

Protecting natural resources in the Ossipee Watershed since 1997

109 NH towns have adopted zoning to protect drinking water

**By Pierce Rigrod,
Supervisor, Source Water Protection Sub-Section
New Hampshire Department of Environmental Services**

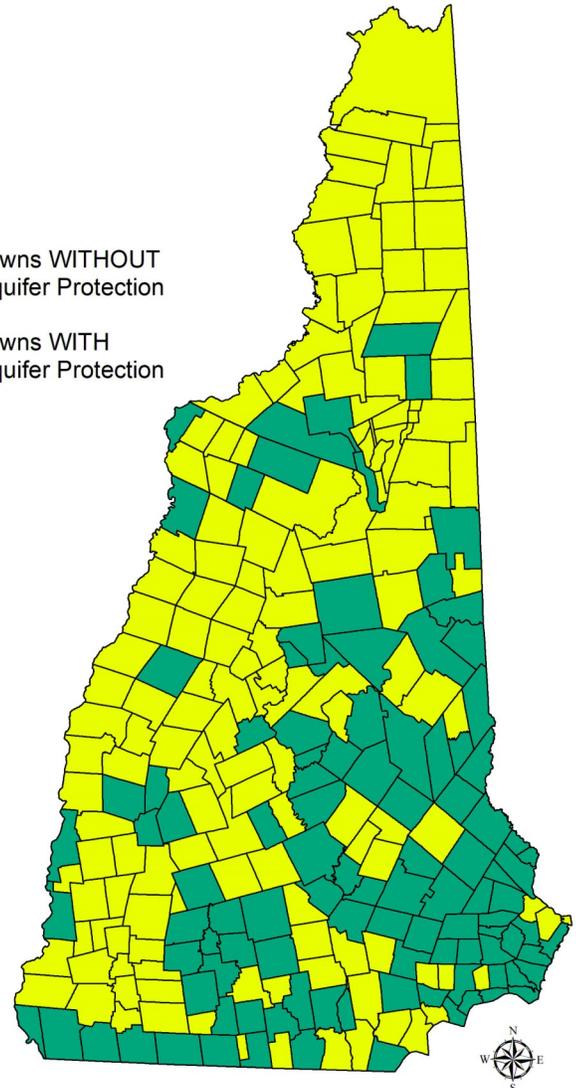
As intended under state planning laws, local zoning plays an important role in protecting groundwater resources, including aquifers, as well as public and private wells that serve as primary sources of drinking water. Groundwater contamination of local drinking water supplies can incur significant expense, limit new development opportunities and affect public health. In New Hampshire, 109 communities to date have adopted local groundwater/aquifer protection zoning ordinances and it is a topic that continues to be of interest to a number of communities and planning boards.

Over the last ten to fifteen years, many local ordinances were developed using language from NHDES' Model Groundwater Protection Zoning Ordinance to help craft clear language that delineates important drinking water areas as district boundaries, limits higher risk uses, like solid waste dumps or septage lagoons, and requires common sense practices ("Best Management Practices") that work to prevent the release of substances that can affect public health. Release of oil, chlorinated solvents and a variety of other harmful chemicals has, over the last thirty years or more, incurred millions of dollars in clean-up costs and contaminated water supply wells, in some cases large municipal wells. Good zoning codes and local enforcement of groundwater protections can help prevent groundwater contamination and maintain a safe and sustainable water supply. NHDES continues to support local efforts to adopt groundwater protection zoning with technical and financial assistance, including improvements to the zoning language already adopted. If you have an interest in working to adopt or improve your local zoning to protect groundwater and drinking water resources, please feel free to contact me at 603-271-0688.

Pierce Rigrod has worked at NHDES in the Drinking Water and Groundwater Bureau since 2005 and oversees source water protection programs designed to protect local drinking water supplies.

Legend

-  Towns WITHOUT Aquifer Protection
-  Towns WITH Aquifer Protection



Map created for GMCG by Dr. Robert M. Newton, Professor Emeritus Department of Geosciences Smith College.



Road signs are one tool communities can use to educate the public about drinking water.

Green Mountain Conservation Group

The Watershed News is a quarterly publication of Green Mountain Conservation Group, a nonprofit, 501 (c)(3) charitable organization established in 1997. The mission of GMCG is to promote an awareness of and appreciation for clean water and the wise use of shared natural resources across the Ossipee Watershed and advocate strategies to protect them.

The towns of Eaton, Effingham, Freedom, Madison, Ossipee, Sandwich and Tamworth comprise the Ossipee Watershed. This watershed includes one of the largest and deepest stratified drift aquifers in New Hampshire. GMCG also serves the towns of Maine's Sacopee Valley. Water knows no boundaries!

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In this issue

Happy fall, friends of the watershed!

The team at the Blue Heron House is pleased to present you with another edition of the *Watershed News*, overflowing (as usual!) with articles, photos, updates and calendar items that reflect our expansive agenda and aspirations.

Special thanks to guest columnist Pierce Rigrod of NH DES for his concise overview of groundwater protection ordinances. As the towns and citizens of the Ossipee Watershed continue to confront threats to their drinking water from escalating development, road salts, climate change and other forces, it is essential to keep in mind why organizations like GMCG worked so hard with countless stakeholders to research, write and pass these ordinances.

Congratulations to GMCG founding Executive Director Blair Folts for being awarded a Conservation Legacy Award by the Carroll County Conservation District. Peter Pohl and Tara Schroeder's page 4 article provides a thorough account of Blair's two decades of inspired leadership. It is a wonderful reminder of where we came from and why we are here today, standing strong and so ready and able to take on the future.

And I am thrilled to announce that at its September 9th meeting the GMCG Board of Directors launched a special three-year drive to raise \$250,000 in addition to

our annual budgets to protect critical lands, restore our buildings and keep improving our capacity to protect your watershed. Turn to page 8 for the full story!

It is also my pleasure to report that as we are going to print, the **2021 Cascade of Giving** campaign we launched this spring to support GMCG general operations with a goal of 501 gifts and \$150,000 has reached 424 gifts and \$119,806! Over the coming weeks we will be in touch with information on how you can help us successfully conclude the Cascade of Giving campaign, and how our new \$250K campaign is a distinct and exciting opportunity for those so inclined to make an additional strategic investment in GMCG's future.

There is much more in these pages I haven't mentioned. Thank you for reading on and taking in all the ways we continue to research, educate, and advocate as well as mobilize our land trust to place more acres of watershed land under permanent protection.

- Matt Howe, Executive Director

GMCG in action summer 2021



GMCG volunteers Vic and Karen Vitek evaluate a stream crossing as part of the Saco River Stream Crossing Assessment Program (SRSCAP)



Water Quality Resources Assistant AmeriCorps Members Trent Millum Spencer Wilson participate in a macroinvertebrate collection training with NH Fish and Game.



AmeriCorps member EB Brandt leads a program about frogs at the Freedom Public Library in June.



AmeriCorps member EB Brandt stands with a group of junior conservationists at the start of our Blue Heron Interpretive Trail in June.



Conservation Assistant AmeriCorps Members Spencer Wilson and Jessica Pierce help out at a community drinking water assessment program in Tamworth in July.



Tim Otterbach (L) receives GMCG's annual High Watch Award for volunteer excellence from director Matt Howe (R) at the 2021 Watershed Celebration event.



Outreach Coordinator Moselle Spiller, AmeriCorps member Jessica Pierce, and GMCG volunteer Tim Otterbach lead a rain barrel workshop at the Tamworth Public Library in June.



AmeriCorps members Spencer Wilson and Trent Millum launch GMCG's new Manta net, a device used to collect microplastics in surface water.



Volunteer Ralph Lutjen samples Banfield Brook in Madison as part of the 19th season of RIVERS, GMCG's long running community science program.

Conservation Legacy Award presented to Blair Folts

By Peter Pohl
and Tara Schroeder

On Friday, September 24 the Carroll County Conservation District celebrated the 75th anniversary of New Hampshire's conservation districts and presented the Conservation Legacy Award to GMCG founder and former Executive Director Blair Folts. The award is given to an individual who has demonstrated a sustained commitment to the stewardship of natural resources in Carroll County. Folts was selected after a rigorous review and selection process for her work in Carroll County over the past few decades that has helped drive local conservation efforts.

It was 24 years ago when Blair and a handful of individuals met around a kitchen table, motivated to protect the state's largest stratified drift aquifer, to organize what has become one of the most successful conservation organizations in the state. Blair founded GMCG in 1997 with the ambitious mission of conducting research to gain facts, educational programs to inform the public, advocacy efforts to protect important natural, and finally land protection of unique properties in the Ossipee Watershed. The mission of Research, Education, Advocacy and Land Protection or REAL as it is referred to, is conducted throughout a seven-town region comprising the Ossipee Watershed. Blair's vision and this strategy, or "braid" as Blair often referred to it, are at the core of why GMCG has been a successful and sustainable nonprofit organization.

Blair organized GMCG to include a Board of Directors comprised of representatives from seven NH towns and from bordering towns in Maine. She is quick to give credit to the others who were involved, but it is Blair who has been the spark plug and the glue that has been instrumental in the success of GMCG. Her leadership and people skills have enabled the organization



Peter Pohl presented the Conservation Legacy Award to Blair Folts.

to achieve many remarkable successes, most notably growing the organization from its humble beginnings to now include 500+ donors, reaching more than 1,000 people with the organization's news, and serving more than 10,000 with its work. This includes the establishment of a volunteer-based water monitoring program for both lakes and major rivers throughout the Ossipee Watershed, in collaboration with partners across the border in Maine. Blair was quick to recognize that "water knows no boundaries", and that successful protection of this critical resource would entail working across town and state borders. Twenty years of data collection now provide a baseline with which to detect any reduction in water quality. The data also provides the science that informs GMCG's educational outreach and advocacy work within the watershed community to protect water resources for the future.

To meet its educational goals, GMCG organizes numerous workshops and trainings throughout the year which address a wide range of issues that deal with wildlife,

forest management, geology, water quality, climate change and a host of timely topics. In addition, programs for local schools have engaged students in citizen science research by testing well water, monitoring streams, evaluating the health of streams by examining the content of macroinvertebrates present in the stream, raising trout in the classroom, and preparing and presenting formal programs before the general public. This work provides invaluable scientific training for these students, and helps them to make connections with their natural surroundings. Blair has always encouraged citizen science and building an informed and active citizenry. GMCG has reached thousands of students K-12 throughout the Ossipee Watershed with its programming over the years under Blair's guidance.

Blair has also been a role model in advocating for natural resources in the Ossipee Watershed, speaking on behalf of threatened resources whenever necessary. She leveraged the support of volunteers, town officials, partner organizations, scientists, legislators and state officials to successfully protect

natural resources on many occasions over the years. She has advocated for the protection of critical recharge areas for the Ossipee Aquifer when threatened with incompatible development such as landfills, waste stations, gas stations and race tracks. She has spoken up for protection of water quality when development was planned for flood zones, as well as globally rare plant species when the Ossipee Lake Natural Area was considered for a town beach. She advocated for the protection of important wetlands to help filter and store water, provide wildlife habitat, and connect conservation lands. She was behind some of the first efforts in the state to provide towns with GIS maps of their natural resources and advocate for sound planning. She helped towns adopt groundwater protection ordinances. She spearheaded the creation of the Ossipee Watershed Natural Resource Guide and a compilation of towns' natural resource ordinances to facilitate cross-town collaboration and encourage similar protection measures for shared resources.

Finally, land protection of unique landscapes owned by individuals interested in permanently protecting their property is a major focus of the organization. This of course requires fund raising skills to achieve the goal. In her time with GMCG, Blair was instrumental in protecting over 2,000 acres of land in the Ossipee Watershed through conservation easements or fee ownership. These lands support local agriculture, wildlife, forestry, scenic vistas, and water resources. In 2001, under Blair's leadership, GMCG acquired its first fee- owned land to protect the aquifer supplying drinking water to both Freedom and Effingham. GMCG's first conservation easement came in 2002, helping to protect 405 acres including Mt. Katherine in Wonalancet.

Blair was also integral in helping other groups in the region with their efforts to conserve land, assisting with



Blair with influential supporters Patricia and Charlie Watts in 2000.

the protection of: 8,647 acres in Effingham, NH and Parsonsfield, ME with the Leavitt Plantation in 2001; 2,600 acres in Freedom and Madison for the Trout Pond/ Freedom Forest in 2005; and 26 acres in Ossipee for the Windows on the Ossipee project in 2008.

Blair is particularly skilled in establishing relationships with donors who have been supportive of GMCG and its progressive mission. GMCG has earned the respect and admiration of many conservation organizations throughout the state. Blair has worked closely with the Society for the Protection of New Hampshire Forests, NH Audubon, The Lakes Region Conservation Trust, Upper Saco Valley Land Trust, and local town conservation commissions within the Ossipee Watershed. This speaks volumes in regards to her people skills.

Blair is an extremely talented individual with a track record rarely matched in the conservation world. She is an idea person who brings a multitude of skills to pursue and achieve a goal once it has been formulated. It was a difficult decision for Blair to leave her position in the organization she largely organized and led for over the past 22 years. She left the organization with an extraordinary

staff of professionals and state of the art facility to fulfill its missions, a Board of Directors committed to the future of the organization and financial supporters who believe in the important work this group is doing in order to protect this special region of the State of New Hampshire.



Blair at the ribbon cutting ceremony for the Blue Heron House grand opening celebration in July of 2018.

The problem with plastic hits home

By Jessica Pierce,
AmeriCorps Member

There is a lake nestled in the dip of a forested landscape. Dominions of pine and oak stand overlooking a town where families have rooted themselves for generations to come. The water is clean, the surface of the lake mirroring the cumulus clouds migrating overhead. A blue heron wades through the shallows, but hanging around its neck is a six-pack of plastic rings. How did this happen?

This is not the first time we have had to deal with a silent invader. In the 60's, it was the call to recognize the insidious nature of pesticides. In the 80's, it was the discovery of the hole in the ozone layer due to chlorofluorocarbons (CFCs). Today, one of the most pervasive issues is yet another man-made construct: plastics.

William "Willie" Farnum is a lifelong resident of the town of Tamworth. A founding member of the town's rescue squad, former selectman, and member of the Tamworth Recycling Project, Willie has been heavily involved in the growth of his community. He is also keenly aware of the continuous influx of plastic as it finds more ways to be a part of our everyday lives. During an interview in advance of GMCG's upcoming Community Plastics Forum on October 13, he talked with me about how the town of Tamworth has a transfer station that was built twenty years ago with the intent of putting in a recycling facility after five years, but this addition never came to be. The station does not have a baler machine nor a place to store plastic, so all of the town's plastics get thrown into a landfill.

"There is no 'away' anymore," Willie explains. "Landfills in the state are filling up, and it's getting more and more difficult to permit them." He warns that once the cost of the tipping fee becomes too high, it will



New Hampshire towns are among countless communities around the world struggling with plastic waste.

be up to the municipalities to take care of it. The committee for the transfer station has looked into creating a building. Willie says "that [the building] would deal with recycling not only plastic, but tin cans, aluminum cans, cardboard, paper; all of our recyclable products." Economically, the addition of the building would cost an estimated 1.2 million dollars, which seems too expensive at face value. But the problem is less about the cost of the addition and more about the issue that a recycling facility or even a transfer station is commonly overlooked as being a part of small town infrastructure.

Willie explains that the attitude of continuing to go down this path of heedless plastic consumption is no longer viable. Certain plastics like single-use shopping bags can take 20 years to decompose while others like the six-pack of plastic rings can take up to 400 years. Given how rapidly products made of plastic are created and how slowly they degrade in the environment, this practice has become more and more unsustainable.

To better understand recycling practices for plastic and other commodities, the Tamworth Recycling Project has visited transfer stations in other towns. The participants recognized the importance of not only recycling out plastic, but reducing it as well. By reducing our plastic consumption, we benefit from avoiding long-term issues with overflowing landfills.

Willie has expressed his concern about the possibility of continued inaction, asserting that "we cannot be the ostrich and stick our head in the sand. ...We kick the can down the road, and there are so many cans down the road, that the next generations are going to have a difficult time fixing all the problems."

To learn more about plastic recycling join GMCG for an online forum featuring guest speaker Willie Farnum and GMCG staff members on Wednesday, October 13, 2021 from 7 to 8:30 p.m.

Pre-register for the Zoom meeting at [gmcg.org](https://www.gmcg.org)

Water: an origin story

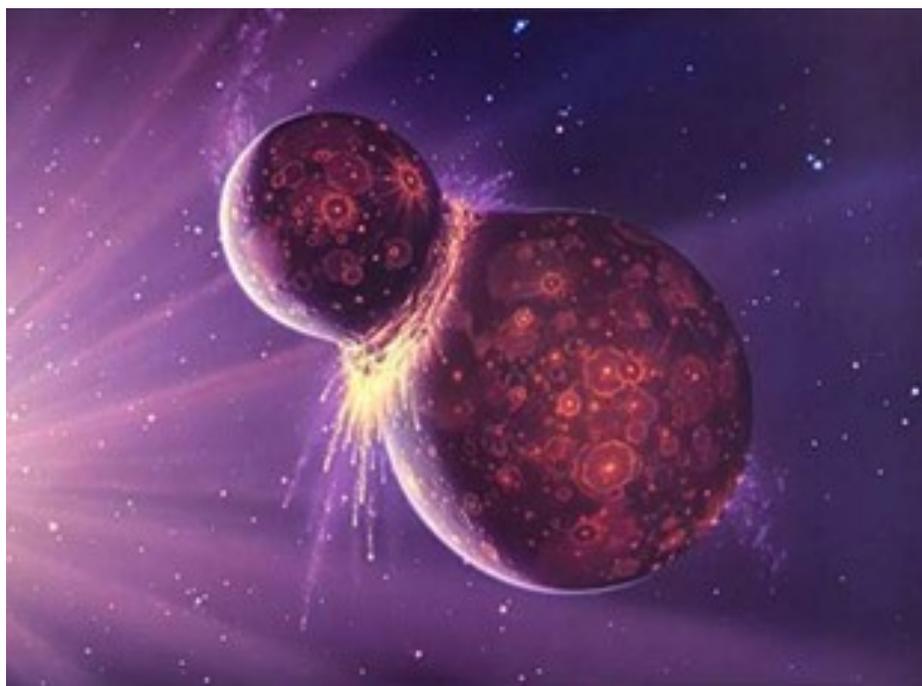
By Jill Emerson

Like some of you, I have spent a good part of this pandemic watching way too much TV. Like way, way too much TV. In the beginning, I tried to be good about what I had on – it needed to be educational in some way. This meant a documentary about penguins or a piece about Victorian England. As quarantine stretched into months, my self-imposed TV requirements loosened dramatically. I tried to justify this by saying I was just keeping up with what had cultural relevance, which was flimsy at best. Eventually I came clean with myself and just watched anything to pass the time. Which led me to watch many (many) TV shows and movies in the Super/Anti-hero genre.

One thing that unites this genre is there's always an Origin Story. Why is a superhero, an antihero, or even a super villain the way they are? How did they get here? What got them to this place where they pick up the mantle of good, or evil, and dramatically pivot the direction of their lives (answer: almost always tragedy)? How does their story begin? And – because quarantine was long and I had A LOT of time on my hands to be existential - How does *anything* begin?

In some cases, origin stories are straightforward: we have recorded documentation of it. We know how the telephone originated, or the Model T. But for some things, it's a little harder to pin down: How was the universe formed, or who first looked at a bunch of coffee beans and thought *I'm going to drink these* (many thanks to that wizard, by the way)?

At least in terms of water's origin story, science does have a pretty conclusive answer: From space. Very Superman in that regard. Now, while most scientists agree that our planet's water came from space, most likely when the Solar System was formed, *when* it arrived to Earth is a bit more



Theia hitting Earth - not Krypton's destruction (photo by Universe Today)

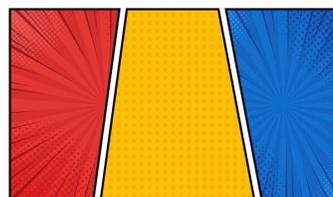
up for debate. One version suggests that when Earth was still forming, the planet picked up icy planetesimals – rocky things like meteoroids and asteroids – that would have condensed from the cloud of debris around the sun. Any planetesimals far enough away from the new sun – out where our asteroid belt is – would have water that condensed into ice. Anything closer to the sun than that would have had its water evaporate. As these planetesimals banged into Earth, our planet not only increased in size, it was able to retain the water brought in by the impacts.

A second similar-but-slightly-different origin hypothesis is that while most of the water came from the rocky asteroids, some of the water came from the solar nebula, or the cloud of dust and gas left around after the sun formed. You can think of the second hypothesis as essentially a reboot of the first, but with perhaps slightly more detail.

Yet a third hypothesis brings another similar origin story as the first two: In this version, a Mars sized body (named Theia) formed

in the outer portion of our Solar System and contained a large amount of frozen water. When it crashed into Earth about 4.5 billion years ago, Theia brought that water with it, giving Earth a majority of its water and in the dust from that collision, we also got the moon. Pretty cool to think we may have gotten the moon and water in the same event. This version is an echo of the first hypothesis mentioned, though in this case with a very specific singular planetesimal collision.

In truth, there probably wasn't one event that brought us water, but all three of the above played a role to bring water to Earth. Organic life pretty much lucked out that Earth was essentially in the right place at the right time. And I think that's what makes water's origin story neat – it didn't start out with tragedy, but rather by chance. Which makes water less like Batman and more like The Flash.



Mothing with AmeriCorps Member Spencer Wilson

**By Spencer Wilson,
Conservation Assistant
AmeriCorps Member**

When the word *moth* runs through the brain, one often thinks of bumbling, dull-colored insects fluttering around an incandescent light bulb. To some a nuisance and others a laugh, moths are often denied their just desserts. Moths are an important part of a thriving ecosystem, acting as pollinators and food source for many. They come in a plethora of intricate patterns, bursting colors, and sizes. In fact, there are approximately 160,000 species of moth in the world and 11,000 in the United States.¹ For example the rosy maple moth, gets its name from its unique pink and yellow patterned colors and affinity for maple trees and leaves. Or the dramatic contrast of the Tiger moth's pattern that makes black and white striking. While pictures can summon a thousand words of admiration, there is nothing quite like seeing moths in person.



*Rosy maple moth*²



Tiger moth

Mothing is the hobby of attracting moths with light to view up close. There are varying levels of effort one can put into mothing. Simply turning on your porch light or taking a lamp outside will attract moths. But to take full advantage of your time, having something for the light to reflect off, like a white bedsheet, will broadcast your light much further and give the moths something to land on that won't singe their feet. To attract the full spectrum of moths, a light trap that represents a diverse spectrum of light will attract moths that have refined light taste. An incandescent light bulb is a good start, with supplemental light from an ultraviolet light (black light) and a halogen bulb light making great additions. Moths can be seen year round, but peak viewing season is in the summer months and optimal conditions occur on clear nights with new moons where light pollution is minimal.

Once the light trap is set up, all that is left to do is sit back and enjoy the night. Moths will slowly roll in to investigate and eventually land for a great opportunity to view and identify. Having a magnifying glass will help to investigate your guests and notice the subtle details in their patterns. With moth in view, a reference guide or looking up the moth's characteristics online can help with identification.

Additionally, apps like iNaturalist can give identification suggestions and species information with a closeup photo that can then be confirmed by experts and other knowledgeable app users.

With a small amount of prep and some patience, moths of all varieties will converge for your viewing pleasure. Don't lose hope if legions of insects aren't taking over your bed sheet and remember that environmental conditions can make a big difference. Try mothing in different places, conditions, and light setups to explore the crowds you summon.



A do-it-yourself light trap includes a white sheet and a bright light to attract the moths in the night.



AmeriCorps member Spencer Wilson photographs a moth in the light trap

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2. *Rosy maple moth Dryocampa Rubicunda (fabricius, 1793)*. Rosy maple moth *Dryocampa rubicunda* (Fabricius, 1793) | Butterflies and Moths of North America. (2020, August 10). <https://www.butterfliesandmoths.org/species/Dryocampa-rubicunda>

Schools conduct 16th year of biological monitoring, pilot microplastics research for rivers and streams this fall

By Tara Schroeder

The 2021-2022 school year looks to be just as challenging as last year when it comes to GMCG collaborating with local schools on watershed education programs. Every school has adopted its own protocols around keeping students and staff safe during the pandemic, and with new reentry plans and protocols changing daily, navigating how to visit schools and make field trips possible continues to be an exercise in adaptation. Kudos to all of the hard-working teachers and administrators for continuing to make these hands-on programs accessible to your students!



Students use microscopes to investigate water samples for microplastics that they collected from local rivers and streams.

This year marks the sixteenth year of the Volunteer Biological Assessment Program (VBAP) by which GMCG monitors rivers and streams with local school groups for macroinvertebrates. GMCG staff, AmeriCorps members, and teachers from across the state trained with staff from NH Fish and Game at GMCG this August to learn about VBAP and electrofishing watershed education programs. This fall Effingham Elementary, Freedom Elementary, Sandwich Central School, Pine Tree Elementary in Conway, Ossipee Central School, and Sacopee Valley Middle School will take part in the VBAP program. Students from fourth through eighth grade will visit local rivers and streams and follow the state's protocol for collecting, sorting and counting macroinvertebrates; gather water quality data; conduct habitat assessments; and — new this



Microbeads and microfibers shown at 4x found in the channel between Broad and Leavitt Bays from a 100 mL sample collected on 6/8/21.

year — collect water samples for microplastics analysis.

GMCG recently began research on microplastics in the Ossipee Watershed after the discovery of microplastics in Ossipee Lake in the summer of 2019 while sampling for cyanobacteria. During VBAP, students will collect water samples to analyze for microplastics in the classroom and GMCG will use state of the art technology, including the dye Nile Red, to investigate samples for the presence of microplastics at its water quality lab. Nile Red has been shown to adhere to many different types of plastics, most likely through hydrophobic interactions. GMCG Water Quality Coordinator Jill Emerson has developed a way to detect microplastics using Nile Red and excitation via blue light then observing through a microscope outfitted with an orange filter. The findings will contribute to our understanding of microplastics in fresh water ecosystems and complement GMCG's research efforts on microplastics for lake water, plankton, groundwater and soils. Students will share their results virtually at the annual Community VBAP presentation on October 28 from 5-6pm on Zoom. Please register in advance for this program at www.gmcg.org.

These programs are made possible with the support of local grants from the Quimby Foundation, Francis Small Heritage Trust, Dorr Foundation

and the NH Moose Plate Conservation Grant Fund. Town support for water quality monitoring programs and the support of our donors also make these educational programs possible. Special thanks to our volunteers, Jeff Beavers of the Conway Public Library for his collaboration on the microplastics programs this year!

GMCG collaborated with NH Fish & Game staff to host the 2021 Watershed Ecology Institute this summer, featuring stream assessment training for teachers in macroinvertebrate sampling and electrofishing.



Watershed Education Specialist Judy Tumosa shows participants how to fill out the data sheets for the Volunteer Biological Assessment Program.



NH Fish & Game staff sample Cold Brook in Freedom as part of the training, discovering healthy Eastern Brook Trout.



Live Eastern Brook Trout specimen on display in a photarium before being released back into Cold Brook.

GMCG Board launches \$250K campaign for land conservation,

By Matt Howe



What does it take to protect a watershed?

Over the last two years GMCG's board, committees, executive director and program coordinators have been working together to set priorities and set the stage for the organization's next era. Charting our future has not been easy (especially during a pandemic), and we have not come up with all the answers. However we have agreed on some core strategies we know we must pursue to maximize our effectiveness as a watershed protection organization:

We must invest more in our staff. We must ensure that our current team is adequately compensated and our benefits package supports their livelihood and wellness. We must address imbalances between program demands and staffing capacity by either increasing hours or bringing on new personnel.

We must sustain our signature programs. Water quality monitoring, school-based education and advocacy of best land management practices are fundamental to long-term natural resource and drinking water protection in the Ossipee Watershed. Over the last two decades GMCG designed an innovative, interdependent web of programs that reinforce each other and will yield results long into the future.

We must take good care of the Blue Heron House and Huntress House. The acquisition and restoration of the Blue Heron House were transformative for our mission. It was an extraordinary collective effort. Countless volunteer hours and generous gifts created a special public indoor and outdoor space that has permanently elevated our presence in the community. Yet like every home, GMCG's home and AmeriCorps lodging require constant, careful maintenance.

We must heighten awareness and understanding of GMCG throughout the watershed. We need more friends like you who are tuned into our mission and inspired to support it. In order to grow we must connect with the next generation of volunteers and donors. We must sharpen our messaging and improve our marketing. This will require research, planning and smart investments.

We must increase strategic land conservation. Economic prosperity and aquifer protection are not competing goals. They are interconnected, as is our natural world. If we build homes and businesses in the wrong places and allow gas stations and gravel pits to operate where they pose clear threats to our groundwater, we endanger our towns' health and prosperity. *In the face of escalating development pressure we must build our land protection program and cash reserves so we are ready to step in when fragile lands are in jeopardy. We must commit to conserving critical parcels of land in order to protect our watershed, leaving a legacy for our communities.*

The Plan

At its September 9 meeting, the GMCG Board determined that now is the time to take a leap forward to ensure we are prioritizing land conservation, building maintenance and staff development. They charted a plan for the \$250,000 as follows:

\$150,000 for Critical Land Purchases

We have recently been presented with two separate special opportunities to purchase local parcels of land at a

capital improvements and organizational development



reduced cost. These parcels each abut conservation land we already own. A 44-acre tract spanning both Ossipee and Effingham will allow us to expand the 102-acre Phillips Brook Wetland Preserve, an ecologically sensitive wildlife corridor donated to GMCG in 2012 by the late Dr. Stephanie Barnes. A 33-acre tract in Effingham will increase the size of the GMCG Natural Area to 80 acres, improving public access from Route 25 and creating an opportunity to expand the trail system.

\$15,000 for Madison Land Donation

When GMCG was approached by a family expressing interest in donating 20 acres of land in Madison — land with shore frontage on Davis Pond — we were truly honored by their confidence in GMCG as a trusted conservation partner. This unique acreage will be a valuable resource for GMCG and a positive connection to the Madison community. These funds will be used to survey the land, cover a variety of other acquisition costs, and steward the land so it can be appreciated by people while protecting the abundant wildlife that reside there.

\$55,000 for Blue Heron House and Huntress House

The GMCG Facilities Committee has been working hard to keep our properties in good working order and ensure that minor problems do not become major problems. The Committee has identified several high priority repairs needed at both buildings. Among the top priorities are to expand the water quality research lab by finishing a portion of the Blue Heron House (BHH) basement; replace the badly weathered exterior of the top floor of the BHH; and complete the BHH front patio entrance way.

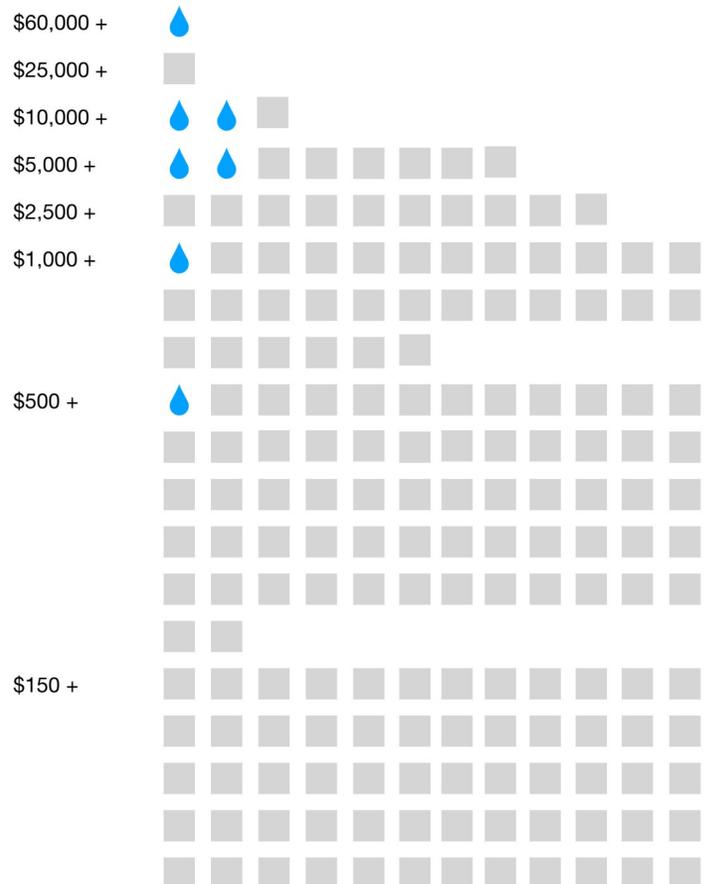
\$30,000 for Capacity Building and Staffing

In the last year, GMCG has redoubled its efforts to share our mission story and many successes. This has brought more financial support from donors. The increase in giving has also meant an increase in our abilities to meet local needs. Our programs and our expertise are increasingly needed. We have a plan to invest in some part time staffing in the areas of marketing, office support, and programming.

And we are off to a strong start! The blue water droplets in the chart represent pledges received since September 9, including a generous \$60,000 gift that puts us well on our way and ensures we can complete our first goal of expanding the Phillips Brook Wetland Preserve this year! For more information on the campaign and to download a pledge form, go to www.gmcg.org/250K

Every Drop Counts!

Consider making a generous pledge to GMCG! Campaign gifts can be given over a three year period.



Donor Goal: 175 Dollar Goal: \$250,000

Conservation conversations

Editor's Note: *Conservation Conversations* is intended to provide a forum for the seven towns of the Ossipee Watershed to share news of their conservation and planning activities and an opportunity to find creative solutions to challenges.

Eaton Conservation Commission

Eaton is pleased to have been chosen as one of five New Hampshire towns to participate in the *2021 Community Conservation Cohort: an In-Depth Training to Protect Wildlife and Natural Resources*. Our learning session this fall will be followed by a hands-on community project of our choosing with support from the Taking Action for Wildlife team.

This team consists of six research-based educators from UNH Extension Service, NH Fish and Game and the NH Association for Conservation Commissions. Five Eaton residents signed on, representing the Conservation Commission, Planning Board and the Select Board. The Commission looks forward to acquiring the tools needed to engage the community in on-the-ground actions to protect wildlife and habitats while gaining the camaraderie of a cohort of fellow community volunteers from other towns.

Effingham Conservation Commission

Work has begun on the expanded trail offerings in the Pine River Cherubini Preserve (PRCP) on Pine River Road. The larger section of new trail will access some high ground on the east side of the property and rejoin the existing trail near the river bank. The other section will head west and provide another line through the wetlands. Bella Terra Trail Design began the work early in September.

A work crew spent a day removing invasive buckthorn from the PRCP. Thanks go to Diane and

Steve Jarecki for their energetic work, and to Emelyn Albert and Jack Williams for their continuing tireless efforts. The Commission is also continuing to try to catalog interesting plant species in the PRCP.

Madison Conservation Commission

We know that groundwater protection is essential for both lakes and aquifers. We also know that soil erosion and stormwater run-off is the largest contributor in NH to groundwater pollution. The Madison Conservation Commission (MCC) is continuing their efforts in groundwater protection! As a part of the National Resource Conservation Service (NRCS) Conservation Stewardship Program (CSP) the MCC identified two areas of Town where soil erosion could cause negative groundwater effects. The access to the Cascade Trail-head has been walked around thus creating a short-cut up a steep bank...and subsequent erosion. Additionally, an area adjacent to Town Hall has a disintegrating retaining wall where soil passes around and into Forrest Brook. The MCC, in partnership with the Madison Department of Public Works, have identified and found funding solutions to both problems...and will repair these areas this year. But wait – there is better news!! Under the American Rescue Plan Act (ARPA) US Treasury funds may be used as State & Local Fiscal Recovery Funds (SLFRF) to repair stormwater run-off problems! So, the ‘fix is in’ and the Town will be able use the federal funds for the repair and simultaneously implement the tenets of US Dept. of Agriculture’s NRCS CSP program. Another conservation/Town win-win for Madison!

Ossipee Conservation Commission

The Ossipee Conservation Commission is currently having the property called the “Windows on the Ossipee Mountains” surveyed and boundaries pinned in order to move forward with having the overgrown brush cut back and to have the property landscaped to provide a clean, open and inviting scenic area as visitors come into Ossipee and the Mount Washington Valley.

Sandwich Conservation Commission

The Sandwich Conservation Commission (SCC) has a new chair, P.J. Blankenhorn, and a new member, Will Viner, plus two new alternates, Cristina LaRue and Susan Gutches. Annual monitoring of Sandwich’s many conservation easements is underway. The group has begun to study its Natural Resource Inventory from 1991 to become familiar with the many prime wetlands in Sandwich that need protection. The map for each of these wetlands also needs accurate updating to help guide any development activity. Members are considering studying areas of prime and historic farmland soil that could be conserved from development. Finally, the SCC is answering the call from the University of New Hampshire for dry milkweed pods which the Department of Transportation plans to sow in conservation corridors along highways to benefit pollinators, particularly monarchs.

Notes from downstream

“Borders? I’ve never seen one, but I hear they exist in some people’s minds.” Thor Heyerdahl

**By Rikki Haley,
Water Quality Coordinator, Saco
River Corridor Commission**

Greetings from your friends at the Saco River Corridor Commission (SRCC)!

The Commission has been busy this year, reviewing over 149 permit applications for development in the Corridor. As we have all seen, there has been a large influx of development in our communities. Waterfront property is particularly sought after, making it increasingly important that our town planning boards, elected officials, and other natural resource planning agencies continue to do their part and ensure responsible land use planning. This means showing up prepared to make decisions that may be difficult but that are in the best interests of the public. As a Commission tasked with land-use regulation to protect our lands and waterways, we recognize the difficult work involved to achieve this goal. We thank everyone who works on behalf of our communities, and we readily extend any of our available resources to you.

The SRCC has completed our 20th consecutive water quality monitoring (WQM) program season in coordination with GMCG. The program encompasses one watershed, two states, and 26 towns and is known as “RIVERS.” We want to extend our sincere thanks to all the RIVERS volunteers and SRCC staff members Rikki Haley and Jill Emerson, whom without the program would not be nearly as successful! GMCG’s program continues into October. This year, the SRCC expanded our WQM program and has begun sampling for additional nutrient parameters at certain sites.



The Ossipee River flows through Effingham on its way to Maine.

When we receive all the sample results, the SRCC will provide our annual reports on water quality with recommendations for all 20 Corridor towns.

The SRCC and GMCG have applied for a grant from the Maine Outdoor Heritage Fund in an effort to secure our own IDEXX Colilert tray system and expand *E. coli* monitoring throughout the watershed. Expanding the RIVERS WQM program and SRCC Land-Use Regulatory program will provide the best potential outcome for future generations who will live, work, and recreate in the Saco River Basin. Citizens from Corridor communities approached the Maine State legislature in 1971 due to concern over the health and quality of the waterways that sustain us. The RIVERS program and the SRCC’s work in Land-Use regulation continue to be a testament to their effort.



Since 2001 local volunteers help monitor numerous river sites from April through October for our flagship research program – the **Regional Interstate Volunteers for the Ecosystems and Rivers of Saco (RIVERS)** water quality monitoring program. A select number of additional sites are monitored monthly through the winter by GMCG staff and volunteers. GMCG’s downstream partner, the Saco River Corridor Commission, monitors additional sites in the Saco watershed seasonally. Overall, the RIVERS program encompasses one watershed shared between two states and 26 towns, monitoring the water health of the entire Saco watershed from the mountains to the ocean.

Save the date! 2021 fall calendar

Thursday & Friday, October 7 & 8 UNH Technology Transfer Center “Green SnowPro Training” – Virtual. GMCG is pleased to bring the UNHT2 program to the Ossipee Watershed to encourage efforts to reduce the impacts of road salt on water resources. Winter operations, especially the use of salt, are a large portion of parking lot and roadway maintenance in NH. This workshop will address the environmental impacts of salt and why it is important to be conscious of these effects. Participants will learn how to keep roads safe all while minimizing salt use. Liability management through developing customer-specific winter maintenance policies will be discussed, as well as the other economic benefits of becoming certified. Although NH is unable to issue certificates to municipal employees at this time, the NH Department of Environmental Services is working on new legislation that would incorporate a voluntary program to include municipal employees. Meanwhile, Green SnowPro classes do qualify for Roads Scholar hours with UNH T2. Green SnowPro Salt Applicator Eligible Training. Registration and details at: <https://t2.unh.edu>.

Saturday, October 9 from 2 - 3 p.m. Wild Mushrooms of Fall with the New Hampshire Mushroom Company’s Stephanie Doyle. Join mushroom enthusiast Stephanie Doyle of the New Hampshire Mushroom Company at GMCG’s Blue Heron House located at 236 Huntress Bridge Road in Effingham, NH to learn skills to identify wild native mushrooms. Stephanie will teach which wild mushrooms are edible, poisonous and common in New Hampshire. Expect to walk up to 0.2 miles along a flat trail and be outside for approximately one hour. The event is free and donations are welcome. For more information, please call GMCG at 539-1859 or write to info@gmccg.org.

Wednesday, October 13 from 7 - 8:30 p.m. Plastics Community Forum. NH towns are among countless communities around the world struggling with plastic waste. Join us at this forum featuring community leaders, organizations and scientists who are tackling the issue of plastics and find out about the latest research, legislation, and possible solutions. Tara Schroeder and Jill Emerson from the Green Mountain Conservation Group, members of the Tamworth Recycling Project and former Selectman Willie Farnum of Tamworth will share some perspectives on plastics, from its history and chemistry to its ecological and human impacts. Presentations will include findings from current microplastics research in the Ossipee Watershed, as well as the financial and social impacts on communities and local solutions. Presentations will be followed by a Q&A session. This program is a collaboration between GMCG, Chocorua Lake Conservancy, the Cook Memorial Library, Conway Public Library, and the Tamworth Recycling Project. Please pre-register for this event at www.gmccg.org.

Thursday, October 28 from 6 - 7 p.m. Community VBAP Presentation. GMCG and students from the Ossipee Watershed will present their water quality research findings from the sixteenth annual Volunteer Biological Assessment Program. Each year local schools present what they learned through participation in VBAP, a community science biomonitoring program that assesses stream health through macroinvertebrates. Students follow state protocols to sample a local river or stream and learn about their watershed. The community is invited to hear from the students what they learned through the program, as well as the results for bioassessments of local streams. Special thanks to the Alfred Quimby Foundation and Francis Small Heritage Trust for their support of the program as well as local towns’ support for this and other water quality monitoring programs.

Wednesday, November 17 from 5 - 6 p.m. Source Water Protection Online Workshop. Community planners and the public are invited to learn more about recommended protection measures for important water resources from Pierce Rigrod of the New Hampshire Department of Environmental Services. Mr. Rigrod works with communities and public water systems to develop protection strategies for water resources, groundwater and drinking water resources. He supervises source water protection programs within the Planning, Protection & Assistance Section, including Chemical Monitoring Waivers, Local Source Protection Grants, Best Management Practices for Groundwater Protection, and the State Groundwater Reclassification program, and provides local technical assistance on source protection and private well testing. This workshop is geared towards municipal boards and commissions, code enforcement officers, health inspectors, and anyone interested in learning more about Groundwater Protection Ordinances and Source Water Protection Plans. Please pre-register for this program at www.gmccg.org. This program is free and open to the public.

***While masks are optional on GMCG premises, the U.S Centers for Disease Control advises that “masks are a critical step to prevent people from getting and spreading COVID-19” and recommends that unvaccinated people wear a mask when in proximity to other people. Complimentary face masks will be available for this program.*

In memory of Dr. Stephanie Barnes

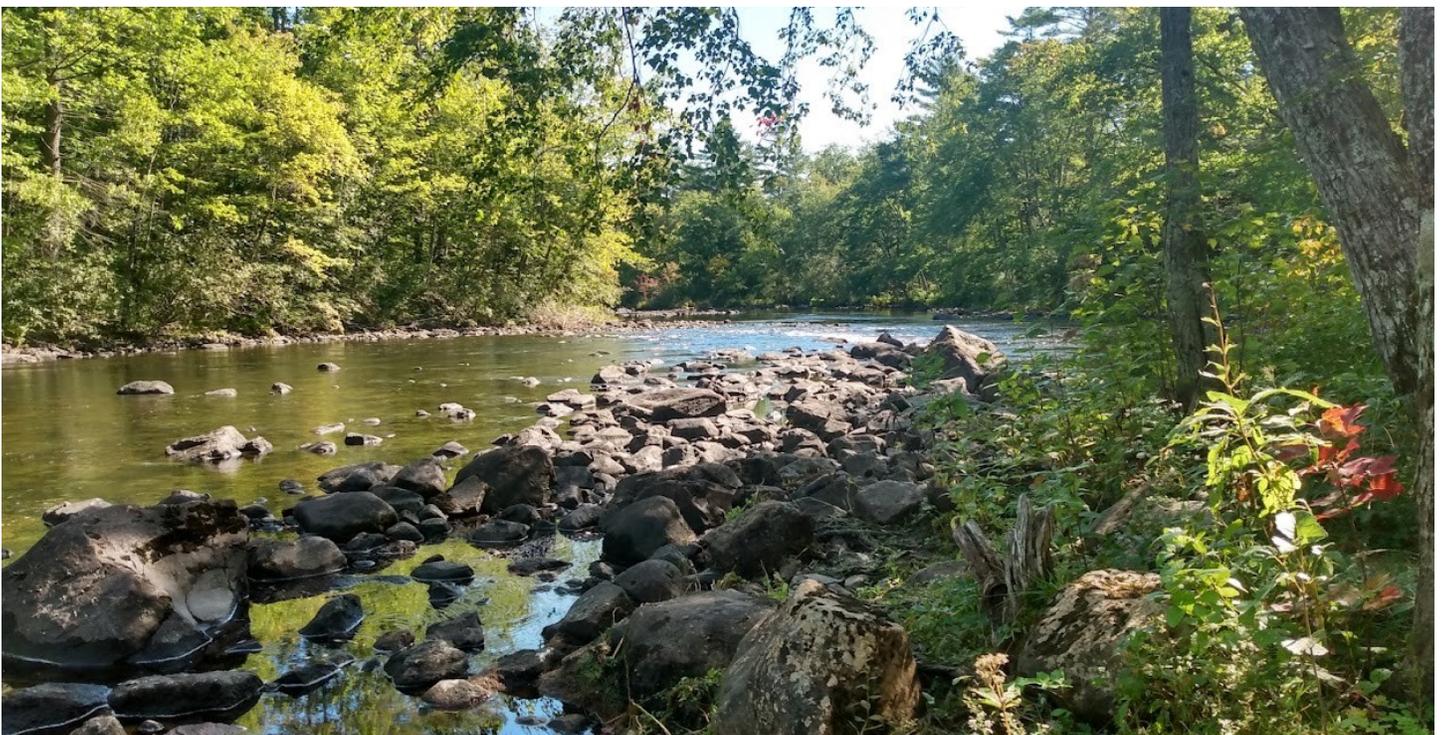
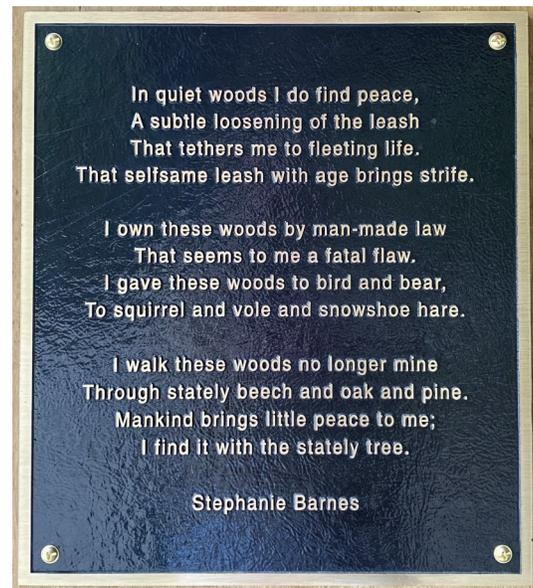
By Matt Howe

Dr. Stephanie Barnes, a long-time Effingham resident and friend of GMCG, passed away on September 25, 2018. She was a physician, activist, poet, philanthropist, and conservationist. Her life was an extraordinary expanse of service to humanity and devotion to nature.

In 2012 Stephanie donated 102 acres of land in the northwest corner of Effingham that is now known as the Phillips Brook Wetland Preserve. She was a tireless supporter of many other local conservation efforts, including the preservation of a parcel on Townhouse Road in Effingham, and projects shepherded by NH Audubon, The Nature Conservancy and the Society for the Protection of NH Forests. She had a particular affinity for protecting wetland habitats, and she served the Town of Effingham as a member of the Conservation Commission.

GMCG's August 12 Watershed Celebration included a remembrance of Stephanie and the dedication of a granite bench with her name overlooking the Ossipee River, and a bronze plaque that is posted at the entrance of the Blue Heron House. On the plaque is the poem "A Conservation Piece," that she wrote in 2012.

Stephanie generously remembered GMCG in her will. We extend our gratitude to her estate for this opportunity to place a lasting memorial to her where those who visit can be inspired by her legacy and take a moment for reflection and appreciation above the river and among the trees.





THE WATERSHED NEWS

A Quarterly Publication for the Ossipee Watershed

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EVERYTHING YOU LIKE TO DRINK
RELIES ON WATER.



MOST OF THAT WATER
COMES FROM THE GROUND.

Cartoon by Time White

SAVE THE DATE

Wednesday, November 17
NHDES Source Water
Protection Workshop
5 to 6 p.m. online

In This Issue:

- Groundwater protection
- Carroll County Conservation Legacy Award presented to Blair Folts
- Education and advocacy programs
- Mothing
- The origin of water
- The Problem with Plastic Hits Home
- GMCG Board Launches \$250K improvement campaign

Contributors: Jill Emerson, Matt Howe, Tara Schroeder, Moselle Spiller, Jessica Pierce, Spencer Wilson, Pierce Rigrod

Comments, questions, or ideas for a future article?
Please write to info@gmcg.org