

The Watershed News

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Autumn 2016

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It's official! Site work is completed at Heron House



After nearly two years of permitting and approval process, finally, in August, site work began at GMCG's soon-to-be-home, Heron House. Thanks to Bill Huckins of Parachthonic Engineering and volunteer site manager extraordinaire, Brian Taylor the land has been



transformed into a center where visitors will be able to study and enjoy the different aspects of water resources. Site work ranged from clearing of trees, digging out under the building, constructing a new driveway, installing proper drainage, creating an outside "classroom" in an old cellar hole, pouring new foundations for the addition of a water quality lab and digging out the vernal pool—all were major construction projects.

"This is one of the more time consuming projects I have worked on but I can now really picture kids running back and forth from



the river to the vernal pool and learning about water resources. I am happy I could donate some extra work towards this worthwhile project," said Bill Huckins. Brian Taylor added, "I grew up in Effingham and am excited to have been a part of this inspiring project. I know that my work here has made a contribution to the future. There now will be a great place to go and learn about natural resources."

Three months later, GMCG is now well on its way to having a new home—The Patricia and Charles Watts Conservation Center. The whole community will benefit from the commitment to this project. Feel free to stop by and see the project or give us a call if you would like a tour.



Thanks especially to the Little Royal Family Foundation, Patricia Watts and family, Peter and Elaine Klose (who helped fund the vernal pool project) and over 80 individual donors. We still need to raise \$50,000 for this project and welcome all donations! Thank you.

Scott Aspinall and Joe, helped with forestry and set drainage pipe.

Dr. Deighan to Run GMCG's Youth Programs

GMCG is excited to welcome Dr. Karen Deighan as the new Education Coordinator for the 2016/2017 school year. She will lead *VBAP* and *GET WET* and will assist with the *Trout in the Classroom* programs. She also will complete the Water Literacy Curriculum and help promote this across the watershed. The curriculum will be aligned to both NH State Education Standards and to Next Generation Science Standards so teachers can easily adopt them into their school year.

Karen received her doctorate in Educational Leadership from Plymouth State University (PSU) and has worked in education for twenty-five years as a classroom teacher, special educator, reading specialist, and more recently as an adjunct faculty at PSU.

GMCG is a perfect match for Karen and her hands-on approach to facilitating experiential education. Karen's first project with GMCG was to deliver the VBAP program this Fall. She partnered with six schools in the Watershed and is currently overseeing the work towards the community presentation on December 7th.

During the field day, Karen would meet the student citizen scientists for the day at a local stream then collect, sort and identify macroinvertebrates.

Finally, in the spring, Karen will deliver Groundwater Education Through Water Evaluation & Testing (Get Wet) to schools around the Ossipee Watershed. Through GET WET, students will learn to collect water from their homes, test it for many parameters, analyze the results, and then provide a presentation for the community.

The goal of water literacy programs is to promote awareness and stewardship of water resources with students. With her background, Karen is an excellent match for GMCG's programs!



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.

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“Water water every where nor any drop to drink”

By Blair Folts
 President & Executive Director

This well known quote from the poem, the Rime of the Ancient Mariner by Samuel Coolidge has really rung true this summer across the Ossipee Watershed. Despite friends and neighbors fishing, swimming, boating and exploring our many ponds, rivers, streams and lakes, hundreds of residents have suffered from the drought and have seen wells go dry. This disaster has not only impacted folks with dug wells, but has also hit people whose wells are 1600 feet deep. While New Hampshire and New England are considered “water rich,” we too have been effected by the drought this summer. I hope that this crisis has helped make us all a tiny bit more globally empathic and conscious of precious water resources.

Not only is Green Mountain Conservation Group's educational efforts focused on water quality protection of our shared surface waters, but also this summer we expanded our well water studies. Thanks to funding from Smith College and Bob Newton's partnership with GMCG we added data from an additional 70 wells as part of a ground water project he began with us in 2009.

Furthermore, thanks to funding from NH DES, the Little Royal Family Foundation and the Adelard and Valeda Lea Roay Foundation, GMCG is fostering the creation of a regional Aquifer Protection Advisory Board that will be charged to review large scale development projects that could have impact on our shared drinking water resources. Living in a rural area, we do not have the luxury of well trained municipal water specialists to analyze and track drinking water quality. Thus, we must all be diligent in testing our own well water, tracking that water quality over time and paying attention to volume, flow and weather impacts. Homeowners with

private wells must become their own scientists and keep data on their own drinking water.

How humbling it has been for us this year to have to conserve water, to not water the garden or lawn to regulate how often the wash is done or the toilet flushed. Has this given us pause to reflect on the millions of people who live like this regularly or have to walk two miles to the community well and then carry water back to their homes?

Not only has water been an issue of global concern for us now, but this was also a constant concern for ancient people. The great aqueduct, Pont du Gard in Southern France is a prime example of



how the Romans in the first century AD were able to design a system that allowed water to flow over 30 miles to their homes. They had waste management systems, fountains, running water in their homes, hot water and even heated floors using this water. This system carried over forty four million gallons of water a day into homes in this area.. The system also required constant maintenance by *circitores*, workers who were responsible for the upkeep that required crawling into the aqueduct and scrubbing out calcium deposits and removing any vegetation.

Whether water is being sent to us via town water supplies, or large city projects or just gathering at a local spring, we all know that humans are 100% dependent on water resources and that access to water is a Human Right.



Collecting water in Ossipee Mountains

What happens when your well runs dry?

By
Cindy Pulkkinen and Emilie Talpin

For many in New Hampshire, the weather this summer was perfect: Crystal-clear blue skies, low humidity, and sun aplenty. For us, however, the gorgeous weather came at a price: No running water.

Our story begins one night in the middle of July as a mix of air and water chugged its way through the pipes and emerged in a sudden blast, then drizzle, out the second floor shower. Panic ensued. We had just bought this house and the likelihood that the water would stop running within the first month hadn't crossed our minds. Flashlight in hand, we stumbled to the well in the backyard. After struggling to move the massive cement cover, we peered through the cobwebs and followed the dim beam of light fifteen feet down the well where it reflected off a pitiful puddle at the bottom. We looked at each other and sighed.

Over the next few days, we began executing an emergency plan to conserve water. Step 1: No washing machine or dishwasher; these were amenities to be enjoyed at a future date. Step 2: All bathing would be done in the nearby lake and stream with biodegradable, organic products. Step 3: Toilets would be flushed with water captured by the dehumidifier in the basement. Step 4: Meals that required more than one pot were banned, spoons became the all-in-one utensil, and one teacup per person held all beverages consumed throughout the day.

Violation of these policies meant hauling in extra water from the nearby spring, which consists of a horizontal pipe sticking out of a slope by the side of the road. According to local lore, this spring (named Scat Will Spring) has been in use for decades and is the primary source of water for more than a few neighbors.



As the puddle quickly began to disappear, we realized we had to do something to get water into our well. After doing some research (aka watching YouTube videos on how to harvest rainwater in the desert), we stretched a giant green tarp between two trees and created a funnel into the well. That night, we heard a few drops pitter-patter onto the tarp, which amounted to nothing, then waited for weeks for the rain that never came.



By the first week of August, our well had run completely dry and the process of exploring new-well options began. We looked into drilling, pounding, pointing, and re-digging – all of which were costly and none of which came with a guarantee. So like many in our situation, we opted to ride it out, and as the hot summer days got cooler and the stream got icier, our semi off-the-grid experience became a challenging yet captivating adventure. Daily operations, like washing dishes, were done more

efficiently and alternative systems for showering were implemented, ranging from the solar camping shower bag, which hung from the back porch through September, to the battery-powered handheld portable shower unit, which pumps water from a 5-gallon bucket into a steady, gentle stream, and is nothing short of miraculous.

Three months later, we find ourselves with a newly dug well and although we have more water than we know what to do with, we're currently dealing with excessive amounts of iron and manganese. The challenge continues. On October 19th, we jumped in the lake for the last time this year. Though freezing, the leaves were in full color and we were alone with the loons – breathtaking, in more ways than one.

This three-month journey has not only made us aware of how we take the luxury of running water for granted, but has also brought us closer to our magnificent surroundings by forcing us to embrace simplicity and conserve our precious water supply. Despite the inconvenience and the stress, we still highly recommend taking this journey!



GMCG Members, Cindy Pulkkinen and Emilie Talpin live in the Ossipee Mountains at the headwaters of the Lovell River.

Monitoring Ossipee Lake's Bald Eagles

By Chris Martin,
Senior Biologist, NH Audubon

One highly visible benefit of the Green Mountain Conservation Group's sustained efforts to protect intact natural communities in the Ossipee Watershed is the presence of healthy wildlife populations, including the return of iconic bald eagles to Ossipee Lake. NH Audubon partners with NH Fish & Game and with regional conservation groups all across New Hampshire to promote the recovery of our state's eagles. One way that we measure progress in eagle recovery is by tracking the number of nesting pairs. NH Audubon relies on trained volunteers who deploy into the field to track eagle activity and search for newly active nest sites.

People have been seeing and reporting adult bald eagles around Ossipee Lake for a number of years, but an actual nest in the local area eluded detection until August 2015, when one NH Audubon volunteer eagle-watcher discovered two fledglings at a nest located not far from the Bearcamp River delta. Eagles often use the same nest for many consecutive years, and this was the case at Ossipee Lake in 2016 when another volunteer, Jack Dorsey, kept a close eye on this pair this past breeding season. Taking some outstanding photos while watching the birds, he confirmed their success in raising two young again in 2016, but also got a positive ID on the nesting female eagle. Her red color leg band with the characters "3U" identified her as an 8-year old bird banded and fledged from a nest on Hancock Pond in Sebago, Maine back in 2008. Turns out that she settled into a breeding territory about 24 miles from the nest where



Photo courtesy of Jack Dorsey

she was raised.

While currently listed as state-threatened, NH Audubon's data show that our state's breeding bald eagle population has been doubling every five years over the past two decades. Much work has gone into promoting the return of eagles, and in 2016 we tallied 56 territorial pairs across the Granite State. Maine's recovering population is now even larger.

Eagles travel and hunt over large areas during their daily and annual activities, but their nest sites are critically important and very

sensitive to disturbance.

Major changes in land use and human activity levels near an active eagle nest may lead to nesting failure, setting back population recovery efforts. That is one reason why GMCG's focus on protecting critical habitat along the Bearcamp River, and other sensitive areas in the Ossipee Watershed, is so important. These natural areas provide homes for eagles, and many other native species. And this gives us an opportunity to watch and enjoy them.



Photo courtesy of Jack Dorsey

Preliminary Ossipee Aquifer Water Quality Report Presented

During this unfortunate time of drought, groundwater has become a more common topic of conversation. Many residents whose wells have been in use without trouble for generations have had their wells run dry. Living in a region that has seemed to have an endless supply of groundwater we tend not even to worry about water quantity. But this summer's lack of rain was humbling and left all of us wondering, "could I be next?"

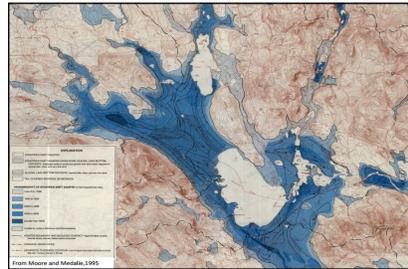
One of the best ways to protect our natural resources is to have a better understanding of them. On September 26th, Dr. Robert Newton discussed types of wells, groundwater flow, the Ossipee Aquifer's susceptibility to contamination and the preliminary results from the 70 well samples that he and his students from Smith College are currently analyzing. In his presentation, Newton explained measured parameters, that included results of water hardness, pH and Alkalinity, road salt impacts, lead, copper, fluoride and volatile organic compounds. You can find Dr. Newton's the full presentation including preliminary results at www.gmcg.org.

Best Management Practices (BMPs) are strategies for preventing the release of

hazardous substances into ground and surface water. It is critical to manage land use practices in order to protect the Aquifer and our drinking water resources. Once groundwater becomes contaminated, it is very difficult, expensive and sometimes impossible to clean.

Over the coming year, the newly formed Ossipee Aquifer Protection Committee will work with local stakeholders to define what land uses and large scale development projects could negatively impact the aquifer and what Practices could be implemented for better protection.

If you would like to join the committee and/or learn more about how to protect your drinking water, visit www.gmcg.org or give us a call.



Water Quality Research

By Corey Lane

This has been a very unusual year for our rivers, lakes and aquifers. Baseline data is always important to understanding water quality trends across the Watershed which is why GMCG's dedicated volunteers have been collecting data since 2002 with over 6,500 site visits to date. In these changing times, it is important to monitor how the warmer temperatures, lack of rain and heavy rainfall after a prolonged drought is affecting our water resources.

Three of GMCG's 30 tributary testing sites monitored May-October ran dry towards the end of the summer and the rest have been painfully low until the rain event on October 22nd which brought more than four inches in less than 12 hours.

Heavy rain monitoring was conducted at GMCG's 10 year round sites just after that storm and it was good to see levels almost back to where they should be at this time of year. Hopefully, this is not temporary and our weather patterns bring us the precipitation that our ecosystem

needs throughout the year to thrive.

GMCG's dedicated Volunteer Lake Assessment Program (VLAP) volunteer crew was also busy throughout the 2016 season. Volunteers made five trips and collected deep water data from Ossipee Lake and Bays from May through September. Three trips were also made out to the Ossipee Lake Natural Area for bacteria testing. This was only possible with the help of VLAP captain Ed Green who had to venture out on the lake at 5:30 am due to sample hold times for bacteria collection.

Data collected by volunteers through GMCG's research programs are analyzed by FB Environmental Engineering firm for implementation into the Ossipee Watershed Management Plan. Currently data is being inspected for phase 2 of this Plan which includes the "big area" of Ossipee Lake and the Lovell River Watershed. You can find this working document at gmcg.org. Thanks to all of our great volunteers, this incredible database is possible.

Death of the Front Porch

They were simpler times,
When life was not such a rush.
After dinner eaten,
On a warm summer eve,
The "extra" room,
Just outside the front door,
The family would there gather,
With maybe a neighbor or two.
The children would run off,
For a lively game of tag,
While the adults did talk,
About the events of the day.
A kind word exchanged,
With those just passing by.
The front porch you see,
Was a magical place,
That brought family and friends together.
In fair weather,
Sis and her beau,
Would cuddle on the swing,
While mom and dad in the house,
Would keep a watchful eye.
It was the place to rush,
To greet guests coming up the drive,
A place to sit and cry,
When bad news did come.
A place to sip lemonade on Sunday after-
noon,
With the preacher and his bride.
Those times my friend,
Are now all but gone,
Squeezed out in modern times.
We retreat to our sealed
Climate controlled rooms,
Electronics glowing their ghastly light.
People pass by,
Not even noticed,
In their sleek fast cars,
Encased like a cocoon.
Chatting with friends,
Is no longer by mouth,
But by the hollow tapping,
Of some sterile keyboard.
The family hardly ever gathers,
At the table together anymore.
With all our advancements,
There is something lacking,
Some sense of community,
And belonging.
So it is with a heaviness in my heart,
As well as deep mourning,
That I reflect in my soul,
On the death of the front porch.

Paul H. Bartoswicz 7/30/2010

*Paul is a GMCG member and former
Effingham Postmaster*

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.*

Effingham

Milfoil in the Ossipee Lake and River has been addressed and cleaned up for 2016. NE Milfoil disposed of 320 gallons of the invasive plant this year, far less than the 3040 gallons of last year. Last year's harvest was due to a large area in Ossipee Lake that had gone undetected for years.

Effingham Conservation Commission sponsored a pie eating contest in August at the first Effingham Preservation Society Street Fair. Though messy, it was a lot of fun for adults and children. One thing we learned was blueberry pies are easier to eat than apple in a timed contest. The Purchase and Sale on the Pine River property has been extended in order for ECC to obtain the necessary funds for purchase. This property which abuts the Pine River on the backside of the lot is a beautiful spot for animals of all kinds and for humans to enjoy. Please consider making a donation for this purchase. If interested, please call 539-2035.

Freedom

The Freedom Conservation Commission, in coordination with neighboring communities, commissions, boards and organizations, has spent the past five months examining the potential environmental effects the proposed and controversial expansion of Westward Shores Campground in Ossipee could create. Ossipee granted Freedom, Effingham, and the Lakes Region Planning Commission abutter status in June 2016.

The Freedom Conservation Commission researched all available hard-copy town records and New Hampshire Department of Environmental Service on-line records to establish a septic system baseline database of all systems located with 150 feet of water bodies in the town of Freedom. This database will be maintained by the FCC and updated as new septic system applications to construct or operate are approved by NHDES.

The Town of Freedom Forest Advisory Committee (FAC), in coordination with NH Department of Resources and Economic Development and HEB Engineers, has completed a boundary line survey along a portion of the Freedom Town Forest and installed new markers. Original boundary line markers had disappeared or been moved.

Eaton

Eaton recently finished removing many of the large rocks on the north blueberry field on Foss Mountain and, in early October, had a regional crew of migrant workers who cut the grass and shrubs which were hindering growth of the blueberries. Since conversion to organic cultivation of the blueberries several years ago, resulting in lower yields, we are now working on lowering soil pH to curtail growth of unwanted grass by having volunteers hand-apply sulfur pellets. The lower pH is beneficial to the berry bushes. We are also preparing a revised list of objectives for management of the Foss blueberry fields and for maintaining the open summit.”



Because We All Live Downstream

By Corey Lane

There are mixed feelings about regulations that protect the environment. Most of these are necessary in order to shield each of us from the possible negative consequences that may occur from incompatible development and/or activities. New Hampshire is not always known for having strong environmental regulations. Instead, in NH, it is up to each town to create stronger regulations it feels are needed to protect the town resources through town ordinances.

As many have followed, the Town of Ossipee is currently reviewing a large scale development proposed on Ossipee Lake at the Westward Shores Campground. In keeping with the town's own ordinance, the Ossipee Planning Board voted to grant the towns of Freedom and Effingham abutter status for the Westward Shores expansion proposal because of concerns stressed by downstream neighbors.

The Town of Freedom has continued to follow the proposal very closely because of the nature of that

development and the simple fact that Freedom property owners are downstream of the site. The Freedom Planning Board requested reconsideration of the approval because as an abutter, Freedom was not allowed time to review the newly released plans. Their request was denied. The Town was able to file a petition of appeal within the 30 days allowed. The appeal outlined many reasons why the approved expansion does not meet the Town of Ossipee's standards.

In addition, the Effingham Conservation Commission has also sent a letter supporting Freedom's petition for an appeal of this approval. While the proposed expansion proposal is in the town of Ossipee, it is such a large scale project that it could negatively impact water resources with the downstream abutters in Freedom and Effingham.

The Ossipee Zoning Board of Adjustments will discuss this petition for appeal at their next meeting on November 8th and then will set a date for a public hearing. Please consider attending this public hearing. To learn more please visit www.gmcg.org or contact the GMCg office at 539-1859.

Save the Date! 2016 Autumn Calendar

Wednesday, December 7th: Youth Water Quality Presentation 6:30 at Effingham Elementary School
Monday, December 19: Annual Cookie Swap and global celebration of “Take a Break from Plastic” 3-6 pm. GMCG will partner with local and international friends on this event—details to follow on GMCG Website.
Wednesday, January 11, 2017: Aquifer Protection Committee Meeting Are you interested in learning more about how you can protect the Ossipee Aquifer? Attend the next Aquifer Protection Committee to learn how you can make a difference. *Funding for this project provided in part by a Watershed Assistance Grant from the NH Department of Environmental Services with Clean Water Act Section 319 funds from the U.S. Environmental Protection Agency.*

Save the 2017 DATE!

Saturday March 4th GMCG’s 19th Annual Meeting Hobbs Tavern and Brewing Company

Local Youth to Present Results of Water Quality Research on December 7th

For the past 11 years, Green Mountain Conservation Group has partnered with schools in the Ossipee Watershed to conduct the Volunteer Biological Assessment Program (VBAP). This year, six schools participated in VBAP. They collected, sorted, and identified macroinvertebrates in an effort to calculate the water quality of streams in the Ossipee Watershed.

Fourth, fifth and sixth grade students from Ossipee, Tamworth, Freedom, Effingham, Sandwich, Moultonborough, and Fryeburg, Maine will present their findings on **December 7th at 6:30 pm at the Effingham Elementary School**. The public is invited and encouraged to attend this informative and inspiring event.

Thank you to our 2016 VBAP volunteers, Maud Anderson, Dr. Ned Hatfield, Dr. Anne Packard, Emelyn Albert and Carolyn Hemingway!



Dr. Hatfield helps student identify macros.



PLEASE!!!!
END of YEAR GIFT Donations help us meet our 2016 program budget
Every drop counts! Thank you!

(Please make checks payable to Green Mountain Conservation Group Box 95, Effingham, NH 03882)
You may also donate 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 ___
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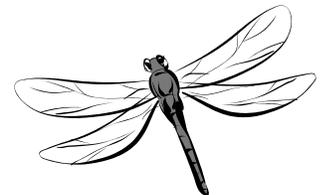
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Are you interested in being a GMCG Volunteer? YES

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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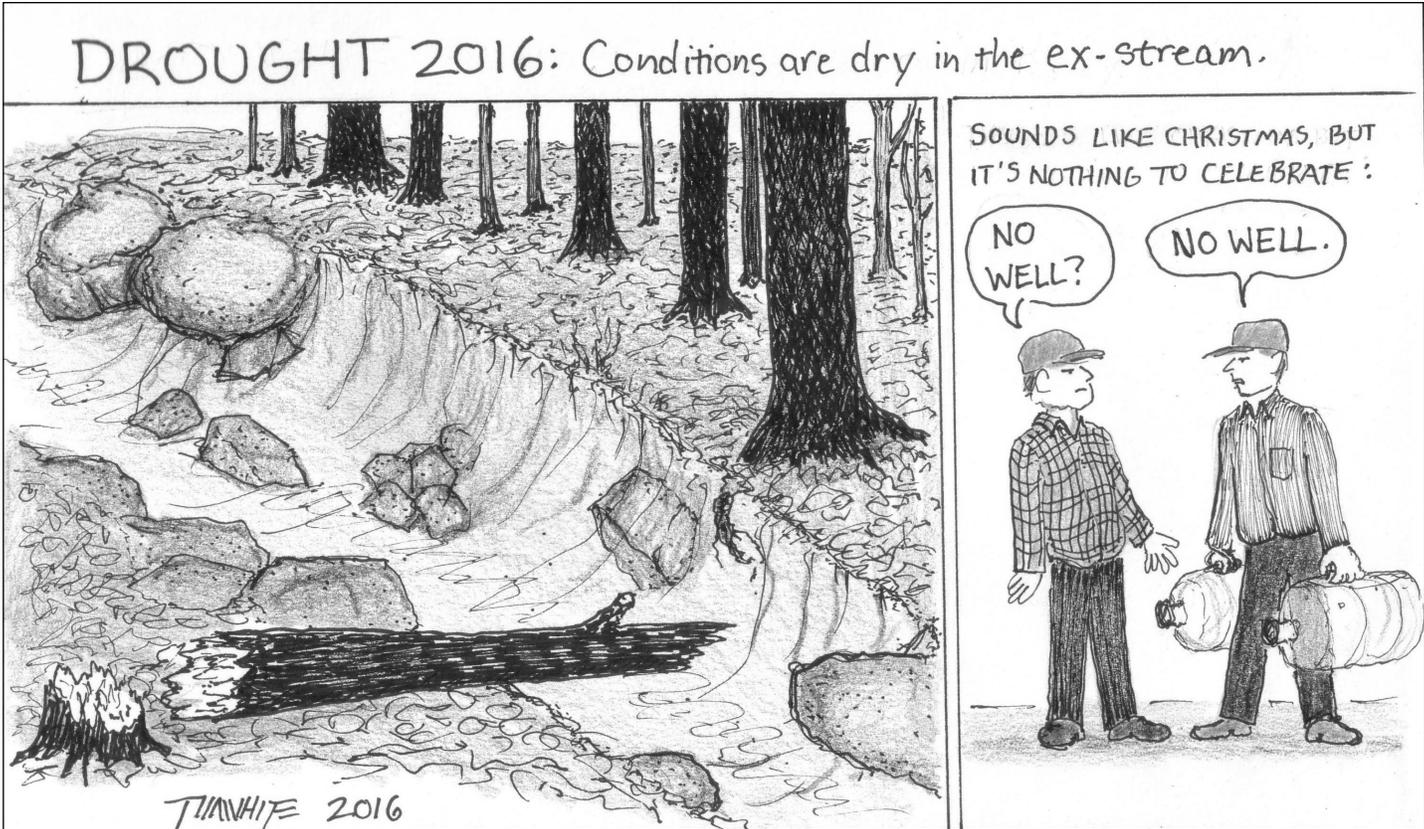
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The Watershed News

SAVE THE DATE!
Youth Water Quality presentation December 7

Winter Newsletter submissions due January 10

IF YOU ARE NOT PART OF THE SOLUTION YOU ARE PART OF THE PROBLEM.



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