

WELLSPRING

Your water. Your environment. Your voice.

Time to Rethink Energy in NJ

Concerned about an onslaught of proposals for new oil and natural gas pipelines that threaten the state's water resources, the Watershed has joined with New Jersey Conservation Foundation, Pinelands Preservation Alliance, and a new organization called "ReThink Energy NJ" to promote a swift transition to clean, efficient energy and reduced reliance on fossil fuels.

At a campaign launch event in late October, the groups released a new poll conducted by Farleigh Dickinson University's PublicMind that found that nearly 80 percent of New Jerseyans believe the state should invest more in developing renewable energy sources like wind and solar, than fossil fuels, like oil and natural gas. Seventy-seven percent of respondents indicated that they are very or somewhat concerned about climate change and 62 percent think the pace at which our state is developing and adopting renewable energy is too slow.

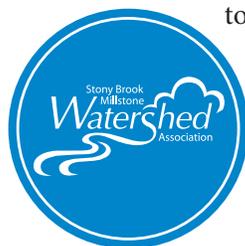
New Jersey has been a leader in promoting solar power and other forms of renewable energy but there are indications that the state's efforts are being surpassed by others. According to the Solar Energy Industries Association, New Jersey ranked third in total installed solar capacity at

1,451 mega watts. But in 2014, our state ranked sixth in new solar installations, and New Jersey's solar production was not even among the top 10 when measured as a percentage of new electrical capacity.

New pipelines, like the one proposed by a consortium called PennEast, threaten clean water and the environment by cutting through streams, forests and farmland and facilitating the rapid spread of invasive species that outcompete native plants. The new pipelines are unnecessary given flat projections for New Jersey's gas consumption. The Watershed believes that greater use of renewable energy and a stronger commitment to improving energy efficiency is a better plan.

In addition to overwhelming public support, the effort to accelerate the state's adoption of clean, renewable energy has bipartisan backing from policy makers. Former Governors Jim Florio (D) and Tom Kean (R), State Senator Kip Bateman (R-16), State Assemblywoman Liz Muoio (D-15), and Assemblymen John McKean (D-27) and Daniel

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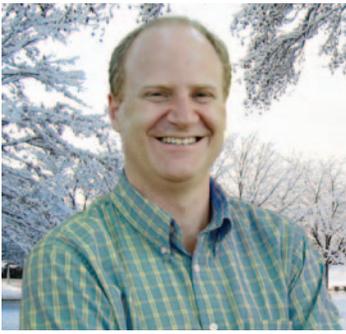
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FROM THE EXECUTIVE DIRECTOR

Affordable Housing Challenge

Affordable housing. Those two words stir much emotion in New Jersey, ranging the spectrum from fear and dread to hope and promise depending on who hears them. But no matter which emotions they elicit, most who've been following the state's tortured efforts to promote affordable housing would probably agree on one thing: the process is a mess.

Under the State Supreme Court's landmark Mt. Laurel decisions of the 1970s and 80s, each of New Jersey's 565 municipalities has a constitutional obligation to provide its "fair share" of the regional need for low-and moderate-income housing. Towns are required to provide a "realistic opportunity" for such housing, showing how their zoning and other actions would lead to its construction.

Towns not deemed to be in compliance with this mandate are vulnerable to "builder's remedy" lawsuits, in which a developer can sue a municipality to change zoning on a particular site if that developer promises to include a 20 percent set-aside of low-and moderate-income housing as part of its development.

In 1985, the State Legislature enacted the Fair Housing Act, which created the Council on Affordable Housing (COAH), a state agency to review and approve plans for affordable housing devised by the towns. Certification from COAH that a town was meeting its affordable housing obligations shielded the town from builder's remedy lawsuits.

COAH released rules in 1986 and again in 1994 that spelled out municipalities' obligations to provide for affordable housing and many towns prepared plans, received certification and were shielded from litigation.

But since 1999, COAH, the New Jersey League of Municipalities, developers and affordable housing advocates have been locked in litigation. In March 2015, the New Jersey Supreme Court removed authority for implementing affordable housing rules from COAH and gave it to the courts. Towns have until the end of 2015 to come up with plans to meet their affordable housing obligations, which will then be approved or rejected by the courts.

A central unanswered question for each town, of course, is how large is its constitutional obligation? Fair Share Housing (FSH), a non-profit affordable housing advocacy organization has asserted that more than 200,000 new affordable housing units need to be built in the state and have issued quotas for each of the state's towns. Others, including many towns and the League of Municipalities, disagree with these numbers, citing flaws in the methodology used to derive them. It remains to be seen if the New Jersey courts will accept FSH's numbers as is, or if they will apply a different set of criteria to determine them.

Of course development in the wrong places can have dramatic consequences for water quality, environmental health, and social well-being. We have spent decades advocating against development that would harm water and environment. As we are reviewing the intricacies of addressing strategies to meet the affordable housing need, we must ensure that the planning takes into consideration environmental impacts. If the numbers provided by FSH are accepted by the courts, close to 16,000 new affordable units will need to be built in the 25 municipalities that make up the Stony Brook-Millstone Watershed. And if "inclusionary zoning," in which four new "market rate" housing units are built for each affordable unit, that number would grow to 80,000.

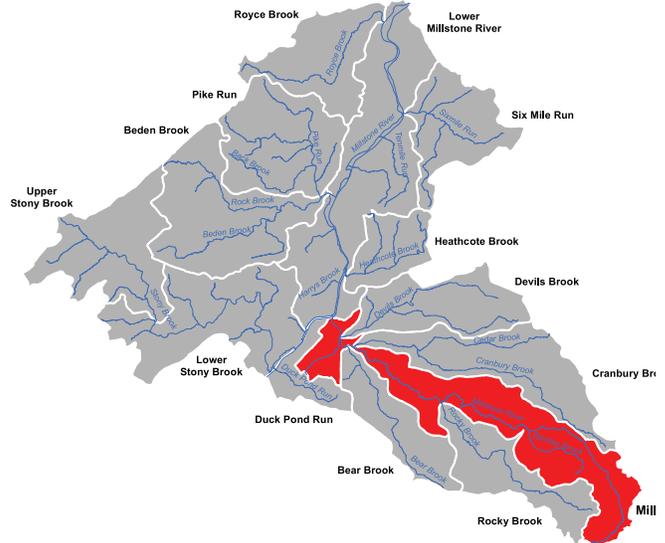
Hopewell Township, for example, a town with approximately 6,200 housing units today, might need to add 5,000 new housing units to meet FSH's suggested affordable housing obligation. How would development on that scale affect water quality and environmentally sensitive areas?

Is it possible to build to that level in a state where 90% of our waters do not meet water quality standards while still trying to meet the Clean Water Act's goal of fishable and swimmable waters? Provision of affordable housing is not just a legal requirement; it's also a moral obligation.

STREAMWATCHING

Focus on the Upper Millstone River

As the headwaters to our namesake watershed, the Upper Millstone River subwatershed has a lot depending on it. The Millstone River is the Stony Brook-Millstone watershed's largest river and the largest tributary to the Raritan River. What happens to the Millstone River in its upper southern reaches affects hundreds of thousands of people downstream. It bubbles up through a spring in the coastal plain in Millstone Township and flows through a network



The Millstone River in the fall

of wetlands until it channelizes and flows northwest to join with the Stony Brook at Lake Carnegie in Princeton. After crossing Route 1, the drainage area to the Millstone River shifts to the Lower Millstone subwatershed.

StreamWatch has monitored water chemistry in the Upper Millstone River since 1992 and the New Jersey Department of Environmental Protection (NJDEP) also conducts occasional monitoring in the area.

Dissolved oxygen levels should never dip below 4 milligrams per liter (mg/L), and should rarely fall below 6 mg/L, however this occurs regularly during the summer months as the water warms. Erosion of stream banks and sedimentation entering the stream from high storm flows has also caused high turbidity and total suspended solids, which has in turn reduced suitable habitat for benthic macroinvertebrates. The StreamWatch biological action team collecting macroinvertebrates in the Upper Millstone River was forced to stop sampling in 2012 when year after year, they were not able to collect a sufficient number of organisms.*

Warming stream water and increased erosion are indicative of larger problems—reduced riparian buffers, which provide shade and root systems to contain soil, and increases in impervious surfaces in the surrounding drainage areas, causing stormwater to rush into the river at once rather than moving slowly through vegetation and percolating through the soil.

One of the major issues in the Upper Millstone is high phosphorus levels. Most of its upper reaches flow through agricultural and low-density residential areas of Millstone and Monroe Townships, which explains the influx of phosphorus through runoff of fertilizer and animal waste. Phosphorus spikes can encourage the quick growth and die-off of algae, reducing dissolved oxygen even further. Nitrate levels have been decreasing in the area since 2008 and are now well below recommended levels.

Continued on page 9

Scorecard

Nitrogen	●
Phosphorus.....	●
Dissolved Oxygen	●
pH	●
Aquatic Life	●
Recreation (<i>E. coli</i>)	●
Impervious Cover	●
Overall Score	●

Rankings
 ●=Good ●=Fairly Good ●=Fairly Poor ●=Poor

Lifetime Learning Expands Horizons

The Literary Language of Nature

We are pleased to announce of a new Adult Education Literature program, complementing our popular Learning the Language of Nature series. While nature



Find your vision of nature through literature

Writers of poetry and essays about nature address their own time, even as they transcend it, speaking to us through its prism. We will be looking for “time markers” in both form and content: What kind of language, what literary conventions do the writers use? What are their concerns—what is happening in the natural world; what is meaningful to the observer; what vision does that observer have of nature and our relationship to it? There will be suggested short readings each week, and we will read and discuss selections from among the listed authors on the spot in class.

**Thursday evenings, 7:30–9:00PM,
January 7 through February 11;
Adults; \$90M/\$130NM.**

FACULTY: Winifred Hughes Spar, Ph.D.

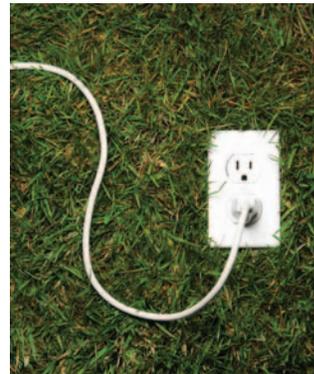
Winifred Hughes Spar formerly taught English literature at Princeton University. She is the author of a scholarly book published by Princeton University Press, and her poems, many on the subject of nature, have appeared in Poetry Magazine and other journals.

outdoors is frosty and dormant, we will warm up with some classic and contemporary nature writing at the Watershed Center.

From the time of Genesis to contemporary nature writing and ecopoetry, the human species has engaged with its natural surroundings, striving to find words for that evolving and increasingly troubled relationship.

Conserving Energy in Your Home

Are you interested in learning about steps you can take to reduce your use of energy in your home, save money on your electric bills and help the environment? Are you



Save money & Save the Environment with this new course

curious about how solar energy and geothermal systems really work and whether they are right for you?

Registration is now open for our adult education course on home energy efficiency to be held in our award-winning Watershed Center. The Center, which has received the highest “LEED Platinum” rating from the US Green Building Council, is an ideal teaching

platform. The course aims to extend many of the lessons learned from designing and building our energy efficient Center to what a homeowner can do in either building a new house or retrofitting an existing home.

**Wednesday Evenings 7:30–9:00PM,
February 3 through March 9;
Adults; \$180/\$230NM**

FACULTY: Ted Borer & Robert Harris, Ph.D.

The course will be led by Watershed-member Ted Borer, Energy Plant Manager at Princeton University and Robert Harris, a former Watershed trustee and retired faculty member at Princeton University who taught a senior engineering design course on energy efficient buildings. The course will consist of six Wednesday evening courses and two Saturday morning field trips beginning on February 3 and ending March 9. The classroom sessions will focus on how energy is used for heating, cooling, and lighting a house, the energy used for hot water and “plug loads,” and what determines the efficiency of energy use. We will discuss practical, cost effective measures that can be taken to lower energy bills and be better stewards of the environment. The field trips will be designed to illustrate how an energy audit is done, the use of solar panels to produce electricity and hot water, and the methods of weatherizing a house to reduce energy costs of heating and cooling.

Winter 2016 Calendar

Registration is required and space is limited in all programs, unless stated otherwise.

Call 609-737-7592 or bnc@thewatershed.org to register.

Unless stated otherwise, all programs meet at the Watershed Center, Stony Brook-Millstone Watershed Reserve, 31 Titus Mill Road, Pennington.

Payment methods:

Cash, Check, VISA, MasterCard or Discover

Fee code: M=Stony Brook-Millstone Watershed Association Member, NM=Non-member

Refund Policy: A full refund will be made if notice of cancellation is received **at least** 48 hours before a program. Call 609-737-7592 to cancel.

No refunds or credits will be given after that time.

All returned checks incur a bank fee.

Watershed membership is not refundable.

Event co-sponsors are indicated by *

Arts Council of Princeton, Friends of Hopewell Valley Open Space, Friends of Princeton Open Space, Washington Crossing Audubon Society

Family and Adults Programs

Registration required for all programs, except as noted.

DECEMBER 5

Winter Bird Walk*

Saturday, 9:00–11:00AM, 15yo–Adult, \$5 per person

Join Education Director Jeff Hoagland on a hike of the Watershed Reserve in search of wintering birds. Bring binoculars and dress for possibly muddy or snowy walking conditions. Co-sponsored by Washington Crossing Audubon.

DECEMBER 5

Woolie Wearables: Felted Scarf*

Saturday, 10:00AM–2:30PM, Adults, Fee per person: \$60M/\$75NM

Learn the technique of felting from an ACP instructor and create a lightweight scarf using carded Merino wool and silk fibers. No previous felting experience is necessary, but expect a little bit of physical work and ability to stand on your feet while felting is required. Bring 2 old towels and a plastic shopping bag. Materials fee of \$15 is payable to the instructor on the day of the workshop. Registration is exclusively through the Arts Council of Princeton; visit www.artscouncilofprinceton.org or call 609-924-8777. Membership rate applies to current members of either organization.

DECEMBER 5

Holiday Open House

Saturday, 1:00–4:00PM, Adults and Families, FREE

Get into the holiday spirit at the Watershed Center! Enjoy informal tours of the building, holiday goodies and simple seasonal crafts for children. Bring your gift-giving list to make a dent in your holiday shopping and enjoy 20% off your nature shop purchases too! RSVP not required.

DECEMBER 12

Candle Making

Saturday, 1:00–3:00PM, 8yo–Adult, \$10M/\$15NM

Celebrate the approaching Winter Solstice and the return of the light by making candles with the Teacher-Naturalists! We will create hand-dipped candles, sand candles, and molded candles. Learn how to shape candles and add embellishments, then go home with your unique handmade gifts!

DECEMBER 14

Lunch & Learn with a Naturalist

Monday, 11:30AM–12:30PM, Families, \$5 per child

Parents and children 5–10 years old—pack your lunch and join Senior Naturalist Allison Jackson for a nature-themed lunch! Enjoy your lunch with us in the Watershed Center, coupled with a nature mini-lesson to whet your appetite and a hands-on activity. We will send you home with ideas to explore and projects to tackle for further enrichment. Registration is not required, drop-ins are welcome!

JANUARY 7—FEBRUARY 11

The Literary Language of Nature

Thursdays, 7:30–9:00PM, Adults; \$90M/\$140NM

NEW—While nature outdoors is frosty and dormant, we will warm up with some classic and contemporary nature writing in this new Adult Education course. For more information, see page 9.

JANUARY 9

Recycle, Reuse & Re-gift*

Saturday, 10:30AM–12:00PM, 12yo–Adult, \$5 per person

Spend the morning at the Watershed Center giving your holiday cards a second life! Get creative with us as you learn to make origami boxes, gift tags and spherical

ornaments. Re-gifting has never looked so beautiful! Bring all of your cards, scissors and ruler. Light refreshments provided.

JANUARY 16

Welcome Winter Walk in Princeton*

Saturday, 9:30–11:30AM, Adults and Families (children 5yo+); FREE

Join Education Director Jeff Hoagland on a morning walk at the Mountain Lakes Preserve in Princeton to explore the wonders of the natural world in winter. Discover the unique survival strategies of local plants and animals from milkweed to meadow vole and red oak to robin. Learn where animals store food and how they survive the season's relentless chill. If weather permits, we will play the 'Hibernation Game'. Dress warmly, boots are recommended, and bring your sense of wonder.

JANUARY 11 & 25, FEBRUARY 8 & 22, MARCH 7 & 21

Lunch & Learn Series

Mondays, 11:30AM–12:30PM, Families, Series fee: \$25/child; Individual class fee: \$5/child

Parents and children 5–10 years old—pack your lunch and join Senior Naturalist Allison Jackson for a nature-themed lunch! Starting with the new year, we will expand our Lunch & Learn to bi-monthly get-togethers! Bring your lunch to enjoy in the Watershed Center, coupled with a nature mini-lesson to whet your appetite and a hands-on activity. We will send you home with ideas to explore and projects to tackle for further enrichment. Registration is not required, drop-ins are welcome! Join us for the entire series (and save) or drop in for just a few—it's your choice.

JANUARY 15

In Search of Owls I

Friday, 7:00–8:30PM, Adults and Families (children 6yo+); \$10M/\$15NM

Begin the evening indoors with a presentation that will introduce you to owls, their calls and adaptations. After a Naturalist-led night hike in search of the nocturnal raptors, we will warm up indoors with a hot beverage. Two additional hikes offered on January 30 and February 5.

JANUARY 16

Sensational Summer Camp Fair in Lawrenceville

Saturday, 12:00–3:00PM, Families, FREE

Look for Camp Director Tammy Love at the camp fair at

the Quakerbridge Mall! Curious about Watershed Nature Camp 2016? The brochure is available for download on our website in mid-January and registrations will be accepted immediately! The first Open House at the Watershed Center is Saturday, March 12 from 2:00–4:00PM.



Conifers provide cover for wildlife on our reserve.

JANUARY 30

Groundhog Day Celebration

Saturday, 1:00–3:00PM, Families, \$7 per person

Celebrate Groundhog Day at the Watershed Reserve by visiting several burrows of these furry weather forecasters. Learn about their life history and role in the ecological community and enjoy the challenge of the Hibernation Game. After our hike and game, warm up by our outside fire, enjoy a warm beverage and make a Groundhog Day craft!

JANUARY 30

In Search of Owls II

*Saturday, 7:00–8:30PM, Adults and Families (children 6yo+); \$10M/\$15NM
See description from January 15.*

FEBRUARY 3—MARCH 9

Conserving Energy in Your Home

Wednesdays, 7:30–9:00PM, Adults; \$195M/\$245NM

NEW—Learn how to reduce energy use in your home, save money on your electric bills and help the environment. Examine solar energy and geothermal systems and determine whether they are right for you. For more information, see page 4.

FEBRUARY 5

In Search of Owls III

Friday, 7:00–8:30PM, Adults and Families (children 6yo+); \$10M/\$15NM

See description from January 15.

FEBRUARY 6

Winter Exploration Geocache Event

Saturday, 1:30–3:30PM, Adults and Families, Donations accepted

This “event-cache” is a great introduction to the hobby of geocaching as well as the ecology of winter. Track animals, meet winter weeds, talk with birds and much more. Appropriate for beginners or experienced cachers. Watch for more details and RSVP at www.geocaching.com or contact the Education Department at 609-737-7592. Light refreshments provided.

FEBRUARY 12

Great Backyard Bird Count on the Reserve

Friday, 10:00–11:00AM, Adults and Families, FREE

Watch and tally wild birds out the soaring windows of the Watershed Center, all from the cozy comfort of the Discovery Room and Gorrie Hall! The Teacher-Naturalists will help you participate in a Great Backyard Bird Count—beginning birders are very welcome. The data we compile will be submitted to the Cornell Lab of Ornithology. Hot beverages provided.

FEBRUARY 13

Winter Tree Exploration*

Saturday, 2:00–3:30PM, Adults and Families (children 8yo+), Free for Members/\$5NM

Join this outdoor exploration to learn about life in the forest by uncovering the secret lives of trees. Discover the many ways that trees provide for others in the forest community including tiny gall flies, the chickadee, turkey tail and wild grape.

FEBRUARY 20

Intro to Private Lands Stewardship Program*

Saturday, 10:30–11:30AM, Adults, FREE

Do you want to support the natural diversity of New Jersey native plants and wildlife but do not know how to start? Established and implemented by the Friends of Hopewell Valley Open Space, PLSP supports stewardship efforts of local homeowners, specifically residents of Hopewell and Pennington, regardless of property size.

Attend this information meeting at the Watershed Center to learn how you can implement sound ecological practices—big and small. Light refreshments, RSVP requested.

FEBRUARY 20

Winter Weeds Sketching Workshop*

Saturday, 11:00AM–3:30PM; 16yo–Adult; \$55M/\$65NM

Join botanical illustrator Ruth Cuncell for an illuminating look at last season’s wildflowers. During a brisk morning walk on the Reserve trails, we will introduce you to a wide variety of plants, sharing their natural history while offering identification tips. Specimens can be collected during the walk for use in the studio session. After lunch, Ruth will help you sharpen your drawing skills to capture the fine form and architecture of the plants. Participants should come dressed for wintery weather on the trails, boots are necessary. Bring a bag lunch; hot beverages provided. Registration is exclusively through the Arts Council of Princeton; visit www.artscouncilofprinceton.org to register and for more information. Inclement weather date is February 27.

MARCH 5

Maple Sugaring Brunch & Hike

Saturday, 2 sessions: 9:30–11:30AM OR 11:00AM–1:00PM, Adults and Families

Member fees: \$15/adult, \$8/child (up to 13yo); under 3yo FREE

Non-member fees: \$20/adult, \$12/child (up to 13yo); under 3yo FREE

Our very popular winter brunch is returning to the Watershed Center. Hike with the Teacher-Naturalists to our tapped trees, learn about the process to convert maple sap to syrup and visit the ‘evaporation station’. A delicious home-cooked pancake brunch, served with our homemade maple syrup from trees on the Reserve, is the highlight of the day! Part of the program is conducted outdoors—winter gear, including boots, is necessary. Sign up for one session—registration and prepayment are required.

MARCH 12

Watershed Nature Camp Open House

Saturday, 2:00–4:00PM, Families, FREE

Summer will be here before you know it! Kids ages 5–16 and their families can meet Camp Director Tammy Love in the Watershed Center, learn about Watershed Nature Camp 2016 and register! RSVP is not required—drop-ins are welcome.

Children's Programs

Registration is required for all programs.

Winter Preschool Nature Classes

Tuesdays, 10:00–11:30AM AND Wednesdays,
1:00–2:30PM

Class fee per child: \$10M/\$15NM. Register and pay for 4 classes, receive a 5th class free.

Children 3–5 years old learn about nature while exploring the out-of-doors with one of the Teacher-Naturalists. Each class includes outdoor exploration, stories and simple crafts. A parent must stay with any child younger than 4. Class size is limited.

DECEMBER 1, 2—Winter Preparations

DECEMBER 8, 9—Evergreens for Everyone

JANUARY 5, 6—Story Time Winter

JANUARY 12, 13—Cozy Homes

JANUARY 19, 20—Birds & Pinecone Feeders

JANUARY 26, 27—Wild or Not?

FEBRUARY 2, 3—Hibernation Celebration

No preschool classes the week of February 8

FEBRUARY 16, 17—Winter Winds

FEBRUARY 23, 24—Mad Science

MARCH 1, 2—Happy Birthday Dr. Seuss

FEBRUARY 6

BSA 'Weather' Merit Badge Workshop

Saturday, 9:00AM–12:00PM, Boy Scouts 11yo+,
\$20 per scout

Join Education Director/BSA Merit Badge Counselor Jeff Hoagland for this morning workshop, designed to help Boy Scouts earn the 'Weather' merit badge. Out on the Watershed Reserve, scouts will examine the effects of Hurricanes Sandy or Irene while exploring the greater world of meteorology. Scouts will visit the Watershed Center's weather station and examine and interpret recent weather data onsite. Registration is by individual Boy Scout, not troop. Payment due at the time of registration.

FEBRUARY 15

Birds-n-Brunch Mini-Camp

Monday, 10:00AM–2:00PM, children grades 1–5,
\$20M/\$25NM

Schools are closed for President's Day so join the Teacher-Naturalists and participate in the Great American Bird Count. Then bundle up for a trek outdoors and a lesson on maple sugaring. Best of all, we will settle in afterwards for a delicious pancake lunch—served with our homemade maple syrup! Part of the day will be spent outdoors visiting the tapped trees and 'evaporation station'—winter gear, including boots, is necessary.



Blue Jay perches on a snowy ledge.

FEBRUARY 19 & 20

Webelos Camp-In at the Watershed Center

Friday, 7:00PM–Saturday, 9:00AM, Webelo Scouts,
Fee per boy: \$35, Fee per adult: \$15

We have a night of wintery fun planned for you and your troop this weekend... scavenger hikes, science experiments and meet the critters are some of the activities you can look forward to. At the end of the evening, spread your sleeping bags out on the floor of the Watershed Center and sleep near our critters and displays! Registration is by troop only and pre-payment is required. Fee includes snacks and Saturday breakfast.

MARCH 12

Winter Fairy Land

Saturday, 10:30 AM–12:00 PM, Families, \$7 per person
OR \$20 per family

Come celebrate winter with the magical creatures of the Watershed Reserve. We will build cozy winter fairy homes in Honeysuckle Hedgerow, listen to winter tales, practice writing in Elfsh, and make some festive arts and crafts. Dress for wintery and wizard-ly weather—boots are necessary.

BACK BY POPULAR DEMAND

Learning the Language of Nature

Registration is now open for additional sessions of our popular Adult Education program, *Learning the Language of Nature*. Sold out last year, this series of courses is designed to deepen our understanding of, and appreciation for, the natural world around us. Each course focuses on a larger taxonomic group, ie. birds, or wildflowers, and illuminates that group, helping participants to understand how these organisms relate to their environment, each other, and us. Created in collaboration with faculty from NJ colleges and universities, several different courses will be offered throughout the year.



New Jersey's State bird, the American Goldfinch

Upper Millstone River

continued from page 3

One StreamWatch bacteria monitoring site in the Upper Millstone subwatershed showed relatively low levels of *E. coli*. Samples never exceeded the state standard of 235 colonies of *E. coli* per 100 mL through the 2015 summer sampling season.

Like many other subwatersheds in our region, the Upper Millstone River subwatershed is neither "Good" nor "Poor." Advancements in stormwater management techniques and agricultural best management practices are necessary to improve water quality in this area.

Courses will run from March through November of 2016, each consisting of six, week-night classes and three, Saturday morning field trips. Classroom sessions focus on the science of our natural world, including evolution, classification, and ecological interactions. The field sessions focus on identification and observation skills of species, habitats and behavior.

Understanding and Identifying Birds of New Jersey

Thursday evenings, 7:30–9:00PM, March 17 through April 28, with three Saturday morning field trips; Adults; \$195/ \$245NM

Dr. Luke Butler, Associate Professor, Department of Biology, TCNJ

Plants and Wildflowers of Woods, Fields and Roadsides

Tuesday evenings, 7:30–9:00PM, May 3 through June 7, with three Saturday morning field trips; Adults; \$195/ \$245NM

Laura A. Hyatt, PhD, Associate Professor of Biology, Rider University

Class sizes are limited, so reserve your spot now. Special tuition rates are available for Watershed members. Two sessions are currently open for registration, with more to follow. For more information, program tuition fees, or to register, visit thewatershed.org or call 609-737-7592.

Acknowledgements

Many thanks to StreamWatch volunteers Rohith and Valapet Badri, Tony Beesley, Greg Cantrell, Ted Chase, Robin Kaplan, Aaron, Sonja, and Charlotte Michaluk, Tessie West, Barbara Zajac, and the Millstone Township Environmental Commission for monitoring the Upper Millstone River.

Generous funding for the StreamWatch program is provided by Janssen Pharmaceuticals Inc, RBC Blue Water Project, Dodge Foundation, and the New Jersey Water Supply Authority.

**At least 100 organisms are required to analyze a macro-invertebrate sample.*

SPEAKING OF NATURE

A Naturalist's Path

by Jeff Hoagland

My bird fever started at a very young age. There was a succession of experiences, each affirming the magic of these creatures, and each now remaining brilliantly luminous in memory despite the years. The first experience was the discovery of a “wild” bird nest as a seven year old. Not searching for birds, we were crawling among the dense brushland of fallow farmland in search of secret hollows to adopt as a fort. Instead, I was greeted by a blind, bug-eyed, wobbly-necked sparrow, extending its neck upward above its siblings. “Hello to you.” Or perhaps “Give *me* some food.”

Tyler Christensen first developed bird fever as a young teenager. While visiting the verdant tropical wonderland of Costa Rica, he participated in a tour that exposed him to the language of birds. It wasn't so much that birds were talking and giving voice and identity to this wild landscape. Tyler was mesmerized that the tour guide could *identify* a bird singing from a lofty perch, out of sight in the leafy, dripping canopy. Each bird species not only had a voice, but it was distinct and identifiable.

Naturalists relish our kinship with the wild. All of us are born with an electric connection to the wild and it served us well in our evolutionary past. But our modern living simply does not utilize this connection or honor our naturalist selves—we are no longer foraging for food with a sensory radar attentive to approaching predators.

Additionally, naturalists are born, our senses wired differently than others. For my entire life, I have been seeing and hearing things that others have not, and yet, somehow, nobody institutionalized me. I learned to trust those observations even though, initially, they were non-observations. “Did you hear that? What just flew by?” Faith and patience were essential tools in learning how to utilize this sensory sensitivity.

As young naturalists, we receive validation and encouragement. For Tyler and I, this started at home. Tyler's father Dave infected him with his obsession for reptiles and amphibians, in particular long, large squirming snakes. I remember Dave telling me, with Tyler grinning ear to ear by his side, about a hotel room incident involving a bathtub full of snakes. My father Alan noticed my insect obsession, fueled by their omnipresence at every step of



Tyler Christensen poses with a newly tagged Saw Whet owl

my childhood. Much to the dismay of my mother Pat, he helped curate my first insect zoo atop the dresser in my bedroom. The zoo continued off and on until I left for college. My mother was remarkably tolerant.

Tyler and I also received encouragement through the presence of nearby nature centers. I don't think this can be understated. My childhood visits to The Nature Center at Washington Crossing State Park began with a bike ride or meandering hike through the wild to a building that condensed and showcased the wonder of nature. Likewise, Tyler would visit the old Buttinger Nature Center, a groupie of sorts, notable to all of us for his attentiveness and curiosity. Tyler's mother Joy, brought him for visits and programs. Each time, Tyler would spend time with each of our resident animals.

The first time Tyler and I shared our bird obsession was when, as a teenager, he joined me for a Christmas Bird Count on the Watershed Reserve. The count is an annual bird survey, a means of attempting to count every bird present. An impossible task, yet over time it reveals population trends like the spread of the house finch, the population decline of the kestrel, or the range expansions of cardinals and black vultures. More recently, this autumn, I hosted Tyler's research here on the Watershed Reserve, looking over his shoulder as he captured and banded one migrating saw whet owl after another—dozens.

This winter, Tyler and I will be in very different locales, surrendering to distraction, as a naturalist does, and sharing our passion for the wild. Tyler will be in Costa Rica, continuing his bird studies at his Nicoya Peninsula Bird Research Station. There will also be leafhoppers, snakes and monkeys vying for his attention. I will be here on the Watershed Reserve, hoping for snow, to further track the elusive coyote in hopes of learning more about their habits. Before the snow, I will also be participating in the Christmas Bird Count in mid-December. Who knows what surprises we will find?



The Watershed Center glows as guests arrive for the evening.

2015 FEST

PLATINUM & PEARLS: ALL THAT JAZZ

Our Watershed FEST 2015, Platinum & Pearls was enjoyed by all! Thanks to all who supported the FEST—our first in the new Watershed Center.

For more photos from the evening, visit www.flickr.com/sbmwa/albums



The crowd gathers in Gorrie Hall for the presentation of the Edmund W. Stiles Award. The Kate Gorrie Butterfly house can be seen in the background.



Tom & Meg Gorrie, Lori Citrone, Alicia & Jim Waltman pose in their 1920's attire for the Platinum & Pearls celebration.

Above: Larry Evans, Marvin Preston, Wendy Pierce-Evans, Dianne Clair, Barbara Nelson, Candice Preston, and Jeff Nelson sit at dinner.

Edmund W. Stiles Award

The Stony Brook-Millstone Watershed Association selected Pam and Gary Mount, founders of Terhune Orchards, to receive the 2015 Edmund W. Stiles Award for Environmental Leadership.

The Mounts are leaders in conservation, sustainability, and environmentally sensitive farming practices. They have been active in our community in many organizations. Pam served as mayor of Lawrence Township for three years and a council member for twelve years. She is active in numerous town committees and organizations. She is a founding member and board chair of Sustainable Jersey, promoting sustainability in municipalities and schools throughout New Jersey.

Gary is a former officer of the State Board of Agriculture and now serves on the Mercer County Agricultural Board and the Mercer County Soil and Water Conservation



Pam and Gary Mount with Jim Waltman and Board Chair Sophie Glover.

Board. He is a long time trustee and chair of the research committee of the International Fruit Tree Association.

Terhune Orchard's 55 acre farm welcomes over half a million visitors for farm fresh fruits and vegetables, festivals, tours, and classes.

Threats to Water Abound

by Mike Pisaurio

Since the last issue of the *Wellspring*, we've been busy on the environmental policy front.

Flood Hazard Rules

In the last issue, I wrote about NJDEP's proposed amendments to the Flood Hazard Area Control Act rules. As proposed, the revisions place people in danger by allowing more development in flood plains. Such new developments would also threaten water quality by degrading riparian zones' ability to filter, slow and infiltrate polluted stormwater runoff. The U.S. Environmental Protection Agency and the Federal Emergency Management Agency have both concluded that NJDEP's proposal is not consistent with Federal law.

In October, the New Jersey Senate initiated the process of "vetoing" the proposed rules by passing a resolution sponsored by Senators Lesniak, Smith, Greenstein and Pou (SCR180), finding that the NJDEP's proposal is against legislative intent. I testified at the Senate Environment Committee's hearing on the resolution and was joined by my predecessor, former policy director, Jennifer Coffey, who is now the executive director of the Association of New Jersey Environmental Commissions, and many others. All of the Senators in our watershed voted to pass the measure. We are urging the Assembly to pass the resolution as well. Please call your legislators too! If each body passes the resolution twice, NJDEP's proposed rule will be legislatively "vetoed."

Water Quality Management Planning

Also in October, NJDEP released proposed amendments to the Water Quality Management Planning (WQMP) rules, which govern wastewater treatment. We are concerned that the proposed amendments would severely weaken the current regulations, which were announced with our support by former NJDEP Commissioner Lisa Jackson at her Earth Day press conference at the Watershed Reserve in 2007. The WQMP rules are one of the tools the State uses to protect and restore the "chemical, physical and biological integrity" of New Jersey's waters and are part of New Jersey's obligation under the Federal Clean Water Act. In part, the rules are a planning document. Working with the counties, NJDEP develops plans on how to meet wastewater treatment needs and protect water quality over a twenty year period. Under the current rules, these plans are incorporated by municipalities into their zoning, septic

rules and other ordinances. The current rules preclude extensions of new sewer lines into areas that NJDEP has identified on a map as "environmentally sensitive areas." This helps ensure that dense new developments are kept out of our most important water supply areas and sensitive habitats. Currently, NJDEP cannot issue permits that conflict with approved wastewater plans.

While our review of the nearly 1,000 page proposal is not complete, it is clear that NJDEP is rolling back key protections gained in the 2007 rules. We will be sharing our analysis of the proposal with our members and other interested parties on our website and providing formal comments to NJDEP for its December 18th deadline.

Pipelines

PennEast filed a formal application for its proposed pipeline on September 24th. The Watershed and Hopewell Township Citizens Against the PennEast Pipeline held two workshops to teach concerned parties how to "intervene" in the formal review and approval process. We joined nearly 1,500 other entities and individuals in filing to be an intervenor and we continue to meet with Federal and State agencies and legislators about the project and the need for a rational planning process for pipelines. The next step is for the Federal Energy Regulatory Commission (FERC) to prepare a draft Environmental Impact Statement. Once a draft EIS is released, FERC will hold public hearings on the document and take written comments. They will review and revise the draft EIS and issue their decision on PennEast's application. The next year will be very active on PennEast.

Meanwhile, Williams-Transco is seeking to back away from the "horizontal directional drilling" it agreed to undertake to limit environmental damage from the construction of the Leidy Pipeline in Montgomery Township. NJDEP rejected the company's request for approval of the change as a simple "minor modification" and has required the company to submit a more thorough application for a "major modification" to the permits it secured for the Leidy pipeline. Oral argument on our lawsuit against the Leidy Pipeline was heard on October 29th in the Federal Court of Appeals for the Third Circuit. It may be several weeks or months before the Court reaches a decision.

POLICY UPDATE

Municipal Watchdogs

As the municipal policy specialist, I work on issues affecting the communities in our region. That means working to enact environmentally friendly ordinances; reviewing and commenting on development plans that can negatively impact our water and environment; and addressing concerns brought to our attention by our members and the general public. A good example happened recently when a concerned citizen informed us of expansive tree and vegetation removal along a stream bank in Hopewell Township.



View of the clear cut landscape by the stream bank

I went to visit the site and observed a once heavily wooded and vegetated parcel along a stream. The habitat had been ravaged. Trees were cut down that served to maintain the integrity of the stream banks, the underbrush had been uprooted, and the land was stripped right down to bare dirt, creating a situation prone to erosion

and sedimentation of the stream. I immediately began notifying the township and communicating with NJDEP.

NJDEP has issued a notice of violation and the township provided a cease and desist order in response to this environmental destruction. We continue to monitor the remediation process, but this example demonstrates an important lesson. We need your help.

Had that concerned citizen not stopped by the Watershed offices to find me, we may never have known that the site had been disturbed. While we look at agendas for municipal government and various agencies, we do not see everything or always understand the intricacies of a proposed project. We (sadly) do not travel along all of the streams in the watershed on a regular basis. We need you to help be our eyes and ears in your neighborhoods and towns. You are the ones kayaking down the rivers and walking through the woods. We need your help. If you see something that doesn't look right, drop us an e-mail, a phone call, or just stop by.

My name is Ed DiFiglia and I'm proud to be your Watershed Municipal Policy Specialist. Call me anytime at 609-737-3735 x29 or email me at edifiglia@thewatershed.org.

ReThink Energy NJ

continued from page 1

Benson (D-14) have all made statements in support of the ReThink Energy campaign.

The launch of this new communications campaign comes as governments large and small prepare plans for reducing emissions of carbon dioxide and other greenhouse gases that contribute to climate change. The United States, European Union, China, India and at least 120 other nations have submitted individual commitments for addressing climate change, which will form the basis of a new agreement at the United Nations Climate Summit scheduled from November 30 to December 11.

On the local level, municipalities are considering adopting their own "Climate Action Plans." West Windsor Township, for example, has prepared a plan to stabilize greenhouse gas emissions at 1990 levels by 2020 and create a further

reduction of emissions to 80 percent below 2006 levels by 2050. The West Windsor Township Committee has been urged to adopt the plan by resolution this year.

The Watershed is expanding its educational programming to help individuals who are interested in making their homes more energy efficient and considering renewable energy systems (see Home Energy Conservation Program, p. 4). The Watershed's new LEED-Platinum Watershed Center for Environmental Advocacy, Science and Education, which was designed to produce most of its own energy from clean, renewable on-site solar photovoltaic panels, will be the platform for this new adult education program.

Clean energy is an important front in the effort to protect and restore water and our natural environment. It's time to re-think how we produce and use energy in New Jersey.

The Buttinger Legacy

Watershed Association creates legacy society for our donors who have remembered the Watershed in their Estate Plans

In 1985, Muriel Buttinger Gardiner bequeathed her home and surrounding property to the Watershed Association. To recognize those special donors who have followed in her footsteps by leaving a bequest to the Watershed, we are announcing the Muriel Buttinger Legacy Society.



Betsy Hoover, long-time Watershed Friend and Supporter talks about her gift—

“Recently, when updating my will I wanted to include gifts to two charitable organizations that are near and dear to me. The Stony Brook-Millstone Watershed Association is one of them. I was introduced

Betsy Hoover to the Watershed by my friend Charlie Townsend over 25 years ago and fell in love with the property. I started volunteering in the early 1990’s and joined the board of trustees. I was a member of the Capital Campaign Committee, helping to raise money for the new building, and I realized then how important it is to think about the future of the Watershed Association so it will be able to continue its work for years to come.

I love that my appreciation and support for the organization will continue on after I am gone. I wanted to let the Watershed know about my plans in the hopes that my gift would

encourage others to do the same. I have included a bequest as a percentage of my estate to ensure that my gift will remain proportionate no matter how the estate’s value fluctuates over the years.

My estate is very modest but if lots of people designate a gift to the Watershed in their estate planning it can make a big difference”.

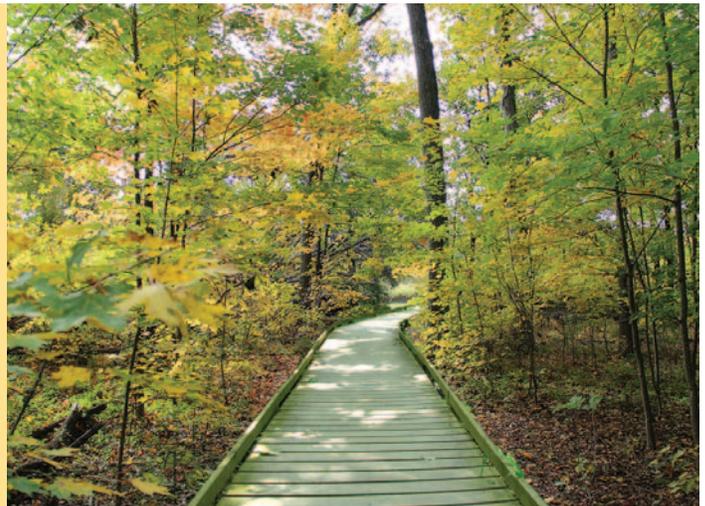
We would like to acknowledge the following members of the Muriel Buttinger Society

- | | |
|-----------------------|----------------------|
| Beth Behrend | Sue and Tony Parisi |
| Elliot Cohen | Howard Russell |
| Brenda and Swep Davis | Jamie Kyte Sapoch |
| James Gambino, Jr. | Alice Bishop Shannon |
| Frank O. Henschel | Doreen Spitzer |
| James Scott Hill | Jim Waltman |
| Betsy Hoover | Anne Pacsu Wieland |
| Audrey C. Johnson | Van Williams |
| Robert C. Johnston | |

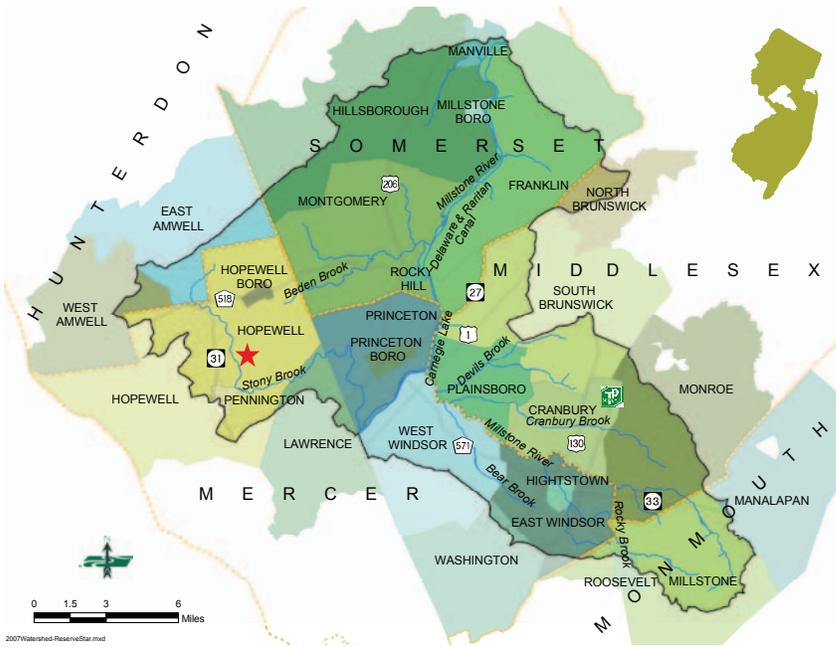
If you have designated the Watershed as a beneficiary of your planned giving and would like to be acknowledged and included as a member of the legacy society, or you are interested in learning more about how to leave a planned gift, please contact Jenny Kershner, the Watershed’s Development Director at 609 737-3735 ext 36 or jkershner@thewatershed.org.

Boardwalk Builders Wanted!

The Watershed is about to undertake the construction of a half mile ADA accessible board walk trail that will create a central access hub to the Watershed reserve trail system. We are in search of volunteer carpentry enthusiasts who have a passion for nature and the great outdoors! This first of its kind trail for the Watershed is going to transform our trail system and provide greater access for all future visitors to the Watershed. Please consider being a part of this very special project. Contact Pam Newitt, volunteer coordinator or call 609-937-3735 ext. 52.



Our Watershed



Our Towns

- | | | |
|-------------------|--------------------|--------------------|
| Cranbury | Manalapan | Princeton Borough |
| East Amwell | Manville | Princeton Township |
| East Windsor | Millstone Borough | Robbinsville |
| Franklin | Millstone Township | Rocky Hill |
| Hightstown | Monroe | Roosevelt |
| Hillsborough | Montgomery | South Brunswick |
| Hopewell Borough | North Brunswick | West Amwell |
| Hopewell Township | Pennington | West Windsor |
| Lawrence | Plainsboro | |

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Visit us online to show your support. Donate, stay informed, get involved.
www.thewatershed.org • www.njweather.org/station/3526

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 31 Titus Mill Road, Pennington NJ 08534
 Main office phone: (609) 737-3735



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