

THE RIVER RUNS

News from the Cowpasture River Preservation Association

Bitter Cold Weather Hits the Highlands in January

By Keith Carson, Editor



The coldest January in nearly 20 years put a blanket of white on Shenandoah Mountain as Highlanders shivered through several days of below zero temperatures.



The Cowpasture River (center) had significant ice cover at the confluence with the Bullpasture River (left).

In This Issue

- Frigid Weather Hits the Highlands
- From the President
- Executive Director's Update
- Report On Toxins In Virginia Rivers
- Summer Picnic
- Fall River Cleanup
- Events Calendar

- What Matters!
 - People:*
 - Thank YOU
 - Welcome
 - Health:*
 - Water Quality Report

- Merchandise
- Join or Renew My Membership



Further upstream, just south of Liberty, in Highland County, the Cowpasture River was completely covered with ice as temperatures dropped below zero on six of the last ten days of January.

CRPA
P.O. Box 215
Millboro, VA 24460

www.cowpastureriver.org

Board of Directors:
2013-2014

Officers:

John Fowler, President
304-543-4459 (cell)

Lou Robinson, Vice-President
703-356-9030

Michael Whiteside, Secretary
540-330-6416 (cell)

Ann Warner, Treasurer
540-997-1447

Directors:

Caryl Cowden
Monroe Farmer
William Hardbarger
Stewart Hobbs
Nelson Hoy
William Jones
Read Lunsford
Richard Lynn
Anne McVey
George Sneed, Jr.
Joe Wood

Staff:

Keith Carson
Executive Director
directorcrpa@gmail.com
540-474-2858

Polly Newlon
Project Director, Water Quality
keepherclean@gmail.com
540-474-2858

Elizabeth Biggs
Accountant
540-925-2308

From the President

The Cowpasture watershed is cold. How cold? I spoke to my neighbor on our road today and he had to take my words inside to defrost them to hear what I said. Besides considering to make Al Gore return his Oscar for his movie on global warming, the Association Board and Keith have been working on many issues, pertinent and possible, regarding the always dangerous Forestry Plan, possible future fracking (gas exploration) activity in Highland, sign placement at public access points, water quality, environmental hot spots, fish health and governmental relationships.



We are planning a bang-up program for the annual meeting including a presentation by Steve Reeser of the Virginia Department of Game and Inland Fisheries, the author of a comprehensive study of our river and its fish. One conclusion of this study is that the population of native species has increased as has their size, since the undefined, but real, decline over the period 2007-2010. A digital copy of this study is available from Keith.

Be assured that your Board has its hand on the heartbeat of the River and our members.

Executive Director Update



This winter has brought several challenges to residents of the Allegheny Highlands. January's bitter cold has been tough on both property owners and livestock. Our 30 inches of snow this winter near Snowy Mountain have brought beautiful scenery, but also some hazardous driving conditions. So far, February has provided welcome relief, but this week another snow storm, perhaps the biggest one of the winter to date, is expected to hit our area. Undoubtedly we have more winter weather to come before spring finally arrives. The CRPA celebrated a major milestone in 2012 with its 40th anniversary and Polly and I are hoping that February brings a welcome milestone to us here on Fossil Run, near Snowy Mountain. Since our wind turbine and tower were totaled in the derecho of June, 2012, we have been without wind power. However, we are anticipating that our next venture into wind energy will be up and running by early March. Winds can be extreme near Snowy Mountain and over the past 5 years we have had several occasions when winds exceeded 70 mph (hurricane force). In March of 2011 our weather station near the house recorded 103 mph winds during a freak spring storm. So it is not surprising that we have had two wind turbines destroyed and two towers damaged in less than 5 years. Residential wind turbines and towers are just not built to withstand such extremes. However, the experiences have taught us a few lessons that we hope to put into practice with our next wind turbine and tower. We look forward to seeing those wind turbine blades spinning once again bringing additional energy to our battery bank and helping us remain free from the frustrations of depending on a sometimes unreliable power grid. There is also much satisfaction to be had from using renewable energy.

Virginia Ranks Second in the Nation in Toxins Dumped In Its Rivers

The recent problems with chemical contamination of the water supply in Charleston, West Virginia are indicative of significant potential threats to human health and the environment that are common in most states in America, including Virginia. The following is adapted from a recent report that shows that Virginia ranks second in the United States in the amount of toxins dumped in its rivers each year. The report is [A Strategy To Protect Virginians from Toxic Chemicals](http://law.richmond.edu/centers/environmental/PDF/toxins-report-final.pdf) by Noah Sachs and Ryan Murphy at the Center for Environmental Studies at the University of Richmond School of Law. The entire report is available at <http://law.richmond.edu/centers/environmental/PDF/toxins-report-final.pdf>.

In Virginia, toxic chemicals in the environment receive relatively little attention, especially when compared to high-profile environmental issues such as the Chesapeake Bay, land use, and transportation. Legislators and the media rarely discuss where toxic chemicals are stored or released within the Commonwealth, and there is a dangerous silence about the daily exposure of Virginians to toxic chemicals. A new strategy is urgently needed to protect Virginians from toxic chemicals. These chemicals are in the air we breathe, the water we fish in, and the land we live on. Exposure to toxic chemicals is significant. For example, over two million Virginians live in communities that fail at least one federal health-based standard for air pollution. Toxic contamination of fish remains so high that the Department of Health maintains fish consumption advisories for most of the major waterways in Virginia. The health impacts of exposure fall particularly hard on children. There are over sixty schools in the Commonwealth that are in the top five percent of schools nationwide in terms of exposure to toxic air pollution. The Virginia Constitution states that it is the “Commonwealth’s policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.” Clearly, we have along way to go before that policy becomes reality. This report shows the true picture of contamination and toxic releases in Virginia. Consider these facts, based on data gathered from 2009-2012:

- ◆ In 2011, industries in Virginia discharged 19.9 million pounds of toxic chemicals into the air, 16.7 million pounds into water, and 2.5 million pounds into land.
- ◆ In 2011, industries in Virginia emitted more toxic chemicals to water, air, and land than industries in thirty-six other states.
- ◆ Electric generating facilities in Virginia emit more toxic chemicals than in thirty-nine other states.
- ◆ A 2010 study by the Clean Air Task Force estimated that emissions of fine sooty particles from coal-fired power plants cause 647 premature deaths, 477 hospital admissions, and 896 non-fatal heart attacks annually in Virginia.
- ◆ Virginia’s waterways are the second worst in the nation, measured by the amount of toxic chemicals discharged into them.
- ◆ The New River and the Roanoke River are among the worst twenty waterways in the nation, measured by the amount of toxic chemicals discharged into them.
- ◆ The James River is the ninth worst waterway in the nation, measured by the amount of developmental toxins discharged into it.
- ◆ Virginia’s electric utilities generate about 2.4 million tons of toxic coal ash annually. Most of this ash is stored next to waterways, and the U.S. Environmental Protection Agency (EPA) has listed eight coal ash disposal sites in the Commonwealth as “significant hazards.” Failure of these decades-old sites to contain the ash would result in extensive environmental and economic damage.
- ◆ According to the Virginia Department of Environmental Quality (DEQ), there are 277 different facilities in the Commonwealth (with 570 total outfall pipes) that are legally permitted to discharge one or more toxic chemicals into Virginia’s waters.

Thirty-one contaminated sites in Virginia are so hazardous that they are on EPA’s National Priorities List under the federal Superfund program. There are hundreds of smaller contaminated sites throughout the Commonwealth that remain unaddressed because, unlike neighboring states, Virginia has no comprehensive program to prioritize and clean up contaminated sites that fall outside federal jurisdiction.

(continued on page 4)

This is not an environmental record that we should be proud of. Reforms are urgently needed to reduce toxic chemical releases and toxic chemical exposures in the Commonwealth. These facts, moreover, are just the tip of the iceberg.

There are numerous other sources of toxic chemical exposure in Virginia that are poorly tracked by regulatory agencies. These include:

- ◆ Hazardous air toxics emitted from automobiles, trucks, trains, and boats.
- ◆ Toxic chemicals discharged into the air, water, and land from small facilities not required to report annual releases.
- ◆ Air pollution and water pollution coming from out-of-state. Because Virginia is downwind from industrialized states such as Ohio, we receive significant air pollution from our neighbors.
- ◆ Agricultural pesticides and weed killers.
- ◆ Household, school, and workplace sources of toxic chemicals, including asbestos, lead paint, formaldehyde, endocrine disrupting chemicals, and other substances.

This report is the first comprehensive examination of the sources of toxic releases in Virginia and the potential exposure of Virginians to harmful chemicals. We have reviewed publicly available data on toxic releases and analyzed the laws and regulations that allow these releases to occur. The central conclusion of this report is that the Commonwealth needs to use its own authority to fill gaps in federal law, step up enforcement, and protect Virginia's citizens from toxic exposures. Because Virginians are exposed to toxic chemicals from a wide variety of sources, focusing on one source of exposure misses the big picture. As the National Cancer Institute concluded in a 2010 report, "the American people—even before they are born—are bombarded continually with myriad combinations" of toxic chemicals. It added that "the true burden of environmentally induced cancer has been grossly underestimated." This report does not attempt to address every potential source of chemical exposure in the Commonwealth. For instance, we do not discuss asbestos, lead paint, occupational exposure, or the emerging issue of hydraulic fracturing chemicals. More research is needed to identify exposures and assess health risks from the wide variety of toxic chemicals released into Virginia's environment. Our review of the law concludes that existing law is inadequate to protect Virginians. There are major gaps in the law, and Virginia lags behind other states in using state authority to address chemical risks. For example, Virginia lacks a comprehensive program to identify and clean up hundreds of contaminated sites in the Commonwealth that are not covered by the federal Superfund law. Moreover, current budgets for program and enforcement personnel are inadequate to enforce existing law, let alone the expanded protective program we recommend in this report. The toxics program at DEQ is understaffed, with about thirty full-time employees devoted to implementing and enforcing toxic chemical laws and regulations for the entire Commonwealth. In comparison, we have found that North Carolina, a state with a population slightly larger than Virginia's, has around one hundred full-time employees implementing and enforcing toxic chemical laws and regulations. Our review concludes that most of the toxic releases to our environment are not illegal. They are usually permitted by DEQ, which implements federal and state environmental laws. The Commonwealth retains the authority to crack down on toxic discharges by enacting laws and issuing permits that are stricter than what federal law requires. However, it has rarely acted on this authority. There is little prospect for new federal environmental regulation or federal grant programs to assist the states on enforcement. For the foreseeable future, the Commonwealth must take the lead to protect its own citizens.

OUR PRINCIPAL RECOMMENDATIONS ARE AS FOLLOWS:

- ◆ The General Assembly should increase funding and personnel at DEQ to oversee an expanded, protective, toxic chemical program, and it should consider consolidating personnel in a new Division of Toxic Substances at DEQ.
- ◆ The General Assembly should enact new legislation providing clear authority to DEQ to require responsible parties to clean up contaminated sites not addressed under the federal Superfund program. The General Assembly should also empower DEQ to undertake clean-up itself, using state funds, and then seek reimbursement from responsible parties.
- ◆ DEQ should use existing authority under the Waste Management Act to enter into consent orders with parties willing to remediate contaminated sites.

(continued on page 14)

Summer Picnic At Maranon Farm



At John Fowler and Mary Sanders Maranon Farm south of Millboro Springs, a large tent provided shelter for over 60 CRPA members and guests. In the background, folks pass down the food and beverage tables loading up on goodies.



Bill Hardbarger grills up some corn on the cob as Terry King, Mark Pace and Eddie Walters catch up on the latest happenings on the river.



Mike Whiteside helps grillmeister Joe Wood cook up the burgers and hot dogs.



Picnickers gather along the river to enjoy the comfortable temperatures and peaceful, easy feeling of a day on the water with family and friends.



The action was hot and heavy at the food table as picnickers filled plates with burgers, hot dogs and all the fixings as another CRPA Summer Picnic on the river brought friends, old and new together.

Fall 2013 River Cleanup: CRPA's Adoption of the Walton Tract Endures



The Fall Walton Tract Cleanup took place on a sunny Sunday afternoon, September 29. Our dedicated crew of river stewards included (left to right) Keith Carson, Dave Peters, Puggy Farmer, Roger Baroody, Cynthia Baroody and Polly Newlon.

Upcoming Events

Look for the following events and activities as they are scheduled in 2014:

- ◆ U.S. Forest Service Public Meeting on the Lower Cowpasture Watershed Restoration Project, Monday, March 24, 6-8PM, Millboro Elementary School.
- ◆ Walton Tract Spring Cleanup, 2 PM Sunday, April 27, 2014, more details TBA in the Spring newsletter.
- ◆ CRPA Annual Meeting, 4 PM Saturday, May 10, 2014 at the Fairview Community Center. Look for details and registration information in the next newsletter coming out in a few months.
- ◆ River Floats scheduled as weather and river conditions permit. Check with Keith at 540-474-2858 for details
- ◆ CRPA Summer Picnic, to be scheduled

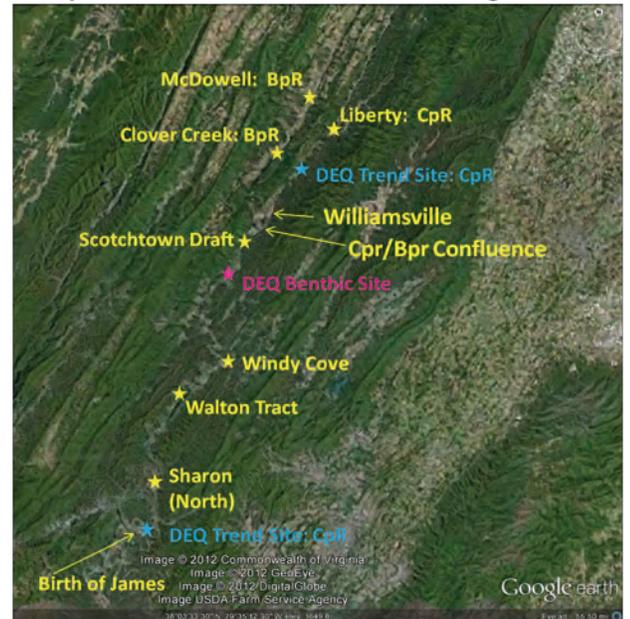


Health Matters: Water Quality Monitoring Marches Forward

By Polly Newlon, Project Director

The year 2013 was good for the CRPA's monitoring program. Twenty volunteers, including seven station managers, conducted monthly bacterial and quarterly benthic studies of the Cowpasture and its major tributary, the Bullpasture River, on 108 occasions throughout the year, involving almost 200 individual volunteer visits. In many cases, up to 5 or 6 volunteers attend the benthic collections. These statistics demonstrate a remarkable dedication of effort from both CRPA member-volunteers as well as non-member volunteers who have collectively made the expanded program a success. In addition to these volunteer efforts, and thanks to grant funding, I was able to begin the chemistry monitoring across all seven stations in June of 2013 with monthly sampling and analysis being conducted thereafter. January of 2014 has proven to be quite a challenge for many to obtain samples since the unusually cold weather iced the river over to extents not seen for years, if not decades. But, a wealth of data has been obtained over the last twelve months. I will focus here on presenting a summary of the bacterial and benthic studies that were detailed in *The River Runs* last summer, as well as presenting some of the data on water conductivity, pH, nitrogen, and phosphorous for which there are six months of data now in hand. In November, I was honored to present our data at the fall meeting of the Upper James Resource Conservation and Development Council. The presentation was well received with kudos granted for the decentralized model we are using that has produced such a large amount of information primarily from volunteer efforts with a small dedication of paid staff time. The existing grant that has made this project possible will run through June of 2014 and I will seek additional funding this spring to allow the project to keep moving forward. It is estimated that now that the project is up and running, roughly \$10,000 per year in staff time will be sufficient to maintain the program and possibly expand to additional monitoring sites.

Cowpasture Watershed: Monitoring Stations



This Google Earth Map shows the monitoring stations the CRPA is using in its expansion program, as well as some of the existing DEQ sites monitored over the years. The majority of sampling sites, at least during this initial expansion, have been along the main stem of the Cowpasture and its primary tributary, the Bullpasture River.

Bacteria. As reported in last July's issue of *The River Runs*, and consistent with Kent Ford's findings over the years, bacterial levels throughout the watershed have generally been found to be low. This is especially true where the river courses through Bath County. However, transient elevations have been observed during summer months, particularly in Alleghany County and in Highland County at McDowell where the density of human presence is greater. Station managers at the Upper Sharon site and in McDowell have taken additional samples upstream when these elevations occur in an effort to hone in on the locations/sources of problems. While Bath County has many farms and residents, a large proportion of the CpR watershed in that area is National Forest or Wilderness Area and the human impact is likely reduced as a result. We have recently become concerned about a small portion of Crab Run in McDowell and have been in communication with local landowners about these issues as we feel they may be derived from septic problems. McDowell does not have a waste water treatment facility but rather, private septic systems. As far as agriculture, Crab Run generally drains Jack Mountain, another highly forested, low farm-density area, and joins the Bullpasture River in the village of McDowell. The Bullpasture at that point is flowing south from its origins near the West Virginia line and usually runs a little higher in bacteria than Crab Run since it primarily drains agricultural areas to the north of McDowell. We cannot know the source (i.e. livestock, human, wildlife) of bacteria without a costly DNA analysis and levels have come down over the winter months. We have increased the number of routine sample sites in that area to help localize the problem area in the coming spring. The DEQ has been informed and I have met with staff

Health Matters: Volumes of Data Flowing in from Volunteers.

on site to discuss our concerns. Our plan at present is to communicate directly with nearby landowners so that they might have an opportunity to examine and/or alter practices possibly contributing to the local bacterial load. So far, despite transient high levels in the McDowell area, samples taken several miles downstream at Clover Creek suggest that natural processing and dilution are helping to ameliorate the problem.

Benthic Macroinvertebrates. The Good Bugs. The results of seasonal benthic macroinvertebrate monitoring continue to show good Multimetric Index scores across the watershed. As we accumulate data over the years, it will be easier to detect any downward trends. Abrupt or remarkable changes in numbers of animals as well as disappearance of those that are sensitive to pollution or lack of oxygen can hallmark an acute event of pollution, including over-sedimentation. We have yet to observe such issues in the Cowpasture watershed. Table 1 shows results of summer and fall assessments. Earlier data were provided in the Summer, 2013 *River Runs*. The best possible score is a 12 with 7 being unacceptable conditions. Going forward, 2014 winter samplings are presently being scheduled as the weather permits. Clearly, that did not involve January this year. ☺

Table 1. Benthic Sample Site	Summer 2013	Fall 2013
McDowell (BpR)	10	10
Clover Creek (BpR)	10	10
Liberty (CpR)	11	9
Scotchtown Draft	12*	12
Windy Cove	11	9
Walton Tract	11	10
Upper Sharon	11	10

Shout Out.....

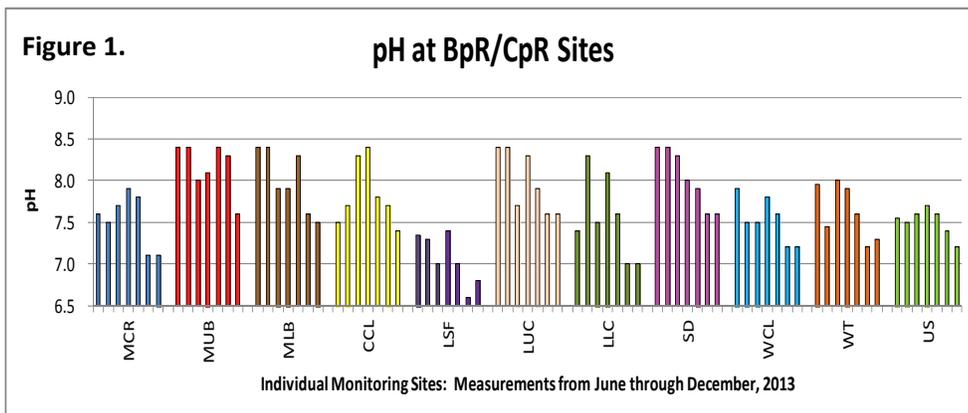
for Highland volunteer Celia Rutt, who has been the station manager at Clover Creek on the Bullpasture since the project's expansion began in July of 2012. She has done a fantastic, conscientious job of managing bacterial and benthic collection at her site and she will be missed.

Want to Help?

We are presently scheduling a spring training session in benthic macroinvertebrate sampling. Volunteers are welcome to join the program and can become certified monitors with Virginia Save Our Streams. Contact Polly at keeperclean@gmail.com or call 540.474.2858!

*June 1, 2013

New Stuff! New physical and chemical measures were added beginning in June, 2013. When new measures are introduced, it is important to establish baseline profiles for each site. These features will show natural changes over the various conditions met during a 12 month period even in the absence of any untoward event that we would hope to detect. Variation will occur due to precipitation and resultant changes in water volume, temperature, animal activity levels, and the geology of the streambed and soils in the surrounding drainage area. Figure 1 shows the pH, (acid/alkaline) trends of the water at our 7 sites over a 7 month period. Each color group is a specific site with bars representing monthly samples taken from June through December. All values were found to be within an expected range for freshwater streams in our area, from 6.8-8.4 pH units. The variations within a site are likely due to rainfall levels. For example, rain events will lower pH since VA rain is slightly acidic.

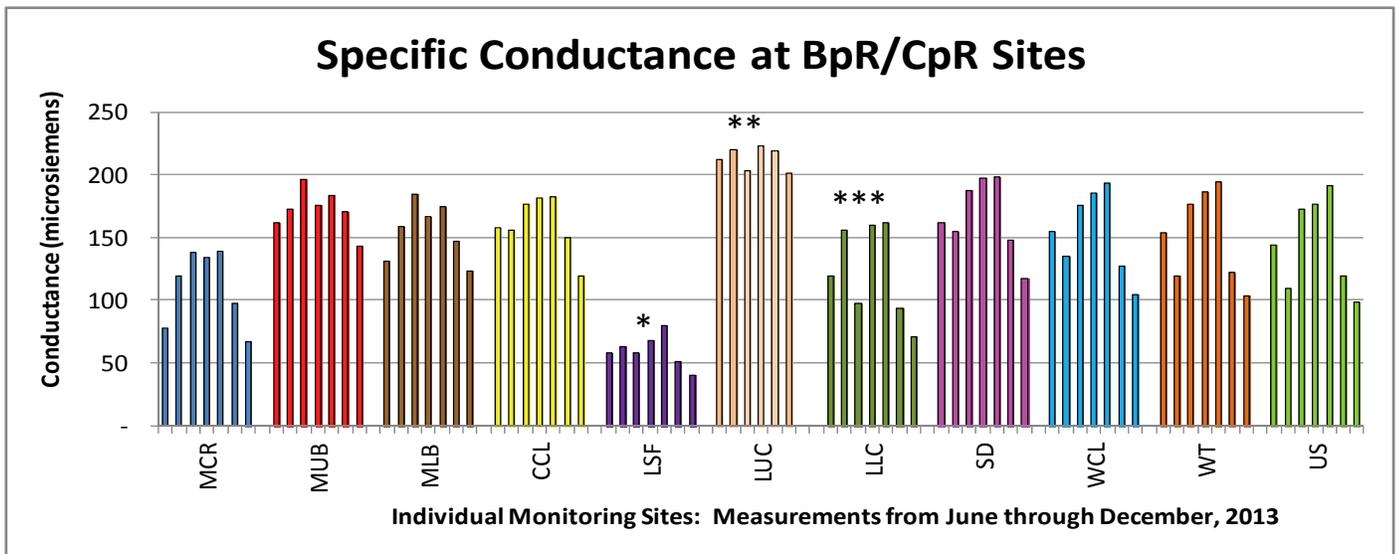


This effect is clear in Nov/Dec when stream levels were high due to precipitation, both rain and snow. Also, limestone in our Karst area shifts the pH of waterways up toward basic. Generally, while values varied over time within a site based on conditions, they generally remained within 1/2 to 1 pH unit over 7 months. See page 10 for site key.

Health Matters: New Measures Provide Another Viewpoint

Figure 2 shows the data on “specific conductance” for the seven sites over the same time period. Conductance is a measure of how well electrical current passes through the water and is an indicator of how many and what types of solids are in the water. For example, charged particles such as the ions of sodium, potassium, and calcium, carry current easily (have high conductance) whereas large amounts of “nonpolar” solids in the water such as oils, alcohols, and other uncharged molecules conduct current poorly and result in a low conductance. Distilled water (no dissolved molecules present at all) has a conductance of zero. One could obtain a low conductance due to either few dissolved solids (very clean water) or large amounts of non-conducting molecules. Conductance readings are also affected by the temperature of the water and so “specific” conductance is often used in which a mathematical correction is made to account for temperature variations. Our equipment corrects the measures to what would be seen at 25° C. In freshwater streams, natural conductivity can range from 50 to 1,500 microsiemens depending on the bedrock it runs through, soil, and tributary contributions. Our sites appear to be on the lower end of this range (50 - 200 μ s) and, with the exception of Crab Run (MCR) and Shaw’s Fork (LSF), which tend toward lower conductance, the sites look rather similar in their profiles and patterns over time. It is worth noting that, similar to pH, in the last two months shown (Nov/Dec) conductance dropped. In these months, precipitation and water levels were higher than usual and this drop likely represents a dilution by rainwater compared to the summer values. Since much of the Cowpasture watershed is in an environment that is rich in limestone, the water is “hard” (highly mineralized) due to concentrations of calcium carbonate that is leached from the limestone. This accounts of some of the particulate in the water, though harmless. Once we have obtained a full year’s cycle of baseline data, we will be in a better position to determine when variations are sufficient to detect disturbances in conductivity that might point to an event impacting the river such as a spill or dumping of a high volume of material. It is interesting to note in the graph below the large site differences obtained between Shaw’s Fork (LSF - *) and the Upper Cowpasture (LUC - **), both being relatively small waterways near the headwaters and that are separated by a single feature, Shaw’s Ridge. At Liberty, they join together. The Cowpasture River after they join, i.e. below their confluence (LLC - ***) shows the blending of the two waterways toward intermediate values. This contrast, which can also be see in the pH data for these two streams, points to the importance of local microenvironments seen in sub-watersheds that can demonstrate very different physical, hydrologic and geologic conditions, even though very close in geographical proximity.

Figure 2.



Site Key: MCR: McDowell, Crab Run; MUB: McDowell, Upper BpR; MLB: McDowell, Lower BpR; CCL: Clover Creek (BpR); LSF: Liberty-Shaw’s Fork; LUC: Liberty, Upper CpR; LLC: Liberty, Lower CpR; SD: Scotchtown Draft CpR; WCL: Windy Cove CpR; WT: Walton Tract CpR, US: Upper Sharon CpR

Health Matters: Nutrient Measures Added to Armamentarium

Nitrogen and phosphorous are naturally occurring elements on earth and fundamental building blocks of life among other elements such as carbon and oxygen. Nitrogen, in particular, plays a prominent role in earth's atmosphere and phosphorous is a critical part of the energy metabolism that makes many life forms run, especially mammals, and primarily through molecules of phosphate. So, the elements themselves and their various molecular forms may not be pollutants or toxins in themselves, but are considered "nutrients", and not in a good way. The water quality issues regarding these elements are primarily related to their use by humans and their effect on aquatic life forms in which they may interfere with natural processes. Nitrates, nitrites, and phosphates are present in things such as animal waste, fertilizers, herbicides, pesticides, and detergents. Historically, this has resulted in their being used on the land surface of watersheds and ultimately being washed into streams by runoff or other means, or from inefficient waste water treatment. High levels in streams can be detrimental to native stream life by becoming food for algae and other organisms that not only interfere directly with native life through competition for nutrients, but also use and reduce oxygen levels both while alive and during death as their post-mortem break down is an oxygen-demanding process. Therefore, the reduction of the various molecular forms of these elements in watersheds has been a primary mission of those devoted to preserving or returning a natural quality of life for waterways ranging from the mountain native trout streams to the Chesapeake Bay. In Virginia, phosphorus has been banned from use in lawn fertilizers and de-icers. Phosphorus-free detergents are also appearing on shelves across the country as states begin to look closely at the impacts of these nutrients on watersheds.

In June of 2013, the CRPA added measurements of these substances to the monitoring effort with monthly assessments. A more detailed report will be provided in the Spring *River Runs*. Here, we provide a brief synopsis and glimpse of the data gathered so far. Our values for these elements are generally quite low so we have included in Table 2 the highest levels of each found at any time over the seven month period of sampling. Asterisks indicate calculated values. The values for Nitrate/Nitrogen and Nitrate/NO₃⁻ are from samples taken in November or December under high water/runoff conditions. Up to that point in the year, these levels were quite low. Similarly, the vast majority of phosphate tests showed undetectable phosphate ("- " = zero). Those that were measurable were obtained during summer months and remained within the natural range. The standard values for comparison are shown in red with that expected for natural conditions as well as levels considered to be high in human-inhabited regions. Stay tuned for more detail in the Spring edition of *The River Runs*!

	Nitrate Nitrogen (mg/L)	Nitrate* NO ₃ ⁻ (mg/L)	Phosphate* (mg/L)	Phosphorous* (mg/L)
Natural	<0.1 mg/l	<1 mg/l	<0.01 mg/l	0.005 - 0.02 mg/l
Watch Out!	5 mg/l	3-10 mg/l	0.05-0.1 mg/l	0.1 mg/l
McDowell				
Crab Run	0.200	0.880	0.003	0.001
Upper BpR	0.780	3.430	0.040	0.013
Lower BpR	0.740	3.256	0.040	0.013
Clover Creek	0.440	1.936	-	-
Liberty				
Shaw's Fork	0.580	2.550	-	-
Upper CpR	0.740	3.256	0.040	0.013
Lower CpR	0.600	2.640	0.080	0.027
Scotchtown	0.580	2.550	0.040	0.013
Windy Cove	0.500	2.200	-	-
Walton Tract	0.400	1.760	0.020	0.007
Upper Sharon	0.240	1.056	0.020	0.007

Shout Out.....

to volunteer station manager Roger Baroody, of Covington, who has logged the most hours of any volunteer participating in the expansion. Manager at the Walton Tract in Bath County, he hasn't missed a single one of 23 sampling sessions at his own site as well as helping at other stations. He and wife Cynthia can always be counted on to show up and help when needed, having participated in 15 benthic sessions across the watershed. He exemplifies dedication and the meaning of team effort. You go, Roger!

And Welcome!

To new station manager at Clover Creek, Dan Solomon of Meadowdale, who recently retired from the Natural Resources Conservation Service office in Richmond and now resides in Highland County full-time.

People Matter: Thank You and Welcome New Members

As the Annual Campaign gets rolling, we offer THANKS from the board and membership for your continued, generous support! This list includes dues and gifts received between July 20th, 2013 and January 15, 2014.

Bedrock Patrons

Tuck and Chris Carter
Kent and Ellen Ford
Tim and Lynn Pistell

Wallawhatoola Society

Elizabeth Biggs and Nelson Hoy
Lucius and Pam Bracey
Bill and Christie Hardbarger
Nolan and Hope Nicely
Lou and Betty Robinson
George Snead, Jr.
Michael Wildasin

Watershed Stewards

Cynthia and Roger Baroody
Camp Mont Shenandoah
Tal and Christine Kemper
Jean Ann Manner
Morrison and Meryl Manner
Jim and Anne McVey
Joan Rule
Truman and Nellie Semens
Carson and Jeff Sullivan
Stephen Young

Headwaters Circle

Charles Black
Keturah Bracey and Jay Horine
David Brooks
Michael S. Christian
John Devenny, Jr.
Witcher and Elizabeth Dudley
Monroe and Kathy Farmer
Billy and Susan Frank
Marshall and Jane Higgins
Paul Higgins
Robert and Ann Howe Hilton
Allan and Becky Howerton
Leighton and Pinky Houck
Jean Howell
Jonathan Jencks
Annette Kirby
Anna & Tom Lawson
Light's Enterprises
Charles and Linda Lunsford
Read Lunsford
Martha Manner-Brown and Dennis Brown
Clifton Marshall
Mary Powell-McDaniel
Carrington Pasco

Headwaters Circle, cont.

Mr. & Mrs. John T. Percy
Dave and Sandy Peters
David K. Peterson
Bill and Barbara Tavenner
John Turner, Jr.
Mike and Peggy Van Yahres
Eddie and Sheri Walters
Dr. and Mrs. Philip Watt
Mike and Marla Whiteside
Camille Baudot Wheeler
Robin and Mina Wood

River Guardians

Phil Agee
Richard Barnes
Elizabeth Barton
Sally Branch and Roy Simmons
Tim and Bonnie Carpenter
Sonny and Bea Clark
Mike and Shirley Cunningham
Jimmy & Trisha English
Jim and Bonnie Fitzgerald
Mike Goode
David Higgins
Patrick Higgins
Highlander Hunt Club
Layton Hulette
Michael Jamison
Gary and Lois Johnson
Cynthia Kane and John Schmerfeld
Marc Koslen
Thomas Lambdon, IV
Jon and Betsy Lasley
Lloyd and Elizabeth Lipscomb
Marlibba Farms
Dr. Edward Metzger
Rick and Suzanne Miller
Jim and Katherine Morris
Fred and Peggy Paxton
Jim and Sarah Redington
Tommy and Kelly Slusser
William E. Wilson III
Roy and Ann Wright

Members

Sally Bingley
Daisy Boyd

Members, cont.

Mrs. Arthur B. Davies, III
Candice and Katherine Dupoise
Wade Evans
Kathleen Gordon
Channing M. Hall, III
J. Lesslie Hall III
Jennifer Hawes
Elizabeth Hereford
Dimmitt Houff
Barbara Keller
William Lipscomb
Phil and Charlotte Lucas
Dan Miles
Lang Murray
Barbara Newlon
Amanda Owen
Kevin and Cindy Rice
Dorothy Lynn Sinsheimer
Eddie Stinespring
Ten Eyck T. Wellford
Francis Wolfe

In Memory of:

Anne and Lockhart McGuire

Lissy and Stewart Bryan

David Moneymaker

Martha Ruggles

Anna Margaret Nelson Russell

Donna M. Braxdale
Risa Dunn
Glenn and Mjylis Gibson
Barbara Ledford
Paul and Betty Robey
Jill Sykes

Herbert Bruce Thomson, Jr.

Don Thomson

Welcome New Members!

Doug and Debbie Albrecht
The Bartons
Tom and Susan Lynch
Blair and Doug Meeks
Doug and Carrie Meeks
Johnny Ray and Kellyn Meeks
The Young-Kruegers
Phil and Betty Jean Young

Another way to give!

Now you can pay dues or make a gift online at www.cowpastureriver.org. Just go to "donate" and find the way you'd like to give.

Did we get it wrong? We're sorry for any errors or omissions in this list. We are happy to correct errors.

Email directorcrpa@gmail.com or call 540-474-2858

The U. S. Forest Service Lower Cowpasture Restoration Project—Request For Input

The Lower Cowpasture Restoration Project is a collaborative effort for integrated management at a large landscape level over a longer timeframe (approximately 10 years). The emphasis for the Lower Cowpasture is watershed restoration including water quality improvement, vegetation management, recreation management, and native species protection and habitat improvement. The objectives for the project proposals are to advance the natural resource goals for the area as outlined in the goals and objectives of the Revised Land and Resource Management Plan for the George Washington National Forest. The project area is approximately 117,552 acres of which approximately 77,680 acres are National Forest System lands. The area is located in the Cowpasture River, Jackson River, and Calfpasture River watersheds Bath and Alleghany Counties. During the 2013 calendar year, Forest Service staff met with the public and various stakeholder groups on several occasions to identify potential projects. Four public workshops and three field trips were held to facilitate this process. District Ranger Patrick Sheridan and his staff in the Hot Springs office are now asking for input to help them identify issues, concerns and other potential opportunities in this project area prior to the next public workshop, which is scheduled for Monday, March 24, 6-8PM at the Millboro Elementary School. The plan for this workshop is to identify issues, areas of consensus, concerns, conflicts, and other opportunities. During 2014 the Forest Service will continue to refine the project proposals for the Lower Cowpasture and they hope to conclude proposed action planning by July, 2014. Potential projects include the following.

Aquatic Passage/Watershed Improvements

Wilson Creek dam removal and culvert replacements to allow fish passage.

Repair of slope failures in the Simpson Creek drainage along the Interstate Rt. 64 corridor.

Prescribed Burning

In partnership with The Nature Conservancy and Douthat State Park there is an opportunity to expand restoration of forest areas through the use of prescribed burning. Fire has been part of the history of the Alleghany Highland landscape for thousands of years. Fire suppression over the past 100 years has caused damage to woodland ecosystems. Prescribed burning can restore woodlands to a healthier state and improve wildlife populations. Twelve potential burn units totaling approximately 11,500 acres have been identified for further analysis. Burn units range in size from 360 to 2,668 acres.

Forest Management

Potential areas for timber management include Lime Kiln, Beards Mountain, McGraw Hollow, and Sandy Springs for a total of 3,461 acres. Additional opportunities may be found in the Pads Creek, Cliftondale Road and Craft Road areas.

Wildlife

Potential areas for wildlife improvement include Lime Kiln, Beards Mountain, McGraw Hollow and Sandy Springs. Possible improvements include wildlife clearings and waterholes.

Non-native Invasive Species

Proposed projects include invasive plant management activities along forest system roads, in forested stands, and in the Walton Tract. Approximately 250 acres of woodland and 55 miles of roads are being analyzed for inclusion in this project.

Road System Work

Road maintenance is needed on FSR 125 (Sandy Springs) and FSR 194 (Lime Kiln). In addition, unauthorized roads need to be blocked and some existing roads should be decommissioned.

Recreation/Wilderness

Proposed projects include invasive plant management, developing better public access to the Rough Mountain Wilderness and creating or improving connectors with Douthat State Park trails.

(continued on the next page)

(continued from page 13)

American Chestnut

A proposal is being developed to set up chestnut tree plantings. Work is ongoing with the Virginia Chapter of the American Chestnut Foundation and the American Chestnut Cooperators Foundation to complete a proposal.

The Forest Service office in Hot Springs welcomes your input on these potential projects. Additional information on projects including a variety of maps is available on the George Washington National Forest Website, <http://www.fs.usda.gov/main/gwj/home>. Look for the section on the Lower Cowpasture Watershed Restoration Project. Input may be hand-delivered to either the James River or Warm Springs District offices during normal business hours, FAXed to 540-839-2496, or emailed to comments-southern-georgewashington-jefferson-warmsprings@fs.fed.us. When sending electronic input please note the name of the project (Lower Cowpasture Project) in the subject line of the email. When sending input through the U.S. Mail, use the following address:

Patrick Sheridan, District Ranger

USDA Forest Service

Lower Cowpasture Project

422 Forestry Avenue

Hot Springs, VA 24445

If you need additional information on this project please contact Karen Stevens at the James River Ranger District at 540-962-2214 or Warm Springs Ranger District at 540-839-2521.

(Continued from the bottom of page 4: Toxins In Virginia Rivers)

- ◆ DEQ and the three citizen boards governing air, water, and waste should enact strict limits on toxic chemical releases in environmental permits, especially in environmentally sensitive areas. The General Assembly should also provide authority to regulate toxic substances not controlled under federal law.
- ◆ DEQ and the three citizen boards should focus stricter permitting and enforcement efforts on chemical manufacturing and electric utilities, which are responsible for more than two-thirds of all reported toxic chemical releases to Virginia's environment.
- ◆ The Virginia Waste Management Board and DEQ should close numerous loopholes in regulation that allow health risks to continue from toxic coal ash from power plants. Using existing authority, the Board and DEQ should increase inspections, monitoring, permitting, and oversight of coal ash landfills and ponds.
- ◆ The General Assembly should enact legislation that treats coal ash disposal sites as hazardous waste facilities.
- ◆ The General Assembly should increase the amount of penalties that DEQ can seek through informal orders to \$15,000 per day of violation.
- ◆ DEQ and the Attorney General should enforce existing laws requiring reporting by facilities that store toxic chemicals, and they should audit reports submitted by industry to ensure compliance with the law.
- ◆ The General Assembly should enact a comprehensive program to reduce exposures to toxic chemicals from products such as children's toys, electronics, furniture, and construction materials. The program should adapt models from other states and should include product labeling, identification of priority chemicals, and, where necessary, product bans.

While the Cowpasture River is not currently exposed to the level of toxins found in other parts of Virginia, the longer these problems are ignored statewide, the greater the threat to the rivers in the Allegheny Highlands.

**40th Anniversary commemorative merchandise
is available through the CRPA website**

Looking for a gift idea?

**Gift a friend or relative with a CRPA membership and a treat
such as a t-shirt, a mug or a tote bag**



**T-Shirts
100% Cotton
Available
in
Green or Blue**

**\$15 each
(SM, MED, LG, XL, XXL)**



Large Cotton Tote Bags \$15



Mugs (14 ounce) \$10

**Visit the CRPA website at www.cowpastureriver.org, click on the
“Merchandise” link at the top right and follow the directions to place orders**

Not a member? Want to help make another 40 years happen? Join today!

- \$20 Individual (minimum annual membership donation)
- \$50 River Guardian
- \$100 Headwaters Circle
- \$250 Watershed Steward Other _____
- \$500 Wallawhatoola Society
- >\$500 Bedrock Patron
- Junior Membership(s): 15 years and under; Cost = 4 hrs./year volunteer service

NAME(S) As You Want Them Published

ADDRESS

CITY — STATE — ZIP

PHONE

E-MAIL

- I prefer not to have my name published as a contributor.
- I am interested in becoming a volunteer river monitor
- I want to help save valuable resources, please send my newsletter by email


Cowpasture River
Preservation Assn.
P.O. Box 215
Millboro, VA 24460

STANDARD
PRESORT
U.S. POSTAGE PAID
PERMIT NO. 38
DALEVILLE, VA



*Printed on recycled paper.
Please recycle this newsletter
when finished by passing it on
to someone else.*