

# **Annual Report to the North Carolina General Assembly**

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## ***Bernard Allen Emergency Drinking Water Fund***

(July 1, 2016 to June 30, 2017)

### **Division of Waste Management**



**NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY**

**<http://portal.ncdenr.org>**

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## **Executive Summary**

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

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

The fund continues to provide critical services for many residents of North Carolina through well testing, providing emergency bottled water and assisting in permanent waterline connections or point-of-entry treatment systems for wells. In FY 2016-17, the fund's resources continued to be focused primarily on providing alternate water to affected residents and investigating potentially contaminated wells across the state through sampling. The fund collected 582 drinking water well samples statewide. Thirty-seven households received alternate water through bottled water, water lines, treatment systems or treatment system maintenance this fiscal year using the Bernard Allen Fund. To date, 146 households have received alternate water through this fund.

## FY 2016-17 Activities Update

In FY 2016-17, the Bernard Allen Memorial Emergency Drinking Water Fund (fund), administered by the Division of Waste Management (division), continued to focus on three major priorities: 1) providing permanent alternate water sources; 2) reviewing and researching of sites in the state that may be at risk and eligible for funding for sampling or alternate water supplies under the program; and 3) testing of private wells known or suspected of being contaminated. The activities conducted in FY 2016-17 are summarized below.

### Alternate Water Provided

The fund provided bottled water to 13 residences in nine counties while water services and water treatment systems were under construction.

|                   |   |                   |   |
|-------------------|---|-------------------|---|
| • Gaston County   | 3 | • Buncombe County | 1 |
| • Guilford County | 3 | • Wake County     | 1 |
| • Lincoln County  | 1 | • Surry County    | 1 |
| • Caldwell County | 1 | • Randolph County | 1 |
| • Vance County    | 1 |                   |   |

The fund connected two residences to municipal water services in FY 2016-17:

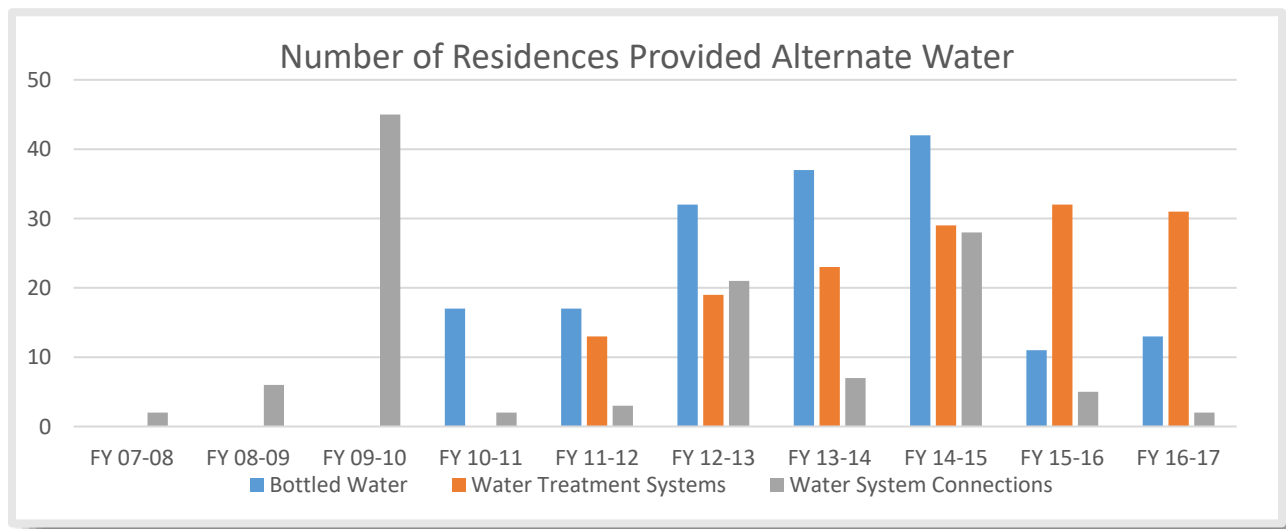
|                  |   |               |   |
|------------------|---|---------------|---|
| • Lincoln County | 1 | • Wake County | 1 |
|------------------|---|---------------|---|

The fund provided point-of-entry treatment systems to seven other residences:

|                   |   |                   |   |
|-------------------|---|-------------------|---|
| • Gaston County   | 3 | • Buncombe County | 1 |
| • Guilford County | 1 | • Wake County     | 1 |
| • Surry County    | 1 |                   |   |

The fund provided maintenance for existing point-of-entry treatment systems at 24 additional residences:

|                      |   |                   |   |
|----------------------|---|-------------------|---|
| • Durham County      | 1 | • Union County    | 1 |
| • Guilford County    | 5 | • Wake County     | 2 |
| • Pender County      | 2 | • Stokes County   | 1 |
| • Mecklenburg County | 2 | • Randolph County | 3 |
| • Rockingham County  | 2 | • Orange County   | 2 |
| • Caswell County     | 1 | • McDowell County | 1 |
| • Avery County       | 1 |                   |   |



## Site Review and Research

The Bernard Allen program staff continue to evaluate the division's catalog of sites having nearby drinking water wells with known or suspected contamination. Local government and other records are researched to determine if any affected residences have been connected to municipal water systems, if other wells are in the area of concern and may potentially be affected, identify potential sources of contamination, and determine ownership of affected residences. Staff test the wells and work with owners and local governments on alternate water supplies. An owner is required to meet the statutory requirement that annual household income not exceed 300 percent of the poverty level.

Staff researched records for approximately 114 site files in FY 2016-17, most with multiple residences and wells. Review of each file includes the following activities:

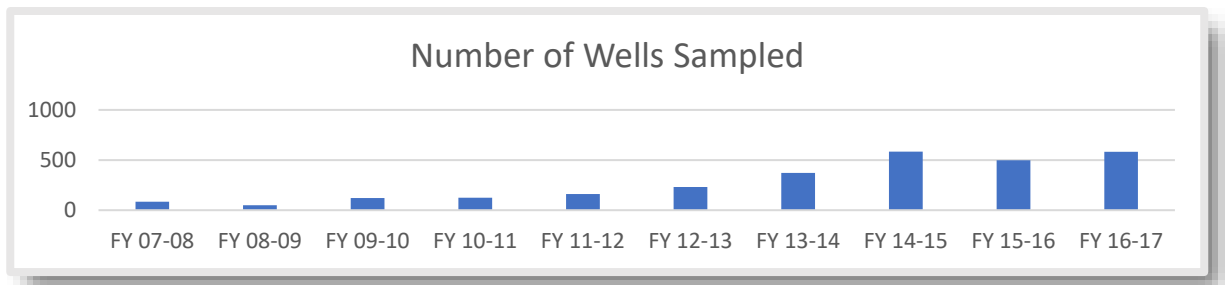
- File review for historical information about previous sampling and work done on the site(s);
- Identification of the affected properties;
- Identification of additional properties using drinking water wells within 500 feet and 1,000 feet radius of potentially affected properties;
- Identification of potential sources of contamination; and
- Location of public water lines in the area to see if properties have been connected to the public water system.

### Sampling of Private Wells

In the division's tracking of sites without responsible parties, there are total of 191 sites for groundwater contamination affecting drinking water wells. Most sites involved multiple residences and drinking water wells. Some detections were above while others below the federal drinking water standards. In many cases sources of contamination cannot be determined, and it can be difficult to predict whether concentrations will rise or fall in the future. Contamination levels change with time as groundwater migrates and the water table rises or falls.

There are an additional 92 sites with water supply wells less than one-quarter mile from potential sources of contamination and have no responsible party. These sites have one or more residential properties or drinking water wells associated with them.

During FY 2016-17, the fund evaluated 1,402 wells for sampling. The fund collected 582 drinking water well samples from across the state. The remaining 820 wells were not sampled because owners did not give permission for sampling, did not respond to the request, were determined to be connected to an alternate water supply or the property was vacant. Locations of the sites are shown below. Those parties where sample results exceeded drinking water criteria were sent health risk evaluations prepared by the division's toxicologist.



Site Locations of Drinking Water Wells Sampled in FY 2016-2017

| <u>County</u> | <u># of Sites</u> | <u># of Wells</u> | <u>County</u> | <u># of Sites</u> | <u># of Wells</u> |
|---------------|-------------------|-------------------|---------------|-------------------|-------------------|
| • Alamance    | 4                 | 21                | • Lincoln     | 6                 | 27                |
| • Bertie      | 1                 | 4                 | • Madison     | 1                 | 3                 |
| • Buncombe    | 3                 | 25                | • Mecklenburg | 10                | 21                |
| • Burke       | 1                 | 1                 | • New Hanover | 1                 | 38                |
| • Cabarrus    | 1                 | 2                 | • Orange      | 2                 | 3                 |
| • Caswell     | 1                 | 5                 | • Pender      | 2                 | 9                 |
| • Catawba     | 2                 | 6                 | • Polk        | 1                 | 3                 |
| • Chatham     | 1                 | 3                 | • Randolph    | 2                 | 8                 |
| • Cleveland   | 2                 | 10                | • Rockingham  | 2                 | 21                |
| • Columbus    | 3                 | 6                 | • Rowan       | 8                 | 46                |
| • Cumberland  | 1                 | 2                 | • Stanley     | 3                 | 12                |
| • Durham      | 3                 | 11                | • Stokes      | 2                 | 12                |
| • Forsyth     | 1                 | 1                 | • Surry       | 2                 | 11                |
| • Franklin    | 1                 | 11                | • Union       | 2                 | 6                 |
| • Gaston      | 11                | 150               | • Vance       | 1                 | 1                 |
| • Guilford    | 7                 | 36                | • Wake        | 5                 | 36                |
| • Henderson   | 1                 | 9                 | • Warren      | 1                 | 5                 |
| • Iredell     | 4                 | 17                |               |                   |                   |

## Summary of the Bernard Allen Memorial Drinking Water Fund

In FY 2016-17, the fund received \$400,000 in appropriations. Expenditures from the fund continue to be primarily used for connecting residences to municipal water systems, providing bottled water, installing point-of-entry treatment systems, maintaining existing point-of-entry treatment systems, and sampling and analyzing drinking water wells for potential contamination. A summary of the fund expenditures can be found in the Bernard Allen Memorial Emergency Drinking Water Fund Accounting Summary below.

### Bernard Allen Memorial Emergency Drinking Water Fund

## Accounting Summary

FY 2016-17

(as of June 30, 2017)

|                            |               |
|----------------------------|---------------|
| BEGINNING CASH<br>BALANCE: | \$ 347,195.51 |
|----------------------------|---------------|

|  |               |
|--|---------------|
| INCOME<br>(Appropriations from<br>General Fund): | \$ 400,000.00 |
|--|---------------|

|                 |          |
|-----------------|----------|
| REIMBURSEMENTS: | \$ 16.45 |
|-----------------|----------|

#### EXPENDITURES:

| <u>Description</u>               | <u>Amount</u> |
|----------------------------------|---------------|
| Lab Testing                      | \$ 49,232.00  |
| Bottled Water                    | \$ 2,748.20   |
| Water Service Connections        | \$ 19,049.75  |
| Well Closures                    | \$ 4,635.00   |
| Point-of-Entry Treatment Systems | \$ 110,063.23 |
| Sampling, Equipment and Supplies | \$ 11,668.57  |
| Staffing <sup>1</sup>            | \$ 140,090.27 |
| Other Operating Expenses         | \$ 4,212.70   |
| Total Expenses                   | \$ 341,699.72 |

|                          |               |
|--------------------------|---------------|
| CURRENT CASH<br>BALANCE: | \$ 405,512.24 |
|--------------------------|---------------|

|                            |               |
|----------------------------|---------------|
| OBLIGATED TO<br>CONTRACTS: | \$ 259,077.30 |
|----------------------------|---------------|

|                            |               |
|----------------------------|---------------|
| EFFECTIVE CASH<br>BALANCE: | \$ 146,434.94 |
|----------------------------|---------------|

<sup>1</sup> Includes sampling preparation, research, field work and fund administration

## **Conclusions**

The Bernard Allen Emergency Drinking Water Fund, administered by the N.C. Division of Waste Management, continues to be a valuable resource for residents in North Carolina at risk from contaminated drinking water wells. The fund's ability to pay for sampling and analyzing drinking water wells along with providing notification for residents has been instrumental in helping the state respond to statewide emergency situations. The fund's ability to provide bottled water to residents as a temporary water supply has helped as a short-term solution, providing time for longer-term alternatives to be evaluated. 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 an increase in the number of private wells tested statewide. The N.C. Department of Environmental Quality will continue to evaluate the eligibility of projects that can be served by the fund as demands change.