Annual Report to the

Environmental Review Commission

North Carolina General Assembly

Bernard Allen Emergency Drinking Water Fund

(July 1, 2011 to June 30, 2012)

NCDENR

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

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Executive Summary

The Bernard Allen Emergency Drinking Water Fund (Fund) was created in 2006 by the General Assembly to improve the state's response to groundwater contamination and to provide low- income households with a safe drinking water supply.

The Fund has three authorized uses: 1) to pay for notice to persons whose wells are at risk from groundwater contamination; 2) to pay the costs of testing private wells; and 3) to provide an alternate drinking water supply to well owners affected by contamination.

The Fund continues to help provide critical services for many citizens of North Carolina through paying for well testing, providing emergency bottled water and assisting in the payment of permanent waterline connections or point-of-entry filter systems. In FY 2011-12, the Fund's resources continued to focus primarily on providing alternate water to affected citizens and investigating potentially contaminated wells across the state through sampling. Twenty-four households received alternate water supplies this fiscal year using the Fund.

FY 2011-12 Activities Update

In FY 2011-12, the Bernard Allen Memorial Emergency Drinking Water Fund (Fund) has continued to focus primarily on three major priorities: 1) providing permanent alternate water sources to households with contaminated drinking water wells; 2) identifying sites in the state that may be eligible for funding for sampling or alternate water supplies under the program; and 3) testing private wells suspected of being contaminated. The activities conducted in FY 2011-12 are summarized below.

Alternate Water Provided

The Fund continued to provide bottled water to a resident in the southeastern area of Richmond County while the Fox Road Phase 2 waterline extension moved through the design and permitting process. Construction of the Fox Road Phase 2 extension of waterlines in Richmond County is planned to begin in fall 2012.

The Fund has continued to supply bottled water to six residences in Montgomery County while also assisting with extension of water lines to the homes (the Windblow Road waterline extension). The Fund has committed $60,000 to assist in installing waterlines. Construction of the Windblow Road waterline extension is also planned to begin in fall 2012.

The Fund connected three other residences to municipal water services in other areas of the state – one in Cleveland County, one in Gaston County and one in Wake County. Two of the contaminated wells that served these homes have been closed and the third is planned for closure for FY 2012-13. The Fund also paid to close 11 other contaminated wells at residences that had previously been connected to a public water system (one each in Gaston, Vance, Stokes, Guilford and Wake counties, two in Stanly County and four in Caswell County).

The Fund provided point-of-entry filter systems to seven other residences (one each in Richmond, Stokes, Union, Randolph and Guilford counties and two in Pender County). The Fund also provided maintenance for existing point-of-entry filter systems at seven other residences (one in Stokes County, two in Mecklenburg County, three in Randolph County and one in Person County).

Seventeen residences have received bottled water through the Fund in FY 2011-12.

- Richmond County 2
- Moore County 1
- Montgomery County 6
- Stokes County 1
- Guilford County 1
- Randolph County 1
- Catawba County 1
- Gaston County 1
- Rockingham County 1
- Wake County 2

Site Review and Research

The Inactive Hazardous Sites Branch has been researching a catalog of sites with drinking water wells known or suspected of being contaminated. Local government and other records are researched to determine if some of the affected residences have been connected to municipal water systems, to identify any other wells in the area that may potentially be affected, to identify potential sources of contamination and to determine ownership of affected residences. When the program identifies wells as being at risk of contamination, the wells are tested and staff work with owners and local governments on alternate water supplies. Note, however, that the Fund can only be used to assist homeowners who have an annual household income that does not exceed 300 percent of the poverty level. Approximately 49 site files, most with multiple residences and wells, were reviewed during this fiscal year. Review of each file includes the following:

- Historical information about previous sampling and work done on the site(s)
- Identification of locations of the affected properties
- Identification of additional properties using drinking water wells within 500 ft. and 1,000 ft. rings of potentially affected properties
- Identification of potential sources of contamination
- Location of public waterlines in the area, notation of properties that have been connected to the public water system.

Sampling of Private Wells

At the beginning of FY 2011-12, the Division of Waste Management's Inactive Hazardous Sites Branch had identified 152 sites with no clear responsible party for groundwater contamination affecting drinking water wells. Most sites involved multiple residences and drinking water wells. Existing groundwater data indicated contaminant levels varied from detection levels to levels exceeding the federal drinking water standards. It is not uncommon to have multiple wells with varying levels of contamination associated with the same site. Since contamination levels also change with time as groundwater

contamination migrates and the water table rises and falls, these wells need to be re-sampled periodically if they are not currently above federal drinking water standards and eligible for alternate water. Staff also identified 71 sites with wells located less than 500 feet from potential sources of contamination that are lacking a responsible party. These sites have one or more residential properties/wells associated with them and also need to be evaluated. The program plans to advance the rate of sampling water supply wells through contracting with environmental consulting firms.

During FY 2011-12, the Fund was used to sample 161 drinking water well samples from 29 sites across the state. Locations of the sites are shown below:

County	# of Sites	# of Wells
• Alamance	2	2
• Caswell	2	3
• Catawba	3	4
• Cleveland	1	2
• Durham	2	13
• Gaston	9	71
• Guilford	1	10
• Moore	1	1
• Pender	1	1
• Rockingham	1	23
• Rowan	2	8
• Wake	4	23

Summary of the Bernard Allen Memorial Emergency Drinking Water Fund

In FY 2011-12, the Fund received income from the Scrap Tire Tax and from interest. Expenditures from the Fund continue to primarily focus on assisting local government waterline projects, providing bottled water, sampling/analyzing drinking water wells for potential contamination, connecting residences to existing municipal water systems, installing point-of-entry filter systems, maintaining existing point-of-entry filter systems and properly closing contaminated wells.

A summary of the Fund expenditures can be found in the Accounting Summary on page 5. In FY 2012-13, the program plans to make use of contracting to expand the number of wells that can be tested beyond what the program staff is able to accomplish. The legislation in General Statute 87-98 allows $100,000 for administrative expenses associated with program implementation. A full-time and one or two part-time employees will continue to administer the program (contracts, screening properties for eligibility, evaluating areas for testing of water supply wells, arranging for alternate water) and to conduct certain sampling. Through file reviews, the Inactive Hazardous Sites Branch has found more than 700 sites (each site potentially having multiple wells) that contain detection of contaminants or wells in close proximity to contamination. Experience indicates about half of those sites will lack financially viable responsible parties.

Therefore, it is essential to expand the rate at which these wells are tested through private contracting.

While the end of FY 2011-12 fund balance is $1,007,959, there are several fund commitments. Waterline contracts in the amount of $290,000 are immediately pending. Approximately $130,000 per year is needed for the additional contracted well testing. The Fund also has commitments to continue to provide bottled water and to maintain treatments systems for homes with contaminated wells. Currently those charges amount to $36,500/year, but are growing. The Fund has laboratory testing contract commitments of $20,000 and planned well treatment system installations in the amount of $26,500. Revenue for waterlines must be accrued as these projects run from the tens of thousands of dollars to several hundreds of thousands of dollars depending on the size of the problem and engineering required. The Department of Environment and Natural Resources' (DENR) Groundwater Decision Support System is under development to centralize electronic groundwater data among DENR programs and share the information with other government agencies and the public. Funding will be designated in the amount of $500,000 from the Fund to assist with public notice by providing groundwater data electronically via the Internet.

Bernard Allen Memorial Emergency Drinking Water Fund

Accounting Summary

FY 2011 - 12

INCOME:

Description		*Amount*
Balance Forward	$	790,374.89
Scrap Tire Tax	$	414,318.24
Interest	$	6,561.84
Total Income	$	1,211,254.97

EXPENDITURES:

Description			*Amount*
Lab Testing		$	16,399.00
Bottled Water		$	6,507.95
Water Service Connections		$	7,458.00
Well Abandonments		$	13,552.50
Point of Entry Filter Systems		$	63,777.93
Sampling Equipment & Supplies		$	304.27
Staffing	*	$	88,865.19
Other Operating Expenses		$	6,430.99
Total Expenses		$	203,295.83

Current Balance as of June 30, 2012 BALANCE:	**$**	**1,007,959.14**
Obligated to Contracts & Commitments	**$**	**1,003,000.00**
Effective Cash Balance	**$**	**4,959.14**

** Includes Sampling Prep, Research, Field Work and Approximately 10 Percent Fund Administration*

Conclusions

The Bernard Allen Emergency Drinking Water Fund continues to serve a valuable role for residents in North Carolina who have contaminated drinking water wells. The Fund's ability to pay for sampling/analyzing drinking water wells and providing notification to residents has been instrumental in helping the state respond to emergency situations statewide. The Fund's ability to provide bottled water to residents as a temporary water supply has helped as a short-term solution, giving time for the evaluation of longer-term alternatives. Prior to the creation of the Fund, the state had no source for providing emergency temporary water supplies in many situations. Future demands on the Fund are anticipated to increase, based on results from private well analysis. DENR will continue to evaluate the eligibility of projects that can be served by the Fund as demands change.

Based on experience implementing the Fund, the department believes that the following changes to General Statute 87-98 could provide a more effective response to contaminated drinking water wells.

1) Allow water supply wells to be tested more frequently than every three years if DENR needs to confirm a laboratory result or to more closely monitor a high-risk well or a well with a treatment system.

2) Increase the amount of funds that can be spent per household from $10,000 to $50,000. ($10,000 is insufficient in most cases for installation of waterlines. New wells most often cannot be installed because of the groundwater contamination in the area.)

3) Allow contamination from artificial sources to take priority over naturally occurring contamination for the provision of alternate water supplies. Thousands of wells in the state contain naturally occurring arsenic, lead, radon and other contaminants, and the Fund does not have the revenue to address all of these cases. The presence of natural contamination is similar to conditions an owner may face with well maintenance such as bacteria caused by poor casing condition, or low flow rate.

4) Specify that the $100,000 fund allowance to administer the program is an annual allowance. The program must have staff to implement contracting and to identify and research sites requiring action.