

Report to the North Carolina General Assembly

**Submitted to the Joint Legislative Oversight Committee on Agriculture and Natural and
Economic Resources and the Fiscal Research Division**



Bernard Allen Emergency Drinking Water Fund

October 1, 2022

Division of Waste Management

**NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY**

Pursuant to G.S. 87-98(e)

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Executive Summary

The Bernard Allen Memorial Emergency Drinking Water Fund, administered by the N.C. Division of Waste Management, was created in 2006 by the General Assembly in G.S. 87-98 to improve the state's response to water supply well contamination and provide low-income households with a safe drinking water supply.

The fund has three authorized uses: 1) pay for notice to persons whose wells are 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 Bernard Allen Program continues to provide critical services for many qualifying residents of North Carolina through well testing, providing emergency bottled water and assisting in permanent waterline connections or point-of-entry treatment systems for households. In fiscal year 2021-22, 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.

This fiscal year, the fund has been used to collect 658 drinking water well samples statewide and provided forty-nine households alternate water through bottled water, waterlines, treatment systems, or treatment system maintenance. Since inception 182 households have received alternate water. In implementing this Program, the N.C. Department of Environmental Quality regularly communicates with local health departments on water supply sample data and other activities related to the water supply wells.

In 2021, the Bernard Allen Memorial Emergency Drinking Water Fund statute (N.C.G.S. 87-98) was amended to allow use of funds for per- and polyfluoroalkyl substances (PFAS) in groundwater. The Program's staff are working with Division of Waste Management to develop guidelines related to this expansion. Private drinking water well owners with known PFAS contamination are exempt from the financial qualifications set forth in the statute.

The Department of Environmental Quality is required to report no later than October 1 of each year to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources and the Fiscal Research Division of the General Assembly on the implementation of N.C.G.S. 87-98, the Bernard Allen Memorial Emergency Drinking Water Fund.

FY 2021-22 Activities

In fiscal year (FY) 2021-22, uses of the Bernard Allen Memorial Emergency Drinking Water Fund (fund) administered by the Division of Waste Management (division) allowed the continued focus on three major priorities that are further described below:

- 1) providing permanent alternate water sources,
- 2) reviewing and researching of sources of contamination (sites that may have put nearby water supply wells and residents at risk), and
- 3) testing of private wells known or suspected of being contaminated.

Alternate Water Provided

Alternate water was provided across the state as detailed below and in Figure 1.

Bottled water was temporarily provided to 12 residences while treatment systems were under construction or additional research was performed. A list by county of residences that received bottled water is provided below.

- | | | | |
|--------------------|---|----------------------|---|
| • Buncombe County | 1 | • Mecklenburg County | 1 |
| • Gaston County | 1 | • Orange County | 1 |
| • Guilford County | 3 | • Wake County | 4 |
| • Henderson County | 1 | | |

One residence was connected to municipal water service:

- Mecklenburg County 1

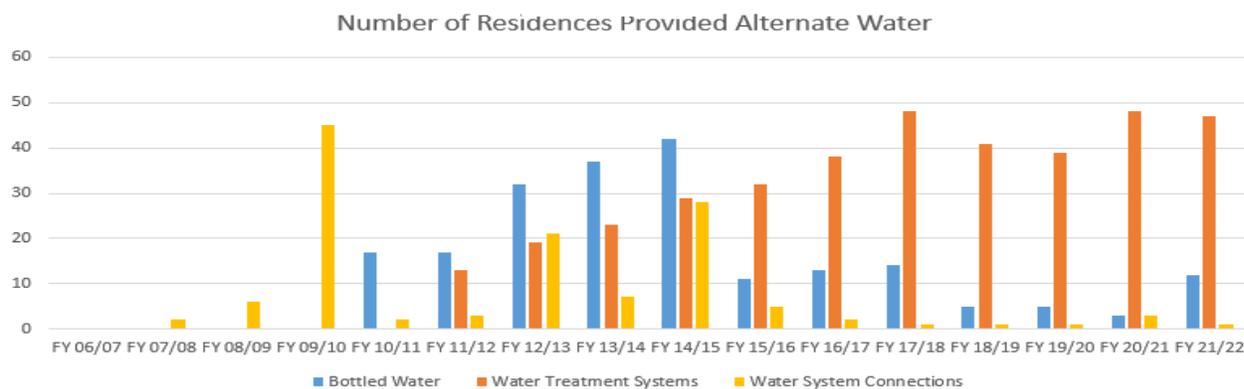
Four residences had point-of-entry filtration treatment systems installed:

- | | | | |
|-------------------|---|---------------|---|
| • Buncombe County | 1 | • Wake County | 2 |
| • Guilford County | 1 | | |

Maintenance was performed on existing point-of-entry filtration treatment systems at 43 residences:

- | | | | |
|----------------------|---|---------------------|---|
| • Avery County | 1 | • Orange County | 2 |
| • Buncombe County | 2 | • Randolph County | 5 |
| • Caswell County | 1 | • Rockingham County | 1 |
| • Durham County | 2 | • Rowan County | 1 |
| • Gaston County | 3 | • Stokes County | 2 |
| • Guilford County | 7 | • Surry County | 1 |
| • McDowell County | 3 | • Vance County | 1 |
| • Mecklenburg County | 2 | • Wake County | 9 |

Figure 1



Site Review and Research

The Bernard Allen Program (Program) staff continue to evaluate the status of drinking water wells within areas of known or suspected contamination. Local government and other records are researched to determine if any affected residential wells have been connected to municipal water systems, if other wells in an area of concern may potentially be affected, potential sources of contamination, and ownership of affected residences. Staff test identified wells, and work with owners and local governments to provide alternate water supplies. An owner must meet the statutory requirement that annual household income not exceed 300 percent of the current federal poverty level.

In FY 2021-22, staff evaluated approximately 111 contaminated sites for water supply well sampling through the Bernard Allen Fund. Most sites encompassed multiple residences and wells. Site reviews include the following activities:

- Review of historical information and previous assessment work performed on the site(s);
- Identification of the affected and potentially affected properties;
- Identification of additional properties with drinking water wells in use within a 1,000-foot radius of affected and potentially affected properties;
- Identification of potential sources of contamination; and
- Location of public waterlines in the area and any past Bernard Allen properties that have since been connected to the public water system.

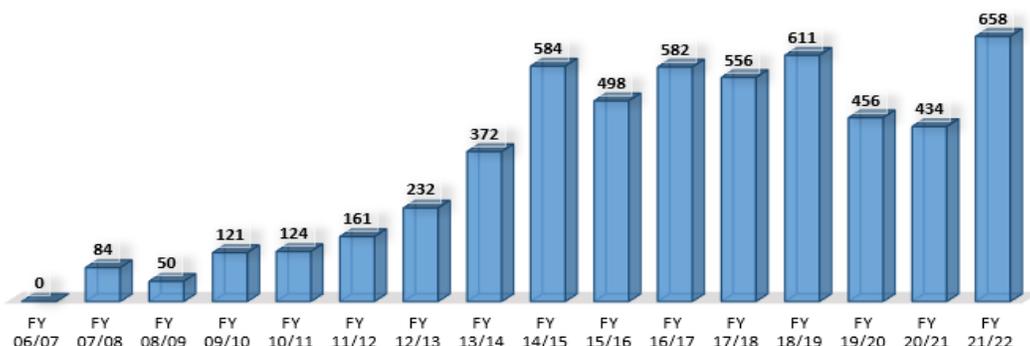
Sampling of Private Wells

There are approximately 345 “orphan” groundwater contamination sites (no responsible party can be identified) with private drinking water wells in the vicinity. Of those, 205 sites have affected the nearby drinking water wells. In many of these cases, the sources of contamination cannot be determined, and it is difficult to predict whether contamination will migrate, or levels will increase or decrease over time.

During FY 2021-22, Program staff sent 1,611 letters to well owners to request permission to sample drinking water wells. As shown in Figure 2, permission was granted and samples were collected from 658 private wells. If the analytical results indicated that a contaminant was detected in the water sample, a health risk evaluation was prepared by the division's toxicologist and sent to the property owner. The remaining 953 wells were not sampled because owners did not give permission for sampling, did not respond to the request, indicated they were connected to an alternate water supply, or the property was vacant.

Figure 2

WELLS SAMPLED BY FISCAL YR



The number of sites and wells sampled within their respective county is shown in Table 1 below.

Table 1. Site Locations of Drinking Water Wells Sampled in FY 2021-2022

County	No. of Sites	No. of Wells	County	No. of Sites	No. of Wells
Alamance	2	9	Hoke	1	1
Ashe	1	7	Iredell	5	22
Beaufort	1	2	Lincoln	1	3
Brunswick	1	3	Martin	1	2
Buncombe	5	13	McDowell	1	1
Cabarrus	2	7	Mecklenburg	17	59
Caswell	2	9	Moore	2	3
Catawba	5	27	New Hanover	2	21
Chatham	1	7	Orange	1	5
Cleveland	1	2	Pender	1	4
Cumberland	2	10	Person	1	9
Currituck	1	8	Randolph	3	6
Davidson	1	1	Richmond	2	5
Durham	3	9	Rowan	4	34
Forsyth	1	1	Stanly	1	3
Franklin	2	5	Stokes	1	6
Gaston	8	76	Surry	1	6
Guilford	8	89	Wake	9	152
Henderson	1	24	Yadkin	1	2

Bernard Allen Memorial Drinking Water Fund

In FY 2021-22, the fund received \$700,000 in appropriations. Of that, \$300,000 is dedicated to work associated with PFAS. Expenditures from the fund continue to be primarily used for connecting residences to municipal water systems, providing bottled water, installing point-of-entry filtration treatment systems, maintaining existing point-of-entry filtration treatment systems, and sampling and analyzing drinking water wells for potential contamination. A summary of fund expenditures is shown below.

Table 2. Accounting Summary of the Bernard Allen Memorial Emergency Drinking Water Fund - FY 2021-22 (as of June 30, 2022).

BEGINNING CASH BALANCE:		\$396,713.34
INCOME (Appropriations from General Fund):		\$701,614.75
EXPENDITURES:		\$453,511.74
	Lab Testing	\$50,412.00
	Bottled Water	\$3,959.00
	Water Service Connections	\$21,173.44
	Point-of-Entry Treatment Systems	\$193,761.79
	Well Abandonments	\$11,614.86
	Sampling Contractors and Supplies	\$82,487.87
	Fund Administration	\$90,102.78
BALANCE AS OF JUNE 30, 2022		\$644,816.35
OBLIGATED TO CONTRACTS		\$154,516.67
DEDICATED TO EMERGENCY CONTAMINANTS Per Senate Bill 105		\$300,000.00
EFFECTIVE (Unencumbered) CASH BALANCE		\$190,299.68

Summary

The Bernard Allen Memorial Emergency Drinking Water Fund, administered by the Division of Waste Management in the N.C. Department of Environmental Quality, continues to be a valuable resource for qualifying residents in North Carolina at risk from contamination in drinking water wells.

The fund's ability to pay for sampling and analysis of water supply wells and the temporary or permanent provision of alternative drinking water supplies has been instrumental in helping the state respond to emergency drinking water situations. Monies are disbursed from the fund based on financial need and on the risk to public health posed by groundwater contamination. The fund's ability to provide bottled water to residents as a temporary water supply has also helped as a short-term solution, providing time for longer-term alternatives to be evaluated and implemented. Without this fund, the state has no resource to provide emergency temporary water supplies in many situations.

Due to the potential presence of these compounds in groundwater throughout the state, DEQ implemented an Action Strategy for PFAS to determine the extent of existing PFAS contamination, protect residents and drinking water supplies, and prevent future contamination. Toward the end of FY 2021-22, N.C.G.S. 87-98 was amended to include contamination from PFAS compounds as a qualifying factor for the fund's use. The Bernard Allen Program will be instrumental in identifying and notifying those who may be at risk of well-water exposure and providing affected well owners with alternative clean water solutions. Evaluation of sites that have been identified with either known or suspected PFAS contamination is underway.

This year, the Program's staff sampled the highest number of private wells since the fund's establishment. Future demands on the fund will likely increase based on the increasing number of private wells tested statewide. The Department will continue to evaluate the eligibility of projects that can be served by the fund as demands change.