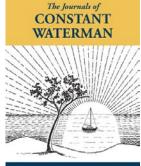


The recently-published e-book Creative Habitat Restoration: Comprehensive Planning, Implementation, and Long-Term Management, by Larry Lodwick, provides a comprehensive examination of the systems approach to habitat restoration. The approach includes methods for the thorough planning necessary to restore, implement, and maintain both structural and functional aspects of natural habitats on previously disturbed sites. With an intended audience is novices and entry-to-mid-level environmental professionals, the book details many of the skills needed to be not only successful in restoring and maintaining habitats, but includes navigating the regulatory requirements and the potential financial assistance which comes from governmental and private sources. The approach is not so much a "hands-on skills" or a "cookbook" approach; rather, the book imparts the strategies and tactics needed for a successful career in the habitat restoration field. Creative Habitat Restoration has the techniques necessary for a wide variety of habitats, with

hyperlinks to specific and detailed techniques for specific species and habitats. The book looks at habitat restoration as a functional system, not simply restoring single species or groups of species. From initial considerations in site selection, acquisition, optimal buffer designations, and implementation, through long-term management, the approach is to ensure success in maintaining long-term ecological structures and functions. Click here to order the book and here for related info.



Here is what its publisher, the University Press of New England, says about its 2013 book The Quest for the Golden Trout: Environmental Loss and America's Iconic Fish, by Connecticut College Professor Douglas M. Thompson: "A river advocate and environmentalist questions some of the unsound methods of conservation and restoration imposed on North American rivers and streams... The Quest for the Golden Trout is about looking at our nation's rivers with a more critical eye." Click here to read the book's table of contents, here for a more detailed description and capsule reviews of the book, or to order a hard copy from the publisher, or <u>here</u> to order a digital version.



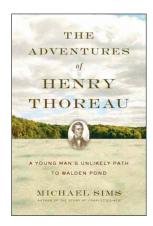
LING, POLING, AND SAILING Matthew Goldman

The Journals of Constant Waterman: Paddling, Poling, and Sailing for the Love of It "is a collection of ninety short tales [some of which previously appeared in Messing About in Boats Magazine] about the boating Matthew Goldman has done in his life - in sailboats, canoes, rowboats, and other floating craft. All these memoirs deal with the water - from the puddle to the sea. They wander, as reflective as a sandy-bottomed brook. They linger, as wistful as an idle boat in summer. They revel, as jubilant as broaching porpoises. Read about boats; read about passages; read about islands; read about the rain. Learn about a murder in the woods by the river; learn about restoring a wooden boat. Hear about sailors, boat builders, ferrymen; hear about canoeing amid the marshes. The best part about it? You don't have to spend your time sanding and varnishing. You don't need to don any foul weather gear. You don't need to know a bowline from a boom vang, or know how to pole a canoe". Click here to order the book and here for more info.

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The recently-published, third edition of the Appalachian Mountain Club (AMC)'s *Quiet* Water Massachusetts, Connecticut, and Rhode Island guidebook "reveals 100 spectacular out-of-the-way lakes and ponds, meandering rivers, marshy coves and inlets, and more, each ideally suited for canoeing and kayaking. From Walden Pond to the East River and from salt marshes to forested reservoirs, the waterways described in this updated guide offer access to unique adventures for beginners and experienced paddlers, birdwatchers and

anglers, families with children, and active seniors. Each trip description features a map, plus details of the suggested paddling route and the flora and fauna to be seen along the way." The fully-updated Third Edition includes additional paddling opportunities not included in earlier editions, plus the content has been reorganized into a more user-friendly layout and design, including an "At-a-Glance" quick trip planner, GPS coordinates to parking locations, improved maps, and new trip planning/safety information resources. Click <u>here</u> to order the book and <u>here</u> to read the press announcement from earlier this year.



Henry David Thoreau has long been an intellectual icon and folk hero. In the recentlypublished book *The Adventures of Henry Thoreau A Young Man's Unlikely Path to Walden Pond*, author Michael Sims reveals how the bookish, quirky young man who kept quitting jobs evolved into the patron saint of environmentalism and nonviolent activism. Working from nineteenth-century letters and diaries by Thoreau's family, friends, and students, Sims charts Henry's course from his time at Harvard through the years he spent living in a cabin beside Walden Pond in Concord, Massachusetts. Sims uncovers a previously hidden Thoreau—the rowdy boy reminiscent of Tom Sawyer, the sarcastic college iconoclast, the devoted son who kept imitating his beloved older brother's choices in life. Thoreau was deeply influenced by his parents—his father owned a pencil factory in Concord, his mother was an abolitionist and social activist—and by Ralph Waldo Emerson, his frequent mentor. Sims relates intimate, telling moments in Thoreau's daily life—in

Emerson's library; teaching his neighbor and friend, Nathaniel Hawthorne, to row a boat; exploring the natural world and Native American culture; tutoring Emerson's nephew on Staten Island and walking the streets of New York in the hope of launching a writing career. Chronicling Thoreau's youthful transformation, Sims reveals how this decade would resonate over the rest of his life, and thereafter throughout American literature and history. Click here to order the book and here, here and here to read reviews of the book appearing in the *Washington Post*, the *Wall Street Journal* and the *Christian Science Monitor*.

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The <u>Mass. Watershed Coalition</u> (MWC)'s <u>"mwc-list"</u> <u>listserv</u> is a great source of information on river- and watershed-related funding and job opportunities, upcoming events, recent articles and more. Many of the posted items

are time-sensitive and can't wait until the next edition of *Ebb&Flow*. You can access the mwc-list listserv at <u>http://lists.topica.com/lists/mwc-list@igc.topica.com</u>, where you can subscribe to receive the posted messages to your e-mail address, or simply read them on-line. Highly recommended!



Coordinated by the Mass. Executive Office of Energy and Environmental Affairs (EEA), *The Great Outdoors Blog* is dedicated to Massachusetts outdoor activities, events, wildlife, state parks and local agriculture that features a **calendar of** <u>Massachusetts outdoor events</u>. Learn about native marsh species, guides for the state's best paddling adventures and learn about wetlands restoration projects that protect recreational and commercial fisheries.

Last but not least:



The <u>Massachusetts Environmental Trust</u> (MET) provides funding to many river, wetland and other water resources protection and restoration projects throughout the Commonwealth. A major source of MET's funding comes from the sale of <u>environmental license plates</u>. Besides the "Right Whale and Roseate Tern" plate (click <u>here</u>, see p. 13), sales of the "Fish and Wildlife" plate (click <u>here</u>, see p.12), depicting a Brook Trout, and the Blackstone Valley plates (click <u>here</u>, see p.10) help fund MET's grant-making programs. (By the way, these three are he only Mass. specialty license plates that exclusively fund environmental programs). Getting an environmental plate is easy and can be done on-line by clicking <u>here</u>, or in person at <u>your local Registry of Motor Vehicles office</u>.

#### Does your car have an environmental license plate?

#### Division of Ecological Restoration Staff.

Tim Purinton, Director Hunt Durey, Deputy Director Carrie Banks, Stream Team and Westfield River Wild and Scenic Committee Coordinator Russell Cohen, Rivers Advocate Michelle Craddock, Flow Restoration Specialist Cindy Delpapa, Stream Ecologist Kristen Ferry, Aquatic Habitat Restoration Specialist Eileen Goldberg, Assistant Director Alex Hackman, Project Manager Franz Ingelfinger, Restoration Ecologist Georgeann Keer, Wetland Scientist and Project Manager Beth Lambert, River Restoration Program Manager Laila Parker, Flow Restoration Program Manager Megan Sampson, Program Administrator Nick Wildman, Priority Projects Coordinator \*\*\*\*\*

Commonwealth of Massachusetts Deval L. Patrick, Governor Maeve Vallely Bartlett, Secretary, Executive Office of Energy and Environmental Affairs Mary B. Griffin, Commissioner, Department of Fish and Game

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