



Clean Water for North Carolina

Clean Currents

Spring 2016

Special Issue: What's in your drinking water?

A newsletter of clean water and community environmental justice issues

What's in MY Well?

Nearly 3 million NC residents depend on private well water, giving us one of the highest percentages of well users in the US. Well water is often a very safe source of drinking water; however, both natural and man-made contaminants can reach groundwater



pumped by wells, either through leaks in the well casing itself, or by percolating down through surface layers into the groundwater and movement through rock fractures or sandy aquifers.

To protect your health as a private well user, we strongly encourage you to test your well every 3 to 5 years for key potentially harmful contaminants. CWFNC recommends testing your well for at least the following: fecal coliform, arsenic, lead, zinc, nitrates, and nitrites. A full "inorganics" water test (required for new wells since 2008) would also include barium, cadmium, copper, fluoride, iron, magnesium, manganese, mercury, selenium, silver, sodium, and pH (acidity).

Clean Water for NC strongly supported the establishment of well programs in each county Health Department around the state, as well as the Bernard Allen Emergency Drinking Water Fund to provide safe replacement water for low income households with contaminated wells. **Since July 2008 the state has required well licenses and basic testing (bacteria and inorganics) for all new wells.**

Request a copy of your water quality test results and your well certificate. **If it has been 3 or more years since your well was installed or tested, we would recommend testing your well water again.** Even natural contaminants like bacteria or arsenic may not show up when the well is first drilled, but may reach the well over time and impact your health.

If there are nearby abandoned wells or old house or farm sites, please look around for old, unsealed wells and arrange to seal them to prevent direct contamination of your groundwater. You should mark the well clearly and contact a well contractor to carry out this process.

If you use a well located near a coal fired power plant, there may be coal ash sites nearby. Coal ash is the waste left after coal is burned at power plants. When coal ash comes in contact with water, its toxic ingredients can "leach" or dissolve out of the ash and into groundwater and move toward nearby wells. The NC Coal Ash Management Act of 2014 required the identification of all private water supply wells within a half-mile radius of a coal ash disposal site. Wells within a 1500-foot radius of coal ash dumps were offered testing by NCDEQ at no charge. If you're near a coal ash site, have limited resources and haven't had your well tested, contact Clean Water for NC at 828-251-1291.

If you live near a coal ash site, but outside of the 1500-foot radius, your county's Environmental Health Department can sample for the same tests as NCDEQ at a relatively low cost. Private labs can also test for toxic metals associated with coal ash, but are more expensive.

When considering what to test for, keep in mind potential sources of contamination in your location:

- Fecal coliform bacteria can occur anywhere, and may come from an incompletely sealed well or cracked well casing;
- Natural contaminants from rock formations: arsenic and radium; radon can also occur in groundwater in some areas, increasing amounts of radon gas that can be released into the home.
- If you live near agricultural operations, consider testing for pesticides, herbicides, petroleum, and nitrates. If you're near an old gas station, fuel storage site, or junk yard where vehicles have leaked fuel or oil, definitely test for "BTEX" volatile organics that may have migrated in the groundwater.
- If you're near a coal fired power facility, you should test for the "coal ash panel" and/or hexavalent chromium.

WHO WE ARE

Clean Water for North Carolina

Clean Water for North Carolina is a private, non-profit organization based in Asheville, NC. CWFNC works to ensure that all people have a right to live, work, and play in clean and safe communities. Together, we have the power and responsibility to work for a healthy and sustainable environment. Our staff works with an active and diverse board of directors, as well as members, to increase grassroots involvement in environmental decisions.

CWFNC spearheads action statewide and helps grassroots and environmental groups, individuals, and local governments develop strategies to address threats to the environment.

Our Mission

CWFNC promotes clean, safe water and environments and empowered, just communities for all North Carolinians through organizing, education, advocacy, and technical assistance.

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NC's Outrageous Retreat from Hexavalent Chromium "Do Not Drink" Notices

Last year, hundreds of NC households near coal ash dumps were told last year their water wasn't safe to drink. Their well tests showed high levels of cancer-causing hexavalent chromium, the toxin which caused people to get sick in Hinkley, CA in the docu-drama "Erin Brockovich." But in March, McCrory administration appointees did an about-face, saying the water was safe to drink again! The water hasn't changed, and the science on which the original warnings were based hasn't changed. So what gives?

Officials are tossing out the 0.07 parts per billion (ppb) hexavalent chromium "health screening level" despite careful research and calculations by state toxicology experts that this level represents a 1 in a million lifetime risk of developing cancer. Instead, they're comparing well water results to long outdated standards for total chromium, which everyone acknowledges aren't protective! Well users are more vulnerable than public water customers, as their wells aren't routinely tested for contaminants. Both public water customers AND well users deserve clear and accurate recommendations on the health risks of contaminants, even if they are below enforceable limits.

Clean Water for North Carolina, impacted communities, and other allies have been responding publicly to dispel misleading information in the letters sent to residents by State Health Director Randall Williams and Assistant Secretary for the Environment Tom Reeder. They claim these families' well water is as safe to drink as public water in cities and towns across NC. Not true! On average, we've found that well water near coal ash dumps contained far more hexavalent chromium than recent samples from nearby city water supplies, as found in EPA national testing program for "unregulated contaminants." You can find more facts responding to these officials' misleading statements on our website at <http://bit.ly/wellCR>.

These McCrory appointees would apparently rather shield Duke Energy from responsibility than give people clear information about whether their tap water is actually safe to drink. Hiding potential risks from private well owners is a worrisome indication that public health experts' recommendations might be shrugged aside on other contaminants, too.

In our opinion, this is an unforgiveable betrayal of the public trust.

SPECIAL THANKS TO MEMBERS OF OUR STEADYFLOW RECURRING GIFT PROGRAM!

Valerie Blanchette
Theresa Lanning*
T. Butler
Stan Coleman
Gayle Tuch

Henry Bruns
Deborah Long
Robin Olmes*
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To set up an automatic monthly, quarterly or annual gift by credit card or PayPal, visit bit.ly/CWFNCdonate and choose your donation frequency.

The Safe Drinking Water Act—How It Protects Public Water System Customers, and How It Sometimes Fails

A Brief History of the Safe Drinking Water Act

In 1974, with bipartisan support in Congress, the Safe Drinking Water Act (SDWA) became law, establishing the first national standards for drinking water, and began funding for local programs to protect current and future potential sources of drinking water. In 1988, under the Republican Reagan administration, the law was strengthened to give greater enforcement authority to act when systems remained out of compliance.

The importance of drinking water as a nonpartisan issue was emphasized again when a Republican majority Congress passed further amendments strengthening SDWA in 1996. Those important amendments increased reporting to the public about its drinking water (through an annual Consumer Confidence report), required assessment and protection of all drinking water sources, and created a permitting program for underground injection control (UIC), which had been widely used to dispose of chemicals and wastes with no regulation. Investigations of underground injection activities associated with disposal of fracking wastes have shown that EPA's UIC program has allowed wide exemptions that endanger nearby groundwater, contrary to requirements that the injected chemicals remain isolated for 10,000 years. This is just one key failing of SDWA that must be fixed to protect safe drinking water.

What is a public water supply?

Any water system that serves 25 or more residents or has at least 15 connections is regulated under SDWA as a "public water supply." Publicly owned water supplies are owned and operated by a city, county or other public authority, and decisions about system operation and budget are made by a local government or board. Privately owned public water supplies are owned by a company such as Utilities Inc. or Aqua NC, usually with a remotely located Board that protects the interests of the investors, rather than customers. Customers of privately owned systems pay significantly more than those on publicly owned supplies, and report many complaints related to water quality and service.

What is a drinking water standard or MCL?

The SDWA categorizes harmful contaminants either as "primary contaminants", which have direct public health impacts, or "secondary contaminants," which affect color, odor, or taste. The National Primary Drinking Water Standards are called Maximum Contaminant Limits (MCLs) and are enforceable by EPA and states like North Carolina, which have "delegated" Public Water Supply regulatory programs. A few of these primary contaminants include: Arsenic, Lead, Fecal Coliform bacteria, and disinfection byproducts such as trihalomethanes (THMs). Every 5 years, EPA considers adding new contaminants to be federally regulated, but the process is very slow and, because industry can weigh in heavily on the enforceable drinking water standards (MCLs), often results in far less protective standards than a purely health protective approach would require (*see page 6 for more detail*).



In North Carolina, the Public Water Supply Section of the Div. of Water Resources has authority to enforce federal drinking water standards and other aspects of SDWA. However, EPA always has oversight authority and can take strong action if a local water supply violates the law and the state agency doesn't act.

The Lead and Copper rule: What happened in Flint, MI?

The recent terrible occurrence of widespread lead contamination in Flint, Michigan is a clear failure of what should be one of the best parts of the Safe Drinking Water Act. The Lead and Copper rule doesn't just require testing of water as it leaves the plant, it also requires sampling and analysis of water in homes built during times most likely to have used lead in their pipes and fixtures. In Flint's case, when the state supervisor for their system decided to save money by getting water from the Flint River, instead of treated water from Detroit, they didn't check to see the effect of the more corrosive river water in leaching lead from old pipes in Flint. When some home testing results came back high, state and federal officials did not step in to correct the problem, resulting in exposure of thousands of children to high lead levels, a blatant environmental injustice in a very poor city with majority African-American residents.



Preapproved pipeline expansion surprises 12 miles of Henderson County communities

Front-end loaders, backhoes, dump trucks and crews moved in recently to run an upgraded 20-inch natural gas line from Mill Spring to the Duke Energy gas fired plant on Lake Julian. Chip Worrell explains that twenty six years ago a different company dug up his momma's garden in Dana for a pipeline and paid her \$1000, but when it happened in February of this year, there was no payment for the damage. The upgraded pipeline stretches through 12 miles of Henderson County. This time folks are saying their decks are being ripped off their houses and driveways dug up, but no one had gotten notice about the project. Terry Robinson, also a resident of Dana, reported sights of police escorted equipment moving through the area each time the pipeline work is underway. The recently approved conversion of the Asheville coal plant to gas is the reason given for the pipelines, but the PSNC Energy committed to the pipeline replacement even before Duke decided to convert its Asheville plant. The largest pipeline cut is at U.S. 64 next to North Henderson High School. People are mad because they got no warning, and police escorts forced the construction through.



Hundreds Protest "Low" Priority for Cliffside Coal Ash Cleanup at Hearings

Both the Rutherford and Cleveland County coal ash risk classification hearings had over 100 people in attendance. The hearing room in Boiling Springs was overflowing with impacted residents, students, professors and other concerned residents from surrounding areas. A close-knit group of impacted residents came in early for a short press event, displaying an ACT Against Coal Ash banner. A Cliffside community member, Roger Hollis, started with powerful testimony, calling for cleanup of coal ash at Cliffside, and pleading for protection of what he referred to as the "forgotten part" of Cleveland County. Many other Cliffside residents spoke out against DEQ's downgrading of the risk classifications for the basins to "low," some displaying jars of tap water and well water testing letters from the state. The state claims it used impacts on surface water, impacts on groundwater and structural integrity to assign the draft classifications, but local residents and environmental advocates (CWFNC) said classifications had a lot more to do with protecting Duke Energy from liability.

Residents also protested about the dumping of ash from cleanup at the Asheville plant at the Cliffside onsite landfill. The strong turnout and spirited comments made for a dynamic night in both Cleveland and Rutherford Counties. Local residents are energized and will meet soon to plan for solutions to water contamination and coal issues.

Hundreds Call for High Priority Cleanup of Buck Plant Coal Ash, Protest State Backing off Water Warnings

On March 22, the Alliance of Carolinians Together Against Coal Ash held a press conference at Catawba College in Salisbury to express the outrage of well users being told their contaminated water was now safe, as well as the cynical downgrading of the previous "high priority" rankings for coal ash cleanup at the nearby Buck plant. Residents of Dukeville, close to the coal ash dumps, live in one of two communities near Duke Energy plants with the highest proportion of wells with "Do Not Drink" letters to warn well users last year of elevated cancer risk. The other community is Belmont, close to Allen Steam Station in Gaston County, which had a hearing the same evening. Both hearings drew over 200 participants and dozens of speakers, calling attention to the vulnerability of well users, frightened and confused by actions of agencies who discarded recommendations of expert toxicologists. Speakers called for prioritized cleanup at these sites, and presented evidence that Duke had manipulated groundwater models to show local wells were not at risk. Clean Water for North Carolina called for a permanent, safe water supply for residents and a prioritized excavation and sealed ash storage above ground.



Statewide and Unified: The Alliance of Carolinians Together (A.C.T.) Against Coal Ash worked together to strategize for fourteen hearings on coal ash cleanup throughout March.

Person County Residents Speak Out on Coal Ash

Over 200 people turned out for the coal ash classification hearing on Roxboro and Mayo Steam Stations in Person County, and 30 folks gave oral comments. Many residents around the plants are on well water, including Phyllis Jeffers, who voiced her frustrations about not being eligible for free well water testing because of the 1500-foot boundary. She had arranged for testing: “There are many different chemicals that came out in the test: chromium, vanadium, arsenic, lead. At that time I did start receiving [bottled] water from Duke Energy.” At least 13 of the families at the hearing had received “do not drink” letters in 2015; they feared long-term health effects on their families, who had been drinking well water since the plants began operating and dumping coal ash decades ago. The residents who testified provided many reasons that the plants’ ash basins should never have been down-ranked from “High Priority” to “Low to Intermediate” by McCrory appointees, despite the guidance by DEQ technical staff. The boundaries of the oldest coal ash dump area at Roxboro have not even been found!



With our community partners in A.C.T. Against Coal Ash, Clean Water for NC is raising money to help coal ash neighbors on wells with urgent needs such as well testing and filters. You can give to this “Coal Ash Well Contamination Relief Fund” at bit.ly/CWFNCdonate (select the fund under “designation.”)

Thanks to Janet Smith, Martha Girolami, and R. Franklin Landis for your contributions, and to the Block Foundation and the Hillsdale Fund for support for coal ash neighbors!



The Dangers of the Atlantic Coast Pipeline

“It sounds like an airplane crash,” some said, but it was the sound of a natural gas pipeline explosion in Unityville, PA. Pipelines lie underground for decades, carrying highly pressurized flammable and explosive gases and liquids, with poorly enforced regulations. In 2015, there were hundreds of pipeline incidents in the US, a significant increase due to rapid pipeline construction.

North Carolina may soon be impacted by the planned Atlantic Coast Pipeline, set for construction in a year or two. It will originate in West Virginia, travel through Virginia, and cross mostly poor areas of the following counties in NC: Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson. The pipeline will end near Pembroke, a town that is 89% Native American.

Natural gas pipeline explosions lead to evacuations, injuries, and death. A 2015 pipeline explosion in Borger, Texas caused \$455,000 in property damage. Other costs of having a pipeline on your land can add up quickly: lower property values, taxes due on land you can’t use, having to change your homeowners insurance from residential to commercial rates, and being unable to get approval for a mortgage. People in impacted counties are encouraged to contact CWFNC’s Durham office at 919-401-9600 to get involved.

The Cumberland-Marlboro Basin That Never Was

During the legislative frenzy to get fracking for gas in North Carolina, proponents of drilling and legislators began talking about another shale-containing basin besides the documented Triassic Basins in the central and western piedmont of NC. The US Geologic Survey reported the Deep and Dan River Triassic basins likely only had enough gas for NC’s use for about 5 years—and only if ALL of it could be extracted. The so-called “Cumberland Marlboro Basin,” which was only a rough outline in southeastern NC in old USGS maps, suddenly began attracting interest in 2014. The NC legislature appropriated money to drill cores in three counties in the supposed “basin.” Cornell Univ. Scientist and Engineer Anthony Ingraffea says the oil and gas industry and its allies love to promote this kind of myth, a “tease” to keep alive hopes of big discoveries and new wealth. But state officials were very quiet after the drilling. It turns out that, just as in tests carried out two decades ago, the new cores showed NO evidence for a Triassic Basin with any oil- or gas- bearing shale in southeastern NC. Environmental Health professionals from the region, responsible for licensing and protecting private wells from contamination in each county, cheered when CWFNC’s Hope Taylor explained that there was nothing to frack in their counties!



The Long Path from “Unregulated Contaminant” to Drinking Water Standard

Public water systems have to meet “primary” standards, limiting the concentration of some contaminants in drinking water (see page 3), but many potentially harmful substances are not yet regulated under the Safe Drinking Water Act. Here’s a closer look at the ‘unregulated’ contaminants that may lurk in drinking water, and the process of developing standards for them!

Drinking water contaminants fall several categories: bacteria and other microorganisms, disinfectants and their byproducts, inorganic chemicals (including many heavy metals), organic chemicals (such as benzene) and radioactive substances (such as radium and uranium). The Environmental Protection Agency (EPA) still needs to develop regulations for a large backlog of contaminants in each category, including many man-made chemicals used as solvents, pesticides, and pharmaceuticals, which are known or suspected to have health effects.

How does EPA set a new drinking water standard?

The road to setting a standard for an unregulated contaminant is long and tortuous. Every 5 years, EPA updates its list of “contaminant candidates” - substances that show up widely in national monitoring of drinking water supplies and could threaten human health. The agency’s staff reviews health information and commissions studies of health risks for each contaminant to determine a “Maximum Contaminant Level Goal” (MCLG) for each contaminant being considered. The MCLG is purely health based—it’s the level below which there is “no known or expected risk to health.”

However, like other federal and state agencies, EPA feels political pressure from big economic interests. After a health protective MCLG is set, an extended comment period allows industry to weigh in on the “economic and technical feasibility” of meeting a proposed standard. Industrial interests - including water treatment operators! – usually lobby hard for weaker standards to keep treatment costs down. This sometimes results in a final Maximum Contaminant Level (MCL), or enforceable drinking water standard, that allows concentrations of a substance hundreds or even thousands of times higher than the health based goal.

For more information on contaminants in public drinking water, visit:
<https://www.epa.gov/your-drinking-water>

Some unregulated contaminants recently in the NC news

1,4 dioxane, an organic compound used widely as a solvent in paper, textiles, automotive and cosmetics industries, is showing up in water supplies in the Cape Fear River Basin from Reidsville to Fayetteville. Identified as a “probable human carcinogen,” 1,4 dioxane is worrisome because its chemistry makes it very water-soluble, and conventional water treatment plants aren’t equipped to remove it. NC DEQ is studying the presence of 1,4 dioxane in the Cape Fear basin, believed to be coming from multiple industrial sources in the upper watersheds of the Deep and Haw Rivers. Fayetteville and Greensboro water managers are actively working to track down sources of 1,4 dioxane in an effort to get it out of the water supply, a great example of local governments taking steps to protect public health even before a drinking water standard is set.

The lack of a drinking water standard for **hexavalent chromium** (see page 2) was used by the McCrory administration in March to justify reversing health-based warnings to well users near unlined coal ash pits. These well users had been living on bottled water for a year after receiving state Dept. of Health and Human Services warnings not to drink their well water containing hexavalent chromium over 0.07 micrograms per liter (which gives a 1 in one million lifetime cancer risk).

Just because there’s no federal MCLG or MCL for a substance yet does NOT mean it’s harmless! For instance, many public health experts agree there’s no safe level of hexavalent chromium because it can cause genetic mutations that can lead to cancer. While the water in many NC public water supplies has very low levels of hexavalent chromium, some privately-owned groundwater supplies do have higher levels. The public deserves better than a cover-up and excuses from the agencies tasked with protecting human health and the environment! **Both private well users and customers of public water supplies should have access to clear information about the health risks posed by substances in their water!**



Clean Water for North Carolina

Thanks to Our Generous Foundations and Major Donors!

Ann Batchelder and Henri Kieffer
Asheville Friends Meeting
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Helen Fischer and Stan Bukowski
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Harris and Frances Block Foundation
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David Hinton
Little Acorn Fund of the Community
Foundation of Western NC

Deborah Long
Donovan McLaurin*
Nydia Morales and Allan Kaufman
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Thank you to our new and renewing members!

Meg MacLeod, Maria-Luise & John Rager, Martha Girolami*, Ian Gibbons, Diane Van Helden, Sally Morgan, Milton Heath & Betty Sanders, Chip Smith, Christine Albrow, Peter & Jane Roda, Robin Kohanowich, Tina Motley-Pearson & Scott Pearson, Doug & Carol Wingeier (in honor of Lela Henderson), Pablo Stone, Don Narensky, James Epstein, Michael McCue, West End Revitalization Association (in honor of Marilyn H. Snipes), Cori Maas (in honor of Rick Maas), Connie & Herb Allred, Stanley & Carolyn Peele, Cheryl Angel (in honor of Hope Taylor & Belinda Joyner), Jack Sullivan Jr., Regi & Katherine Blackburn, Linda & George Thompson, Barbara Merrill, John Runkle, Stan Van Etten, Jennifer Miller & Bob Hall, Allen Hubbard, Bernice & Arnold Green, Geraldine Hall (in honor of Reverend John E. Hall), Stuart & Carola Cohn, Esther & Len Pardue, Sandy Adair, Bill & Ann Davis, Grace Curry, Steven Berkowitz & Johanna Norman, Joyce Brown, Gisele Crawford, Anne Cassebaum, Nathanette Mayo (in honor of Ruby & Nathaniel Mayo) Hilda & Bob Pozner (in memory of Taylor Hunt & Elliot Mills), Ed King (in honor of David King), Jeanie Hale, Jerry Starr, Cynthia Ken Crossen, Jane Finch, Joan Palmroos, Liz Cullington, Robert Tunes & Bette Bates (in honor of Rick Maas), Michael & Cynthia Justice, Mary Anglin, Laura Gordon, Catherine Cameron, Stephanie Biziewski, Andrea Emanuel, Susan & Bob McClanahan, Benjamin Turney, Ted Outwater, Lisa Krolak, Jean Karpen, Diane DeWitt, Scot Quaranda, Tom Linden, Linda Smathers & Sam Speciale, Bob Rodriguez, Marilyn Grolitzer, Bill Blackley, Lee Ann Smith (in honor of Katie Hicks), Harry Petrequin (in honor of Thomas Berry), Millie Buchanan, Evan Johnson* (Ashleigh Rainbow Hillen), Karen & Joe Bearden, Steve Patch, Margaret Averyt, Mary Goodwin, Courtland White, Thomas Boals*, George Peery & Mary Miller Stair, Steve Wing, Bert Bowe, Ferris Lyle, Lib Hutchby (in honor of Ericka Faircloth), Deck Stapleton, Pam Westmoreland Sholar, Jane Kendall & Ran Coble, Jim Warren, Amey Miller & David Kiel, Gracia O'Neill, Alistair Hoehne, Carol & Jim Hillegas, Elizabeth Jezierski, Isaac Coleman, Dave Schwartz, Rebecca Leonard & Janis Brock, David & Dorothy Herbert, Thomas East, Montie Hamby, Laura Engl&, Nancy LaPlaca, Tracy Davids, Donovan McLaurin, Ray Eurquhart, Joan Lemire, Jeri Cruz-Segarra, Susie Scott, Rudy Singh, Kyle Dalton*, Molly Matlock

***Supporters of the Frack Free NC Alliance** (Clean Water for NC is the "fiscal agent" for this Alliance).

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Dr. Ingraffea Wakes Up NC Campus Audiences to Startling Climate Impacts of Fracking and the Path to a Fossil Free NC!



Dr. Tony Ingraffea with Clean Water for NC Executive Director Hope Taylor (left) and Water & Energy Justice organizer Ericka Faircloth (right)

When Tony Ingraffea and co-authors from Cornell University estimated in 2011 that leakage rates of 3.6 to 7.9 percent of the natural gas extracted by fracking could cause climate change worse than burning of coal for electricity, Energy Secretary Stephen Chu called their research “not credible.” Five years later, after numerous studies showed leakage rates even higher than their estimates, the Obama administration has changed course and decided to regulate methane emissions. This is a long overdue policy shift and it must be implemented quickly and forcefully—the increase in atmospheric methane since the US “fracking boom” began has significantly accelerated climate change! Now the single biggest step we can take to prevent radical climate change is to STOP fracking, STOP conversions of power plants to methane and CUT methane emissions from extraction and pipelines drastically.

Clean Water for NC and our Frack Free NC Alliance partners brought Dr. Ingraffea to eastern NC in mid-March, where he spoke to audiences at UNC Wilmington, Eastern Carolina University and NC State University. He ended each presentation with the great news that before 2050, studies by

thesolutionsproject.org show, we can produce more than enough energy for NC using no fossil fuels at all, just a combination of renewable energy and efficiency! Just before the tour, his 10 hours of expert testimony helped to win a \$4.2 million decision for families in Dimock, PA whose wells were contaminated by nearby fracking!