



# Lake James Environmental Association Newsletter

Winter 2010 - 11

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*Protect and enhance the health and beauty of Lake James and its watershed*

## Board Members

George Johnson (P)

|                    |                   |
|--------------------|-------------------|
| JoAnne Stewart (V) | Bruce Whipple (T) |
| Otis Wilson (S)    | Bill Hendley      |
| Ken Harris         | Bill Bell         |
| Mike Jackson       | Eric Loomis       |
| Jimmy Blanton      | Sean McElhone     |
| Bob Long           | Charles Sander    |
| Jack Raker         | Jeff Taylor       |
| Bill Chapman       | Ivy Oates         |
| Judy Francis       | Ted Restel        |
| Rindy Stiene       |                   |



## Message from the President:

Our newsletter has a whole new look this month. This is the inspiration of our new editor, Eric Loomis (pictured below), who is gifted with imagination, creativity, and excellent IT skills.

We hope you find the new approach appealing and informative. Please let us know what you think by sending comments or ideas to [info@ljea.org](mailto:info@ljea.org). We aim to please our members.



The New Year is a good time to reflect on where we've been and where we are going. So, following the articles and updates we summarize LJEA's 2010 accomplishments, continuing activities for 2011, and new projects planned for next year.

Thank you for your continued support as we strive to protect and enhance the health and beauty of Lake James and its watershed.

Happy New Year,

**LJEA**

P.O Box 430  
Nebo, North Carolina 28761

[www.ljea.org](http://www.ljea.org)



[info@ljea.org](mailto:info@ljea.org)



# Radon Action Month

by George Johnson

January is "Radon Action Month." LJEJA urges you to take advantage of this program, during which NC will provide free home test kits for residents to test for unsafe levels of radon.

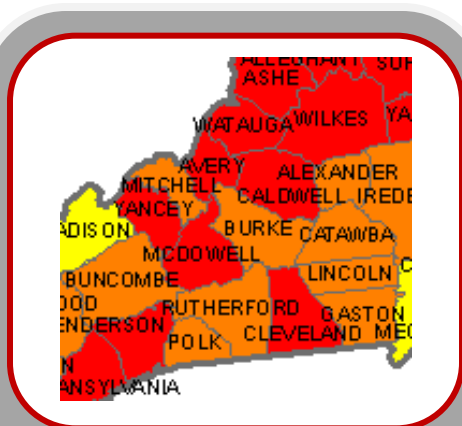
Radon is a naturally occurring radioactive gas that is invisible, odorless, and tasteless. It is released harmlessly from the ground into outdoor air, but can reach harmful levels when trapped in homes and buildings. Some of our members have found unsafe levels in their own homes and have acted to reduce them.

This year McDowell has been designated a Zone 1 (Red) county by the US Environmental Protection Agency. This means the average home will test over 4 picocuries per liter (pCi/L), the level at which it is recommended that homes be fixed. Burke County continues to be rated Zone 2 (moderate), however, excessive levels have been found in Burke, too, even around the lake.

Houses in the same neighborhood can have very different levels, so every home should be tested. Testing homes for radon is simple and inexpensive. If you miss the free test kits in January from your county Extension Service Office, they can be ordered from the NC Radon Program for as little as \$4 each [www.ncradon.org/purchasetestkit.htm](http://www.ncradon.org/purchasetestkit.htm), purchased at local hardware and home improvement stores or ordered directly from radon testing companies. Should your home be found to have elevated levels of radon, the problem can be fixed by qualified contractors for a cost of about \$1,000 to \$2,500 depending on the home.

Free publications about radon are available to the public year around (by pick-up or by mail) from your county Extension Service Office or by visiting the NC Radon Program's website at [www.ncradon.org](http://www.ncradon.org).

For those who wish to start on their own, extensive information about radon is available at <http://www.ncradon.org> and test kits may be ordered from the NC Radon Program for as little as \$4 each <http://www.ncradon.org/purchasetestkit.htm>.



## McDowell County

Contact Kristin Mart to obtain publications, reserve test kits, and receive testing instructions or information on mitigation services. Free test kits will be available beginning January 3rd – January 31st

828-652-7874

[Kristin\\_Mart@ncsu.edu](mailto:Kristin_Mart@ncsu.edu)

## Burke County

Contact Eleanor Summers to obtain publications, reserve test kits or receive instructions

828-439-4460

[Eleanor\\_Summers@ncsu.edu](mailto:Eleanor_Summers@ncsu.edu)

## "Protecting Your Family from Radon: What You Need to Know"

Presentation by Catherine Rosfjord, Western Radon Coordinator

Thursday, January 6<sup>th</sup> 2pm – 4pm

**Burke County Agricultural Building**

130 Ammons Drive, Morganton, NC 28655

There is expected to be a supply of short-term test kits available to attendees!

**Register by Tuesday, January 4 at 828-439-4460**

*Special thanks to Kristin Mart and Eleanor Summers for the information used in this article*



# IBT Lawsuit Settled

By George Johnson

The Interbasin Transfer (IBT) lawsuit over apportionment of the Catawba River's water, under jurisdiction of the US Supreme Court, has been settled. Parties to the Settlement Agreement are the states of South Carolina and North Carolina and Intervenor Duke Energy Carolinas, LLC and the Catawba River Water Supply Project (CRWSP).

## As of December 10, 2010 both States agree:

- To regulate water use and withdrawal from the River Basin and
- To encourage or require conservation especially during periods of drought,
- To recognize withdrawal reduction measures in the Low Inflow Protocol (LIP) of the FERC's Comprehensive Relicensing Agreement (CRA)
- To update the Catawba-Wateree River Basin Water Supply Study every 10 years, working cooperatively with the Catawba-Wateree Water Management Group (CW-WMG). Certain stipulations are made regarding modeling, etc.
- To work together for a consistent system of approving IBTs within the River Basin.
- That during periods of drought, both States should require all owners of water withdrawal intakes who depend on water storage in Project reservoirs to implement drought response plans as stringent as the LIP requirements applicable to their water intakes.
- To develop a Memorandum of Agreement (MOA) after dismissal of the Litigation,
- To coordinate their agency permitting/approval processes for bi-state water providers for the purpose of avoiding unnecessary duplication. Public participation shall be involved in development of the MOA.
- To dismiss the dispute in the US Supreme Court
- That during the term of the New License neither State will file an action in the US Supreme

A copy of the settlement agreement may be obtained at:

[http://www.ncdoj.gov/getdoc/84e49df1-9bf6-4a0e-97c1-ef0a8d724ca8/SC-v--NC-Settlement-Agreement-\(executed\).aspx](http://www.ncdoj.gov/getdoc/84e49df1-9bf6-4a0e-97c1-ef0a8d724ca8/SC-v--NC-Settlement-Agreement-(executed).aspx)

A copy of the dismissal document may be obtained at:

<http://www.ncdoj.gov/getdoc/190e600c-895f-4a6e-ba4a-17b540b5305d/SC-v--NC-Certified-Stipulation-for-Dismissal.aspx>



# McDowell Early College Stream Study at Greenway

By Jack Raker



On October 22, 2010, McDowell Early College Earth Science students participated in a stream study of the Catawba River along the new Joseph McDowell Historical Catawba (JMHC) Greenway in Marion. Three LJE board members, George Johnson, Mike Jackson, and Jack Raker attended as photographers and observers. Bill Hendley, a fourth LJE board member and president of the McDowell Trails Association participated as one of the instructors at the Historical Station.

Between the observation platform and the Little Round Hill Trail Head, Mike Kirk and the other instructors setup four instructional stations. The 50+ students divided into four groups and performed their hands-on activities by rotating through the stations in 30 to 40 minute intervals.



The stations and some of their related activities were:

**Physical:** The students measured the temperature and velocity of the river. They observed the clarity of the water and discussed factors that would affect it. Physical features of the river bed and its banks were noted, as well as the amount of sunlight.

**Chemical:** The students measured acidity and dissolved oxygen, nitrate, and phosphate levels of the water. They discussed other chemicals that may be found in the water. They listed how, when and where chemicals might enter the stream and how the stream and living things might be affected in the short and long term.

**Biological:** While some students held a small kick net on the bottom of the river, other students upstream kicked along the bottom moving organisms into the net. The specimens were delivered to students on shore who searched the net. Organisms were placed into containers and identified. Other students searched for life on the bottom of rocks and in the silt below and brought them to shore to identify. A group discussion was held as to how this life could be used to determine the health and purity of the river. The affects of silt on this life were noted. How other forms of life used and benefited from the river was discussed.

**Historical:** Students listened to Bill Hendley and others explain the history and significance of the Catawba River, the location, and the Greenway. Historical figures, locations and events related to the area were discussed and recorded. Bill, who grew up in the area, was able to give the students insight into how the river and surrounding area has changed in his lifetime. One change is the man-made canal that runs parallel to part of the Greenway on the opposite side of the trail than the river then under the Greenway into the river. It was used in a gravel operation nearby years ago.



After finishing the stations, the students enjoyed the beauty of the area by choosing their own locations to reflect on the activities and data while writing about the experiences. After sharing data and finishing their sack lunches, all seemed to agree that the multiple discipline stream study had been very rewarding. They had gathered evidence of what a splendid river and area they have and hopefully carried away lifetime memories.

LJEA is encouraging and offering assistance to all middle and junior high schools in McDowell and Burke Counties to have hands-on water related activities for all students. This spring, West McDowell Junior High science teachers are planning a similar activity along the JMHC Greenway for their students. Other schools are exploring the possibilities of holding events. It is our goal that all McDowell and Burke County students have the opportunity for similar experiences allowing for an increased appreciation for our marvelous water bodies and their watersheds, while ultimately encouraging the protection of these natural resources.



# Lake James to Become Drinking Water Supply

By George Johnson



McDowell County announced its intention to purchase land near Catawba Dam to develop a drinking water treatment plant within five years. As a public drinking water supply, the lake's Water Supply Classification will probably need to be changed from WS-V to at least WS-IV. The process may take three years, during which:

1. Department of Environment and Natural Resources (DENR) approval must be received signifying the lake water can be treated successfully for drinking purposes, and meets water supply water quantity and quality criteria.
2. Resolutions must have been passed by each local government having land use jurisdiction within the proposed watershed (largely stormwater runoff protection, and setback and density requirements for future development).
3. It is highly recommended that an Environmental Assessment (EA) or Environmental Impact Statement (EIS), as appropriate, be submitted by the county and reviewed by appropriate state and Federal agencies.
4. An acceptable Fiscal Analysis is prepared by DENR.

Then the application must pass muster with the Water Quality Committee, the Environmental Management Commission (EMC), the Rules Review Commission, possibly a legislative review and, finally, a review by the Federal Environmental Protection Agency (EPA).

## How good is the water quality of Lake James?

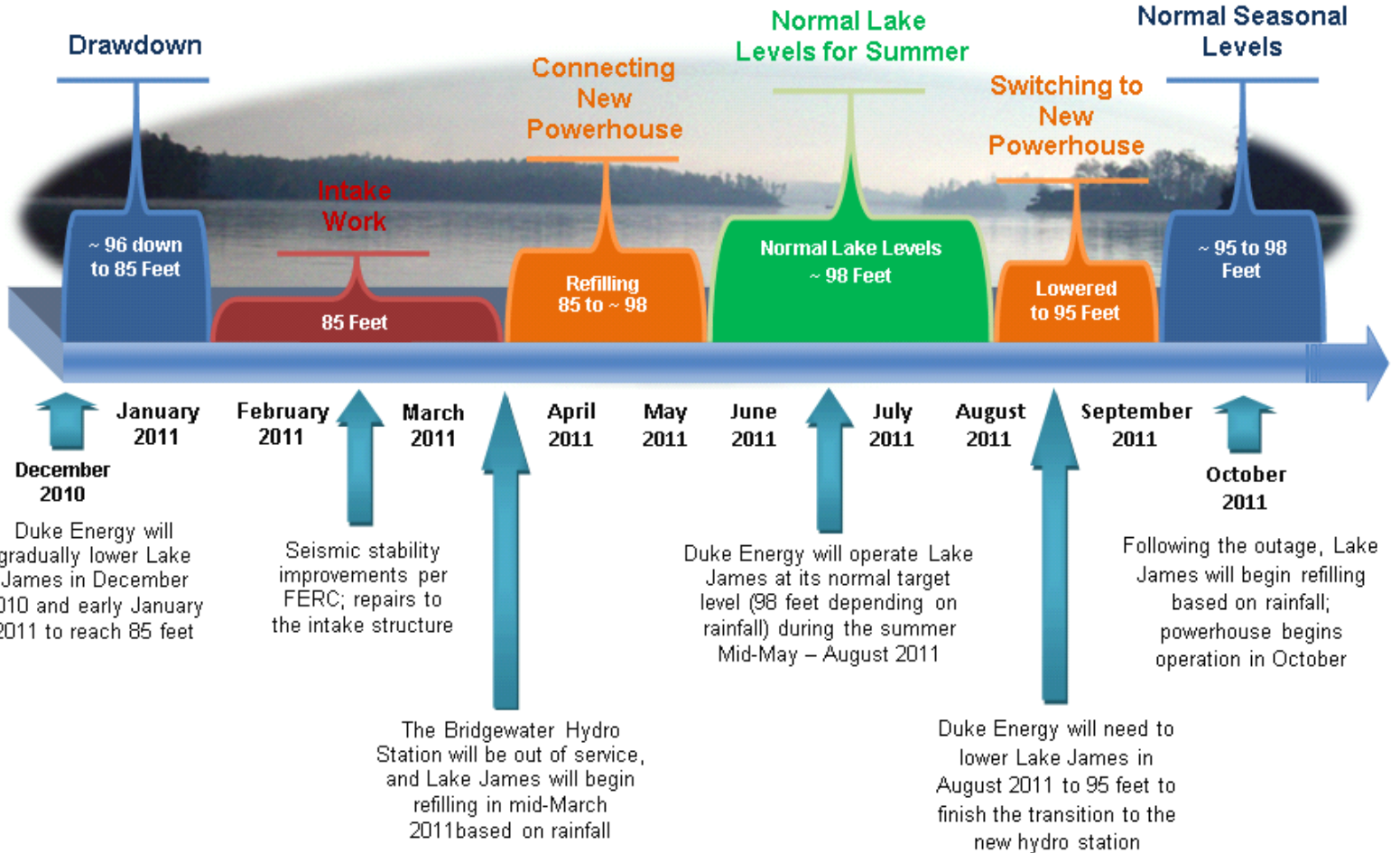
Based on almost a decade of water sampling by LJEA, the lake's water quality generally is good to excellent. Measured parameters are pH, alkalinity, turbidity, total suspended solids, conductivity, orthophosphate, ammonia nitrogen, and nitrate nitrogen, with some differences revealed between the Catawba and Linville sides. The Linville side is somewhat clearer due to lower pH, alkalinity, nutrients and fewer suspended solids. The Catawba sometimes experiences deep water stagnation producing stratification of temperature and dissolved oxygen. Higher nutrients and suspended solids on this side lead to greater fish populations but also susceptibility to algae blooms and fish kills. After major storm events, significant silt deposits occur at the west end of the Catawba side, and some at the mouth of the Linville. Both sides have occasional bacterial contamination, primarily during storm events and periods of high lake usage (e.g., warm season holiday weekends).

LJEA is studying the silt pollution problem. After the recent December storm event, when the lake rose three feet, the Catawba main branch from Old Fort ran very muddy. The primary source of that sediment was traced to Crooked Creek which enters the Catawba east of Old Fort. Other creeks may be problematic, too. So there is work to be done to maintain and improve the lake's water quality. On balance, there is no reason to believe that the water cannot be treated successfully for drinking purposes. Lake James has higher quality water than that utilized farther downstream for the same purpose.



# Lake James Lake Level Schedule

By Eric Loomis



Duke Energy sent out a letter to the community on December 8<sup>th</sup> 2010, describing a new plan for the required Federal Energy Regulatory Commission (FERC) Bridgewater Hydro Station repairs. This new plan was developed to reduce the project's impact on local business and recreation by allowing normal lake levels during the summer season. As shown in the above graphic, the lake will be lowered to 85 feet from early January until mid-March to complete the repairs to the intake structure. Once this work has been completed the lake will begin to refill based on rainfall. The lake will then be lowered one final time beginning in August in order to switch to the new powerhouse in September. The new powerhouse should begin operating in October.

For lake level updates during the Bridgewater Hydro Station repairs, call 800-829-LAKE or visit [www.duke-energy.com/lakes/levels.asp](http://www.duke-energy.com/lakes/levels.asp)

For dock, slip, or shoreline repairs during the lower lake levels, be sure to contact Duke Energy Lake Services at 800-443-5193 to obtain permits.



## December Volunteer Water Information Network (VWIN) Report

*By Bob Long*

The summer lake sampling is over and now from October to April we will be sampling only the Catawba, North Fork and Linville Rivers monthly. Despite the lake being lowered 15 feet our sampling will continue. In addition, we will be continuing to have the analyses done by the newly restarted Environmental Quality Institute (EQI) near Biltmore Village in Asheville. The EQI will give us enhanced comparisons of our data with those of other lakes and rivers in Western North Carolina.

Duke Energy's new lake level strategy, should assure that we have normal water levels throughout the lake sampling period next summer.



## 2010 Accomplishments

### Clean Water

- Continued monthly water sampling of Lake James (May-September) and its tributaries (year around). Water quality was generally good to excellent.
- Supported the Catawba Riverkeeper Foundation's hiring of an Upper Catawba Advocate.
- Continued working with county schools to develop hands-on opportunities for students to learn more about water quality.
- Saw completion of a several year project by the City of Marion (with early help from LJE Board Members) to upgrade its waste treatment plant south of town and close the plant which released effluent into the Catawba River just above Lake James. The result is cleaner lake water.

### Ample Water

- Continued monitoring stream flows and lake water levels.
- Kept members informed about Duke Energy's plans to lower lake levels for construction activities at the Bridgewater dam and powerhouse, about options for protecting their docks and boats and about drought stages, as necessary.

### Clean Air

- Participated in Radon Action Month, publicizing the dangers of radon gas in homes and other buildings and encouraging citizens to test their homes using inexpensive kits from their County Extension Service.

### Clean Surroundings

- Supported the development of the new state park. (Some Board Members were involved at the park's conception and acquisition)
- Publicized and participated in two lakeshore cleanups. One was in McDowell County during the spring. The other was in Burke County, at the New State Park in October.

### To further develop the capacity of our organization and to deliver on its mission, the LJEA...

- Collaborated with the Catawba Riverkeeper Foundation to have several members trained as Covekeepers
- Created its first brochure and assembled informative displays
- Participated in Earth Day and Catawba Riverfest events
- Expanded its board of directors. You will be reading about our Board Members in future newsletters
- Improved its website

### In 2011 LJE will continue...

- Participating in Radon Action Month (January)
- Testing the health of Lake James' water
- Working with county schools for hands-on learning about water quality
- Monitoring stream flows, lake levels and drought stages
- Providing status updates as appropriate
- Publicizing and supporting lake cleanups and the development of the new state park

### In 2011 LJE will develop additional capabilities and projects...

- Attack erosion and sedimentation by:
  - Publicizing/distributing information about laws, regulations and ordinances governing land-disturbing activities in each county (Burke and McDowell), an educational, problem-preventing approach
  - Undertaking a project to document how much sediment is in Lake James in which locations and pin-point its major sources for study of how best to respond
- Provide greater opportunity for members to participate in LJE programs and activities
- Further improve our website, newsletter and our IT infrastructure
- Refine LJE's strategic plan and priorities

