
◆ The Watershed News ◆

Volume XIX, Issue II

Spring 2016

A Quarterly Publication for the Ossipee Watershed Published by the Green Mountain Conservation Group

GMCG Approved for NH DES Source Water Protection Grant Funding

By Corey Lane

Where does our drinking water come from? If you live in the Ossipee Watershed region, chances are it comes from the Ossipee River Basin Aquifer which is the largest stratified drift aquifer in New Hampshire.

Stratified drift aquifers consist mainly of sand and gravel and are more vulnerable to contamination due to their extremely permeable soils. The high transmissivity of water in aquifer recharge areas means that potential contamination sources in one town can impact groundwater quality in another town, as water knows no boundaries.

GMCG recently submitted a proposal to New Hampshire Department of Environmental Services and was awarded a Source Water Protection Grant. Source water can serve as drinking water and includes surface water (rivers, lakes and streams) and groundwater (aquifers).

Over the next year, GMCG will be working with the community and sharing information about Best

Management Practices (BMPs) for groundwater protection, hosting GET WET education in eight watershed schools, partnering with local towns to provide educational presentations including a Green Snow Pro training for local plow contractors. In addition to workshops, GMCG will also help create the Ossipee

Groundwater Protection Advisory Committee. If you are interested in volunteering for this project please give us a call.

On June 17th, GMCG will be hosting a presentation on how the Ossipee Aquifer was formed with Dr. Robert Newton from Smith College. Please see our website later in the Spring for details. (gmcg.org)

Contact Corey at clane@gmcg.org or 539-1859 for more information.



March is Membership Month!

As Spring arrives we hope you will renew or become a Green Mountain Conservation Group Member and help support the organization's growing responsibility to provide research, education, advocacy and land conservation in the Ossipee Watershed. Since 1997, GMCG has been a voice for shared natural resources and has been advocating for the protection of New Hampshire's largest stratified drift aquifer. Faced with unprecedented growth and development issues, we are confronted with many challenges. These range from: sustainable timber harvesting; to drinking water protection; to animal habitat protection; to how and where to plan for growth and development.

For eighteen years, GMCG has developed programs in water quality monitoring, educational

outreach, natural resource based planning, and advocated for natural resource conservation in the Ossipee Watershed. GMCG is also a local land trust and holds both conservation easements as well as gifts of land. In order to meet the growing need for research, education, advocacy, and land conservation, we rely on membership support.

Be a part of GMCG's growth and sustainability. This is your organization! We need your commitment and support in order to continue to promote conservation of shared resources in the Ossipee Watershed. Please consider renewing your membership today.

For more details, see page seven for membership renewal information or renew online at www.gmcg.org. Thank you!

The Watershed News

The Watershed News is a quarterly publication of the Green Mountain Conservation Group, a non-profit, 501(c)3, charitable organization established in 1997 and dedicated to the preservation of the natural resources in the Ossipee Watershed. The towns of Eaton, Effingham, Freedom, Madison, Ossipee, Sandwich and Tamworth make up the boundaries of the Ossipee Watershed. This watershed includes one of the largest and deepest stratified drift aquifers in New Hampshire. GMCG also partners across the Maine border into Parsonsfield and beyond. Water does not have any political boundaries.

GMCG's purpose is twofold:

1. To provide an organizational structure for a coalition of citizens and local officials interested in identifying sensitive areas within the Watershed in need of protection;
2. To offer public educational events about conservation issues and possible solutions regarding the preservation of unique natural resources.

Through research, education, advocacy and land conservation we strive to promote an awareness and appreciation of our watershed's natural resources and encourage a commitment to protect them.

Board of Directors

Jerry Knirk, Chairman
Carol Stansell, Vice Chairman
John Wacker, Treasurer
Jay Buckley, Secretary

Town Representatives

Eaton, Kirsten Neves
Effingham, Susan Slack
Freedom, Alice Custard
Madison, VACANT
Ossipee, Larry Wogman
Sandwich, Bob Butcher
Tamworth, VACANT
Maine, Peter Zack

Staff

Executive Director, Blair Folts
Water Quality, Corey Lane
Programs Coordinator, Brittany Angelo

A Message from the Board Chair

By Jerry Knirk

We had a wonderful Annual Meeting on Feb 27 at Hobbs Tavern. A capacity crowd heard a fascinating talk by Chris Schadler from Coyote Project about eastern coyotes and wolves. Election of Board officers saw the addition of two new members, John Wacker from Tamworth as Treasurer and Kirsten Neves, from Eaton as Town Representative. We look forward to their input on the board. We still have openings for a Town Representative from Madison and one from Tamworth so please give the office a call if you are interested in learning more about being a GMCG Board member.

2016 looks to be an exciting year. Under the inspiring leadership of our Executive Director, Blair Folts, GMCG continues to protect our precious water resource on many fronts. Here in the Ossipee aquifer, we rely on our safe and clean surface and ground water for our drinking water and our recreation. The surface and ground water within the watershed is shared by 14 towns with a population of over 12,000 residents; most significantly, the towns of Eaton, Effingham, Freedom, Madison, Ossipee, Tamworth and Sandwich. Our diverse board leadership is drawn from these towns and we even have a representative from Maine.

Most of us are drawn here by the abundant clean water, the diverse wildlife and the forests. Over the past few years we have often read about instances of water contamination around the country (West Virginia, Toledo, Flint just to name a few). GMCG's many programs work to prevent contamination and preserve the quality of our valuable shared water resource through research, education, advocacy and land conservation. We have recently completed our watershed management plan for the lower bays and are beginning our larger focus on Ossipee Lake.

Ongoing monitoring of water quality provides research data to spot trends and inform good decision-making regarding best management practices. Our research and educational programs drive our non-confrontational advocacy on many fronts

to protect our water and related resources. The public knows our commitment to conservation and entrusts us with conservation easements on many properties.

GMCG continues to be active in educating the public too--in the schools, at the camps, with the town conservation commissions and with the public at large. All year long, GMCG hosts educational programs. Be sure to visit the website, GMCG.org to see the upcoming programs. We look forward to seeing you at some of the upcoming events!

Our staff is small, very busy and accomplishes a great deal of work. We also rely on our great volunteers for much of our work. There are many ways that you can volunteer--committees, serving on the Board of Directors, working on events, or assisting with gathering of water quality data or being a land trust steward.

We also rely on your membership support and hope you will renew or become a GMCG member. Please consider becoming a sustaining member too--details can be found on the website. And please encourage your friends and neighbors to support our work to conserve our shared water resources.

In 2016, fundraising for the renovation of Heron House which has frontage on the Ossipee River in Effingham and is adjacent to our current office, continues to be a main project. We will be renovating the existing house to become our offices and educational center. The riverfront location is a great site for our ongoing educational programs. Please consider a donation to Heron House building project.

Finally, mark your calendar for our Loons and Tunes music and watershed festival for August 27 on the waterfront at Camp Calumet. This year we are expanding the festival, adding another musical group featuring jazz, blues and rock along with expanded educational booths and a speaker from the Loon Preservation Center. Keep an eye on our website for more details. Thanks for your continued support and we hope to see you around the Watershed.

Jerry Knirk, is Chairman of the GMCG Board of Directors.

GMCG Hires a New Programs Coordinator

GMCG is pleased to introduce our newest staff member, Brittany Angelo. She is the new Programs Coordinator. If you have not yet met Brittany, chances are you will soon as she will be wearing many hats. Not only will she be overseeing monthly programs, special events and outdoor activities, but she also will be coordinating youth educational programs and land trust activities.

Brittany graduated in 2015 from Plymouth State University with a Bachelor's Degree in Environmental Science and Policy and a minor in Geography. While in school Brittany worked for the Office of Environmental Science and was President of the Geography Club for two years. She is well versed in working on different tasks and has jumped right in managing the many different GMCG programs that she will be overseeing.

Following graduation, Brittany headed west where her first job was for the Utah Division of Wildlife as an Invasive Species Technician



Brittany kayaking through a Mangrove Forest in Tampa, FL

working on the Arizona-Utah line at Lake Powell. She worked to stop the spread of an invasive aquatic species, the zebra mussel, on the boat ramps on the largest man-made lake and house boating

capital in the world. "I would say life was pretty great. I lived in a beautiful place and was making a difference with the environment, but it was too hot for my liking and well, I missed New England," Brittany said. As much as she enjoyed the west and desert life, she packed up her things after the summer season and travelled back to the east coast.

Originally from the greater Boston area, Brittany's next career move was to a policy internship for a non-profit in Boston, Save the Harbor Save the Bay. There her responsibilities included water quality monitoring and creating a report card on the safety of the Boston Public Beaches. To her surprise, Brittany stated "the beaches were a lot cleaner than most would think as they are the cleanest urban beaches in the US."

Brittany joined GMCG in February. She will be overseeing education and outreach events, youth water literacy programs and Land Trust. She is also excited to help out with water quality monitoring as time permits and said "I am excited to join GMCG. I have already met so many great volunteers and I love that I can wear so many hats."

Brittany may be reached by email at programs@gmcg.org



Students ready to release eastern brook trout as part of Water Literacy programs

This year, five schools have been carefully raising Trout in the Classroom (TIC) since January and have hatched over 300 fingerlings each equaling over 1,500 eastern brook trout that are just about ready for release into our local rivers!

This year, Elementary Schools in Madison, Freedom, Moultonborough and Sandwich as well as the Community School in Tamworth are participating in TIC which teaches our students how to raise trout from eggs to fry, monitor tank water quality, engage in stream habitat studies and appreciate water resources. TIC compliments the work that many of the schools do with VBAP (Volunteer Biological Assessment Program) in the fall which helps determine where the water quality parameters are suitable for their survival.

As students get ready for release day, they monitor and mirror the temperature of each river which are the approved new homes, by NH Fish and Game, for their fingerlings with the ideal temperature between 47 and 50 degrees Fahrenheit. Students then take a field trip to the river and get to experience the excitement of watching the trout they so carefully raised swim off to start their new life in the clean, healthy water body that they have learned about. This program is made possible by Trout Unlimited, Quimby Foundation and NH Fish and Game.

Currently, GMCG is creating a water literacy curriculum for teachers that will combine all of GMCG's youth programs and follow Common Core Standards and Next Generation Science Standards in NH.

Tyler Manville is seen here helping fifth graders with trout eggs as part of Trout in the Classroom. Tyler has been the Education Coordinator for the past year and GMCG is sad to see him go. We wish him best of luck as he moves into his new job managing his family's farm Picnic Rock Farm in Moultonboro.

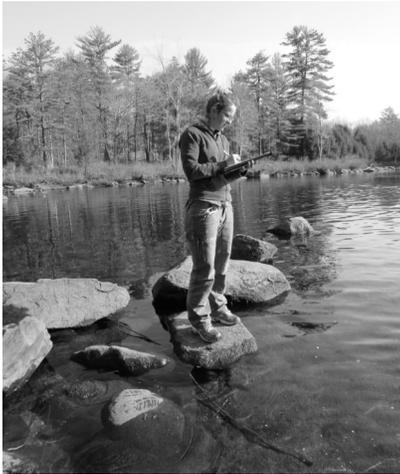


The project will now be overseen by the new Programs Coordinator, Brittany Angelo. If you are interested in joining the Education Steering Committee please contact Britany at programs@gmcg.org.

GMCG's Annual RIVERS Volunteer Training is April 16th

By Corey Lane

GMCG is hosting the annual volunteer training for the RIVERS Water Quality Monitoring program on Saturday, April 16th at 10:00 at 196 Huntress Bridge Road in



RIVERS volunteer, Joanne Ducas monitoring GE-3 on the Ossipee River .

Effingham. No experience is needed and all are welcome to participate in this hands-on community service program that trains volunteers to collect quality assured data from our local rivers and streams.

Volunteers monitor a total of 30 sites from May through October one morning every other week before 9:00 a.m. because oxygen levels change as the sun rises and warms the water. Ten sites are monitored once monthly throughout the winter.

In the field, each volunteer collects temperature, pH, dissolved oxygen, conductivity, and turbidity readings. Two water samples are also collected at those times which are then sent to the University of New Hampshire in partnership with the Water Resources Research Center for the analysis of 13 more parameters. Total Phosphorus is

analyzed by the Lakes Lay Monitoring Program.

2016 will mark the fifteenth year of the RIVERS program, with volunteers making more than 6,000 site visits around the Ossipee Watershed! With a shared cross state Quality Assurance Project Plan, GMCG partners with our downstream neighbors in Maine, Saco River Corridor Commission, which monitors a combined 65 sites across the Saco River Watershed from Sandwich, NH to the mouth of the Saco River in Biddeford and Saco, Maine with over 10,000 combined site visits.

Find GMCG's 10 Year Water Quality Report at gmcg.org. This report would not be possible without the help of many great volunteers.

If you are interested in attending this training, adopting a stream site or learning more about any of GMCG's programs, call 539-1859 or email clane@gmcg.org

Volunteers Needed for Deep Water Sampling of Ossipee Lake and Bays

Volunteers are needed to assist with collecting data at five deep water sampling locations, which are located by GPS, on Ossipee Lake and four Bays through the Volunteer Lake Assessment Program (VLAP). Just as important as monitoring trends in the tributaries, deep water sampling is crucial to understanding short and long term trends in the lake system.

More hands on deck are needed! Join GMCG's knowledgeable crew of trained volunteers making these time sensitive trips (due to the collected samples having short hold times). Without hesitation, many are ready to provide boats, gas, time, skills and knowledge of the lengthy protocol to successfully assist with a total each season of six sampling dates, from ice out through fall turnover. Volunteers are welcome to participate in one or all of the trips out on the Lake and Bays.

Why is long term monitoring important for our lakes and rivers? With more and more development around our bodies of water, it is easy

for them to become nutrient enriched. Over time, nutrient loading will lead to algae blooms. With lake data from as far back as 25 years ago, the Ossipee Lake system is showing a long term trend of increasing phosphorus and decreasing clarity.

With grant funding from NHDES, GMCG has been working with the community on the Ossipee Watershed Management Plan and can assist homeowners with solutions to help protect our lakes and rivers.

Contact Corey at 539-1859 or clane@gmcg.org for more info.



Lisa Doner, Plymouth State University, helps collect samples

Data from GMCG's Property Contributes to National Forest Inventory

By Randall Morin

In February, GMCG was visited by Aarron Clark and Ashley Zickefoose on their five year stewardship outing to review a forestry inventory plot that is installed in a forested portion of the Green Mountain Conversation Group's property on Huntress Bridge Road in Effingham. The plot was established in 1948 and is one of approximately 1,218 that exist in the State. These plots are part of the national network that comprises the



**Aarron Clark and Ashley Zickefoose
at GMCG's Huntress House**

Forest Inventory and Analysis (FIA) program of the Forest Service, an agency of the U.S. Department of Agriculture (www.fia.fs.fed.us). FIA has been the Nation's continual forest census since 1930. Information on the status and trends of America's forests is collected, analyzed, and reported on an annual basis. For example, questions such as the following are addressed: how much forest exists, where it exists, who owns it, how much has died or been removed, and how the harvested trees have been used in recent years.

This information can be used in many ways, such as in evaluating wildlife habitat conditions, assessing

sustainability of current ecosystem management practices, monitoring forest health, supporting planning and decision making activities undertaken by public and private enterprises, and predicting the effects of climate change. The FIA program combines this information with related data on insects, diseases, and other types of forest damage to assess the current health and potential risks to forests. These data are also used to project how forests are likely to appear in 10 to 50 years under various scenarios to evaluate whether current forest management practices are sustainable in the long run and to assess whether current policies will enable our grandchildren and their grandchildren to enjoy America's forests as we do today.

For more than 80 years, FIA has played an essential role in providing the information vital to managing the Nation's forest resources. In recent years, an increasing number of important decisions affecting the Nation's forests have been made with reference to and reliance on FIA findings and forest resource evaluations. Contemporary topics include carbon sequestration, forest product sector and employment trends, biomass availability, land cover and land-use change, climate change, forest health, and fire risk.

FIA releases new results annually for each state, publishes a comprehensive report every 5-years, and provides tools and data to users online. For example, annual reports for New Hampshire have been published each year since 2006 (<http://www.nrs.fs.fed.us/fia/data-tools/state-reports/NH/default.asp>), comprehensive 5-year reports are available for 2007 (<http://www.treearch.fs.fed.us/pubs/38743>) and 2012 (<http://www.nrs.fs.fed.us/pubs/49042>), and analysis tools provide access to data collected in 1983, 1997, and annually since 2007 (<http://www.fia.fs.fed.us/tools-data/>).

The most recent FIA annual report for New Hampshire included an analysis of differences in the number of overstory trees and regeneration by species that have implications for future forest composition (<http://www.nrs.fs.fed.us/pubs/50196>). Although overstory tree species composition has been relatively stable over the last decade, the species composition of the understory suggests that changes are likely to occur. Many factors drive understory composition including management, disturbance, herbivory, climate, and presence of invasive plants. A lack of oaks and pines in the sapling size-classes means that as large oaks and pines are harvested or die they will likely be replaced by species such as American beech, red maple, balsam fir, and red spruce that dominate the sapling size-class. This is reinforced further by a dearth of oak seedlings. By contrast, balsam fir and red spruce regeneration appears to be adequate and increasing.

Based on the current status of regeneration in New Hampshire, both the maple/beech/birch and spruce/fir forest types appear poised to increase or remain stable. However, future projections of suitable habitat predict that much of New Hampshire may be more suitable for the oak/hickory forest type than the maple/beech/birch or spruce/fir forest types (http://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs99.pdf).

Randall Morin is a research forester with the US Forest Service, Northern Research Station. He is the lead analyst for the New Hampshire FIA inventory and can be reached at rsmorin@fs.fed.us.

Conservation Conversations

Editor's Note: *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.*

Freedom

To commemorate the 10th anniversary of the Freedom Town Forest, the Forest Advisory Committee (a sub-committee of the Freedom Conservation Commission) has produced a video telling the history of the Forest. Many wonderful volunteer hours have resulted in an informative and beautiful video.

The first part of the video recounts the story of how the forest was acquired. From the beginning, when a concerned citizen questioned a “for sale” sign, through years of dedicated work, to the actual purchase of the land, the process was truly a community effort.

The video continues with a photo history of the past 10 years in

the Forest. The early years involved major clean-up of the land that had been neglected and misused. Under guidance of a professional forester, as directed by the Forest Stewardship plan, the 2,600+ acre Freedom Town Forest is now a beautiful venue for low impact outdoor recreation. With a variety of habitats, both old protected areas, and some newly created, a wide range of wildlife happily call the Forest “home”. This video is available for all to enjoy and can be purchased (by donation) at the Freedom Store.

Eaton

The Conservation Commission realized last year that much of over 2200 acres of town lands had not had their boundary surveys done in many years and it was high time to complete those before they faded into obscurity. This blazing project was begun last year with an outside surveying consultant but will be finished up this spring using ECC volunteers. We will mark the

boundary lines before leaf-out to make the blazes easier to see.

The Commission will also be working with forester Dan Stepanauskas of Madison for a new three-year forest management and harvesting plan. Harvesting of wood on the Town Forest is a main source of income for Eaton Conservation Commission's work on the Foss Mountain trail, the blueberry fields, the maintenance of the open vista on the Foss peak and the support of summer scholarships to Tin Mountain camps.



View of Mt Washington from Foss Mt

NRCS funding helps provide Wildlife Management Plan for GMCG

By Ellen Snyder

Huntress House and Heron House, the sites of the current and future GMCG office, respectively, were the focus of a recently completed wildlife habitat and land stewardship plan by Ibis Wildlife Consulting. Both parcels border Huntress Bridge Road and are separated by Pratt Road, not far from the Maine town line. The most significant water and wetland features on the properties include the 500 feet of riparian habitat along the Ossipee River, the nearly one-acre forested/scrub-shrub swamp on Heron House, and nearly 3.5 acres of a forested/scrub-shrub wetland system on the Huntress House property.

Although the two parcels total only 14 acres, the close proximity to large blocks of conserved, undeveloped land ensures that wildlife can continue to move across the landscape, whether along the Ossipee River or through the wooded wetlands and oak-pine uplands. The properties are within a large area of “highest ranked habitat” associated with the Ossipee River, according to the state’s Wildlife Action Plan.

The Wildlife Management Plan will help guide GMCG’s plans to renovate the Heron House as a new office, to enhance a vernal pool in the wetland south of the house, and to enhance the land between the house and river to provide access for educational programs and restore the area to better protect water quality. The Plan includes other recommendations, including a bio blitz—where volunteers scour the area on a given day to record all observed plants and animals, fix eroded areas, remove the few invasive plants, improve trails and access, engage volunteers in stewardship, protect an historic sawmill site, restore areas with native plants, and create meadow and shrub habitat for pollinators around the existing Huntress House office.

Funding for this project was graciously provided by NRCS through the Environmental Quality Incentive Program.

Ellen Snyder is a wildlife biologist with Ibis Wildlife Consulting and a long time GMCG partner.

Save the Date! 2016 Spring Calendar

Saturday, April 16th 10:00am RIVERS Annual Water Quality Monitoring volunteer training. GMCG is always looking for water quality volunteers to assist with monitoring 30 RIVERS tributary sites around the Ossipee Watershed and 5 deep water testing sites on Ossipee Lake and Bays. This RIVERS training and refresher will teach volunteers how to use the testing meters, sample collection procedures and other data collection protocols according to GMCG’s and Saco River Corridor Commission’s shared Quality Assurance Project Plan (QAPP). Contact Corey at 539-1859 or clane@gmcg.org if you would like to join the WQM team!

Friday June 17th 6:30pm. How the Ossipee Aquifer was formed: Learn about how the glacier formed this extensive aquifer with Dr. Robert Newton , Geologist from Smith College. The evening presentation will also be GMCG’s kickoff meeting to form the **Ossipee Watershed Groundwater Protection Advisory Committee**. This program is sponsored with generous funding from a Source Water Protection Grant from New Hampshire Department of Environmental Services. Meeting will take place at Runnells Hall in Chocorua at 6:30 pm. Call GMCG for more information at 539-1859.

June 29th Watershed Management Plan Phase 2 Community Forum Please join GMCG, FB Environmental Associates, the New Hampshire Department of Environmental Services and other Ossipee Lake watershed citizens for an interactive forum on the health of Ossipee Lake and its watershed. We are seeking your valuable input as we reach the final stages of the Ossipee Lake Watershed Management Plan process. The forum will be held on Wednesday, June 29th at 6:30 at the Freedom Town Hall. Please contact Corey at 539-1859 or email clane@gmcg.org for more information.

SAVE THE DATE for GMCG Summer Festival!

Saturday August 27th 2pm-8pm Summer Music Festival “Loons and Tunes” at Camp Calumet in West Ossipee. Family friendly fun event. A selection of local music and local produce will be available. There will also be Pontoon boat tours of Ossipee Lake and a presentation on Loon Habitat by the Loon Preservation Association. Details to follow in the Summer Watershed News.



Don’t forget—MARCH IS MEMBERSHIP RENEWAL MONTH!
Your Membership Makes a Difference.
Every drop counts! Thank you!

(Please make checks payable to Green Mountain Conservation Group Box 95, Effingham, NH 03882)
You may also renew your membership online at www.gmcg.org/we-need-your-help/

Vernal Pool __\$25 Stream __\$50 River __\$75 Pond __\$100 Bay __\$250 Lake __\$500 Aquifer __\$1000 Other __

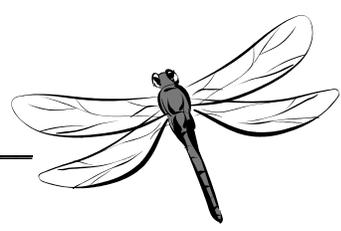
NAME _____

ADDRESS _____

PHONE _____ EMAIL _____

Are you interested in being a GMCG Volunteer? YES

March is Membership Renewal Month, PLEASE RENEW YOUR MEMBERSHIP TODAY and encourage your family, friends and neighbors to join GMCG. GMCG is a non-profit 501 (C)3 tax-exempt organization funded by grants, memberships, and donations. **THANK YOU FOR YOUR CONTINUED SUPPORT!**





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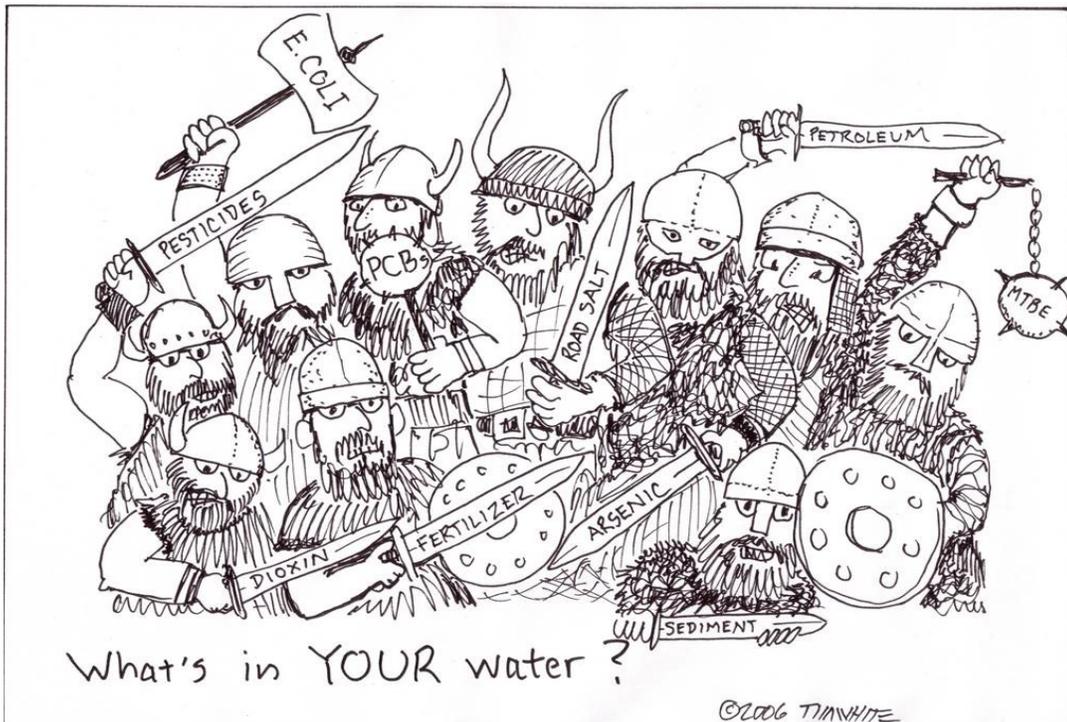
The Watershed News

Save the Date!
**“How the Aquifer
was Formed”
with
Bob Newton**

**June 17 6:30
Runnells Hall**

**Summer Newsletter
submissions due June 10**

EVERY PERSON CAN MAKE A DIFFERENCE AND EACH PERSON SHOULD TRY.



Sign up for event updates with *Watershed Happenings* and stay in the flow! Sign-up at www.gmcg.org