

**Report to the North Carolina General Assembly
Joint Legislative Oversight Committee on
Natural and Economic Resources and the Fiscal
Research Division**



***Bernard Allen Emergency Drinking
Water Fund Annual Report***

October 1, 2023

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 (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 2022-23, 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 410 drinking water well samples statewide and provide 75 households alternate water through bottled water, waterlines, treatment systems, or treatment system maintenance. Since inception 205 households have received alternate water. As part of the Program, DEQ regularly communicates with local health departments on water supply sample results 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. To date, 63 wells have been sampled for PFAS and seven residences have received bottled water. Due to the ubiquitous nature of PFAS and its presence in most of the wells tested, Program staff developed a pilot treatment system reimbursement program to stretch the available funds and serve as many affected citizens as possible. Program staff continues to work with the Division of Waste Management to identify sites statewide for drinking water well sampling on properties at risk of PFAS and other contamination.

DEQ 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 2022-23 Activities

In fiscal year (FY) 2022-23, 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:

- 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.

PFAS Alternate Water Assistance Program

Since releasing the DEQ Action Strategy for PFAS on June 7, 2022, DEQ has taken significant action to address PFAS in drinking water. To date, 63 wells have been sampled for PFAS and seven residences with contamination exceeding the Health Advisory Level (70ng/L) have received bottled water. In March 2023 EPA released a proposed maximum drinking water standard of 4ng/L for PFOA & PFAS. Research of sampled well results in the Guilford and Lower Cape Fear Counties showed nearly 640 residences would qualify for alternate water provisions as a result of these standards. Due to limited funding and to accommodate as many affected residents as possible, a pilot program was developed under the Bernard Allen Emergency Drinking Water Fund to support residents that have PFAS contamination in their private drinking water wells. Full or partial funding for treatment systems or, where feasible, connection to public water, will be provided to eligible residents with PFAS contamination that equals or exceeds EPA's proposed MCLs, on a scale based on household income. Qualifying property owners who cannot afford the purchase of a treatment system or public water connection due to income are also considered.

The Bernard Allen program continues to support DEQ's Action Strategy for PFAS with well sampling across the state. Applications for the pilot treatment program will be provided to residents who meet the program criteria, as long as funding is available.

Alternate Water Provided

Alternate water was provided across the state as detailed below and in Figure 1. It is anticipated that the number will be much higher in the next fiscal year in response to the treatment system assistance program.

Bottled water was temporarily provided to 19 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.

• Bladen	1	• Henderson County	1
• Brunswick	1	• Orange County	1
• Buncombe County	1	• Rockingham County	2
• Gaston County	2	• Surry County	1
• Guilford County	5	• Wake County	3
• Haywood County	1		

Bottled water was provided to the following 7 residences that had wells contaminated with PFAS.

- Catawba County 3
- New Hanover County 4

One residence was connected to municipal water service:

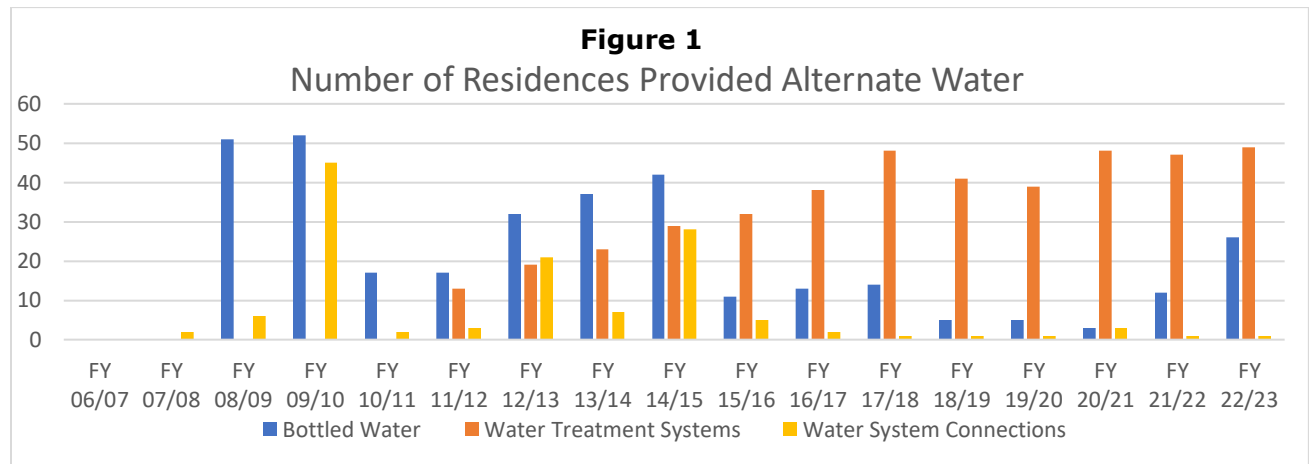
- Wake County 1

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

- Guilford County 2

Maintenance was performed on existing point-of-entry filtration treatment systems at 47 residences:

- Avery County 1
- Buncombe County 3
- Durham County 2
- Gaston County 6
- Guilford County 8
- McDowell County 3
- Mecklenburg County 2
- Orange County 2
- Randolph County 5
- Rockingham County 1
- Rowan County 1
- Stokes County 1
- Surry County 1
- Wake County 11



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.

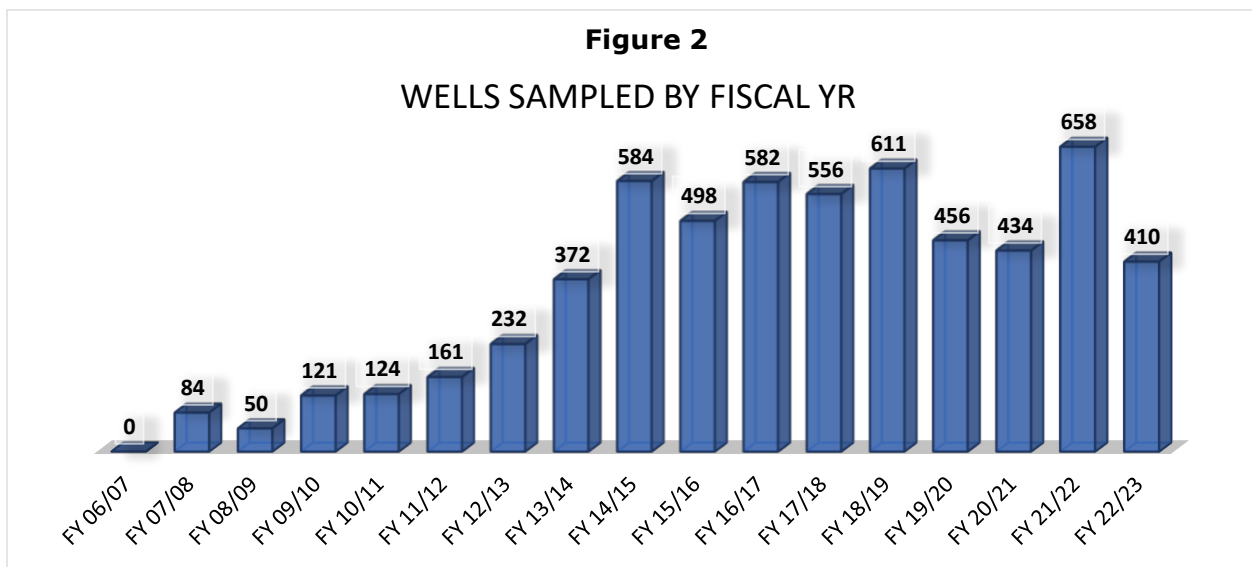
In FY 2022-23, staff evaluated approximately 75 contaminated sites for water supply well sampling through the Bernard Allen Fund. Most sites encompassed multiple residences and wells. Site reviews include the following activities:

- 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 over 377 known “orphan” groundwater contamination sites (no responsible party can be identified) with private drinking water wells in the vicinity. Of those, 343 sites have affected the nearby drinking water wells, and more are discovered each year. 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 2022-23, Program staff sent 1,044 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 410 private wells (15% were sampled for PFAS.) 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 634 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.



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
Ashe	2	3	Iredell	1	5
Avery	1	5	Lincoln	2	3
Bertie	1	1	Mecklenburg	8	55
Bladen	1	1	Montgomery	1	1
Brunswick	1	1	New Hanover	2	47
Buncombe	2	14	Orange	3	3
Carteret	1	3	Pender	1	2
Caswell	1	1	Randolph	1	17
Catawba	1	2	Robeson	1	3
Cleveland	3	6	Rockingham	1	19
Craven	1	1	Stokes	1	7
Durham	2	6	Vance	1	1
Franklin	1	5	Wake	5	34
Gaston	5	69			
Guilford	6	79			
Halifax	1	4			
Henderson	2	12			

Bernard Allen Memorial Drinking Water Fund

In FY 2022-23, 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 2022-23 (as of June 30, 2023).

BEGINNING CASH BALANCE:		\$644,816.35
INCOME (Appropriations from General Fund):		+\$700,000.00
EXPENDITURES:		- \$591,161.94
Lab Testing	\$73,625.90	
Bottled Water	\$6,179.35	
Water Service Connections	\$27,830.74	
Point-of-Entry Treatment Systems	\$183,147.63	
Well Abandonments	\$6,164.00	
Sampling Contractors and Supplies	\$45,883.37	
Fund Administration	\$91,246.41	
Accounting Error (correcting FY23-24)*	\$157,084.04	
BALANCE AS OF JUNE 30, 2023		=\$753,654.41
OBLIGATED TO CONTRACTS		-\$148,956.95
DEDICATED TO EMERGENT CONTAMINANTS Per Senate Bill 105		-\$563,332.30
EFFECTIVE (Unencumbered) CASH BALANCE		=\$41,365.16

*Payment for contracted activities was made from the Bernard Allen Drinking water account rather from the Inactive Hazardous Sites Clean Up Fund and the correction did not occur until after the close of FY2022-23 on June 30th, 2023. The correction will appear on the reports for FY2023-24.

Summary

The Bernard Allen Memorial Emergency Drinking Water Fund 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 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.

This year, the Program experienced some increased demands associated with PFAS that necessitated the recruitment of additional staff, training on unique sampling methodology and personal protective equipment, modifications to laboratory contracts, and development of the Pilot Treatment System Reimbursement Program. Even with the Program's growth, it continued to sample a high number of private wells each year for both routine and emerging contaminants,

Future demands on the fund will likely increase as the extent of contamination continues to be assessed and as the pilot program grows, increasing the number of private wells tested statewide. In addition, sampling equipment, analytical costs, and costs to purchase and install alternate water systems continue to increase. The Department will continue to manage the fund as demands change.