



Volunteer Teens Get Down and Dirty North Carolina's Less Fortunate Get Help

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Some might find it odd for teenagers to trade a week of lazy summer days for labor-intensive days, complete with ticks, poison ivy, snakes, spiders, wasps, and hornets. Possibly more peculiar is their willingness to pay approximately \$300 for the experience. But Rich Holder, community resource coordinator for North Carolina Rural Community Assistance Project (NCRCAP), doesn't find it at all odd. This summer, like last summer, Holder will work with

teenagers from across the country who have eagerly volunteered their time and money to hand dig and install septic systems for low-income families in western North Carolina.

Founded in 1987, NCRCAP is a non-profit organization that assists rural North Carolinians with water, wastewater, and housing issues through a variety of outreach programs.

Western North Carolina Septic Repair Program

One of NCRCAP's programs is the Western North Carolina Septic Repair Program, which is committed to protecting public health, the environment, natural resources, and addressing poverty issues in western North Carolina. It was founded in 2006 after surveys conducted by local county health departments, and the North Carolina Wastewater Discharge Elimination (WaDE) program showed a high incidence of wastewater treatment violations.

"I was part of the original survey team," Holder said. "We went door-to-door to see if homeowners had a system. If they did, we dye tested it to make sure it was working properly. What we found was that many of the surveyed homeowners had failing septic systems or were straight piping their waste to local streams. In many cases, the homeowners were very low-income, unable to afford repairs, and lived on sites that were inaccessible to a backhoe."

One of the surveyed homeowners lived in a dilapidated home with raw sewage flowing beneath it. Although the family was awarded a grant to purchase a mobile home to replace their current home, the grant was not enough to cover the cost of a septic system. The Land of Sky Regional Council of Governments, a local government planning and development organization that was instrumental in securing the grant, asked NCRCAP for help.

After surveying the site and recommending a pump system for the property, Holder asked the Emanuel Lutheran Appalachian Servant Event organization, which, through its volunteers had been repairing homes and septic



systems for more than 25 years, if they could hand dig and install the system to save the homeowner labor costs. Emanuel Lutheran agreed and spent one week of almost continuous digging.

Septic Repair Program Structure

"We (NCRCAP) see this program as Rich's brain child," Sharon LaPalme, associate director of NCRCAP, said. "Rich was involved with the county-wide surveys that occurred in the late '90s. Since then, it has been his goal to see the long-term follow-up to those surveys. And, it's where Rich's skills and knowledge lie. He knows the residents, so he is very good at working with them; he has the needed technical expertise; and he has a lot of contacts in the wastewater industry."

The septic repair program brings together funding groups, regulators, housing agencies, material manufacturers, and volunteers, all working together to assist low-income homeowners with their wastewater needs. To be eligible for the program, households must meet certain requirements, such as financial need and have a wastewater violation that is a threat to public health. Financial qualification is done through the Land of Sky Regional Council of Governments and community action agencies, while Holder knows which households have the greatest need for repairs.

"Many of the contacts that Rich made when he worked as an environmental health specialist donated materials to the septic repair pro-

gram," LaPalme said. "He has put together an incredible basket of materials free of charge."

Available donated materials play a key factor in determining the type of system to install. Because Holder is a registered sanitarian and an environmental health specialist, he is authorized to design and permit septic systems with the state of North Carolina Department of Environment and Natural Resources. In helping design the systems, he ensures each meets applicable onsite wastewater and plumbing regulations. But he is not a county employee, so he works with the county health department to permit the systems and to have the systems inspected.

To get local and national companies involved, Holder sent them a letter explaining the septic repair project. "Along with the letter, I included pictures of the kids digging," Holder said. "The companies all jumped on board. A lot of them are friends of mine, but I think it was the kids volunteering their summer vacations and their own money that got everyone really interested in wanting to help." Funding for materials and equipment that are not donated is provided through housing and watershed protection programs, such as the Community Foundation of Western North Carolina, Pigeon River Fund, the North Carolina Clean Water Management Trust Fund, and WaDE.

Volunteers for the program come from two youth, faith-based groups: the Emanuel Lutheran Church Appalachian Servant Event, and ReCreation Experiences, which includes a variety of religious denominations. "All of these kids are real heroes. They spend summer vacation





time to help those in greater need than themselves. The money each volunteer pays is used for their travel, living, and entertainment expenses as well as for some of the costs of supplies needed for repairs.”

Holder is onsite with the volunteers, teaching them what to do each time they encounter a new phase in the project, and when Holder isn't at the site, he ensures that someone just as qualified as he is takes his place. This enables Holder to move between sites to ensure everything is going smoothly, and that he can arrange for additional site supervision.

“Septic tanks? When people hear that, they think ‘Gross!’” said volunteer Ashley Lawler. “But now that I have worked on one and have watched a group of teens change a family's home, I can fully appreciate the program and the impact it has on making the community a better place.”

It's a win-win situation. Low-income homeowners are given assistance for their wastewater needs and volunteers learn about onsite wastewater treatment techniques, southern Appalachian culture and topography, collaboration between the public and private sectors, and the sense of fulfillment gained from community service. “I never knew how much digging a hole could affect the life of a homeowner and the surrounding community,” said volunteer Andrew Opila.

“Sometimes homeowners will get in the trenches with us,” Holder explained, “but mostly, they are too elderly to do that. It's not a requirement that homeowners help.”

One homeowner who did help dig commented, “I can walk through my backyard now without stepping through that mess. As for the kids, it is great to see so many people who really care come together, especially young people.” Many homeowners will show their appreciation by supplying cold drinks and treats.

After installation, Holder teaches the homeowner, through literature and explanation, how to maintain the system.

Obstacles

An abundance of insects and poison ivy are not the only obstacles volunteers face. Each system has had overwhelming problems, according to Holder. He points out that he can't always prepare for these problems, because he doesn't know what he is going to find until they start digging. And digging has been extremely difficult because of the recent, severe drought in western North Carolina. “It's like trying to dig through cement,” Holder said. Since conventional machinery cannot maneuver onto the sites, hand digging is the only option. Digging is also hindered by rocks and roots, and “we somehow find water and electric lines in our path that are not supposed to be anywhere near where we are digging,” Holder said.

Plumbing has also been an issue. In some cases, houses need to be replumbed because the only place that a septic system can be installed is at the end of the house opposite where the plumbing is located. This isn't the only reason for replumbing. In some cases, plumbing fixtures have fallen into such disrepair that they could cause a hydraulic overflow, causing the newly installed system to fail.

Holder has also experienced electrical problems. “We had a pump system, but not enough power going to the circuit breaker box to power the pump,” Holder said. “We had to bring in an electrician to see if we could put in a larger circuit breaker box.”

“For some of the homes, it is as if there wasn't a system there to begin with,” LaPalme said. “It involves installing all of the components: a septic tank, sometimes a pump tank, and, of course, a drainage field.” None of this deters Holder. According to LaPalme, Holder works more than 70 hours a week to get the work done.

Silver Lining

Occasionally, a home will not need much done to fix the wastewater violation. One home, for instance, had a septic tank that straight piped into a ditch that went into a creek. The upside of this story is that there



also was a mobile home on the property that was no longer being used. It was conveniently located downhill from the house and already had a permitted septic system that would meet the needs of the homeowner and could be used as a permanent system.

"We just ran the pipe from the septic tank at the owner's house to the permanent septic system [at the trailer] and hooked to it," Holder said. "We found a way to use something that the owner already had rather than installing a whole new system to get him out of straight piping."

Septic Repair Program Grows

In 2006, two households benefited from the program. This year, however, the goal is set for 10 households. Each site will have approximately 40 volunteers who will work between eight to 10 hours a day for five to seven days. Some of the repairs will include systems that require pumps, alternating valves, tanks, aggregate, pvc pipe, and filters.

"We don't take into account how much a faulty septic system affects the community until we are standing in it only five feet away from a school playground," said volunteer Bethanie Gallagher. "Many hours of hard work went into putting a dent into the problem." The system that Gallagher is referring to is one slated for repair this summer that is located just 20 feet from the swing set of an elementary school. "On the day that Rich went to do a site visit, he found the elementary school kids running around on the failing drainfield trying to catch the butterflies that the effluent and sewage attracted," LaPalme said. "This system was clearly a threat to public health."

Teens Go Beyond Septic Repairs

Volunteers not only repair septic systems, they also paint, repair bathrooms, roofs, and floors. "They are willing to do whatever it takes to make the homes a safer and nicer place to live," Holder said. "They are truly amazing kids!"

The teens have even gone beyond repairs

in some cases to make the homeowner's life more pleasant. One homeowner, for instance, had commented that she spent most of her time alone. When the teens found out it was her birthday, they threw her a celebration. "I really missed all the company I had that week, and the birthday celebration was very special to me," the homeowner said.

Request for Help

"We still are in great need of donated materials to be able to complete these projects," Holder said. "We would like to invite all organizations to join us by collaborating with agencies committed to improving water quality, public health, and helping those in greater need than themselves."

For more information, contact Holder at rholder@ncrcap.org, LaPalme at slapalme@ncrcap.org, ReCreation Experiences at www.recreationexperiences.org, and Emanuel Lutheran Appalachian Servant Event at (828) 273-7669, and Terrell Jones at Terrell.Jones@nc-mail.net.

Organizations that have supported the project through volunteer labor, funding, or donation of supplies are:

- SE Rural Communities Assistance Project
- NC Rural Communities Assistance Project
- NC DENR Wastewater Discharge Elimination Program (WaDE)
- ReCreation Experiences
- Emanuel Lutheran Church Appalachian Servant Event
- Community Foundation of Western North Carolina
- Land of Sky Regional Council of Governments
- Watauga Avery Mitchell Yancey Community Action Agency
- Pigeon River Fund
- Western Carolina Environmental Inc.
- Local Health Departments
(Buncombe, Henderson, Jackson, Madison, Yancey)
- Ring Industrial Group
- Infiltrator Systems Inc.
- Carolina Aerobic Systems
- Mariner Container Corp
- Mace's Back Hoe Services
- AAA Water Flowrite Inc. (Plumber)
- Kingsway Ready Mix Concrete Inc.
- Zoller pumps
- The North Carolina Clean Water Management Trust Fund
- KDR Services (Electrician)