

**Annual Report to the
Environmental Review Commission**

**BERNARD ALLEN EMERGENCY
DRINKING WATER FUND**

October 1, 2009

**North Carolina Department of Environment
and Natural Resources**

Executive Summary

In 2006 the General Assembly created the Bernard Allen Emergency Drinking Water Fund as a program designed to improve the state's response to groundwater contamination and to provide low income households with a safe and clean drinking water supply.

The originating legislation establishing the Fund outlined three authorized uses: 1) to pay for notice to persons whose wells were at risk from groundwater contamination; 2) to pay the costs of testing private wells; and 3) to provide an alternative drinking water supply to well owners affected by the contamination. The statute governing the Fund has since been substantially modified twice by the General Assembly.

The Fund received a \$300,000 appropriation in 2006 and a \$615,000 appropriation in 2007. The General Assembly did not appropriate any money to the Fund in 2008. In 2009 the General Assembly included a provision in the budget bill, Session Law 2009-451, which amended the statute governing the distribution of the revenue generated from the scrap tire tax. The provision allocates 2.5% of the net tax proceeds from the tax on new tires for the Fund. This new revenue is estimated to generate approximately \$325,000 for the Fund in the upcoming fiscal year.

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 water line connections. In 2009 the Fund continued to be focused primarily on responding to the situation in the Sandhills area. Dozens of residents in Montgomery and Richmond County have had their drinking water wells contaminated from historical pesticide use in the area. Approximately 55 households have met the income requirements in the statute and have been receiving an alternate water supply paid for by the Fund.

Despite the important purposes served by the Fund, the program itself is hampered because of a lack of a full time administrator to run the program and oversee the Fund. The Fund could also benefit from additional guidance on policy matters related to temporary drinking water supplies.

2009 Update¹

The Bernard Allen Emergency Drinking Water Fund (Fund) provides critical assistance to the residents of this state affected by groundwater contamination. Other programs that provide funds for alternative water supply, such as the Underground Storage Tank Trust Fund and the Dry Cleaning Solvent Cleanup Fund, can only be used to address specific types of contamination. Before the creation of the Fund there was no source of emergency funding to assist residents whose drinking water wells had been contaminated by a broad range of pollutants, including pesticides, bacteria, solvents and other chemicals.

The Fund fills many of the gaps where other programs cannot provide immediate relief. The Fund also leverages investments by local government and by state funding agencies. Without investment of state monies, many local governments find a waterline project to serve a small number of residents cost prohibitive.

In 2009 the Fund has primarily been focused on two major priorities: 1) working with residents in the Sandhills area whose wells have been impacted by pesticides; and 2) identification of other sites in the state that may be eligible for funding under the program.

Sandhills Region

In December of 2007 the Division of Water Quality (DWQ) was notified of potential drinking water concerns in Montgomery County. DWQ sampled the well in question and discovered pesticide contamination that likely resulted from the land's prior use as peach orchards. DWQ began sampling more wells and expanded the geographic scope of its sampling into Richmond and Moore Counties. To date, over 500 private drinking well samples have been tested in conjunction with the local health departments. Of those wells sampled approximately 70 wells had detections at concentrations too high to use the water. The sampling of these wells and the lab analysis were paid for by the Fund.

In April of 2008 the Fund also began paying for bottled water to affected residents, while a permanent solution was explored. Because the Fund can only be used to provide an alternative water supply to residents whose income is below 300% of the federal poverty guidelines, residents were required to provide affidavits verifying their eligibility to continue receiving the

¹ A more detailed description of the Fund's history and implementation since its inception can be found in the 2008 annual legislative report on file with staff to the Environmental Review Commission.

bottled water. As of September 2009 approximately 55 households continue to be supplied with bottled water. The Fund is currently spending approximately \$4,000 per month to provide bottled water.

Montgomery County is in the process of beginning construction on a waterline that will serve some of the impacted residents. The Fund has committed \$200,000 towards this waterline project, which has been estimated at \$1.2 million.

While the waterline connection will provide a permanent solution for some residents, many others who live off unpaved roads will not be able to connect to the waterline. Other long term solutions such as filtration systems or new wells are likely infeasible for varying reasons. Consequently, an important policy issue arises as to the state's obligation and the expectation of the Fund with respect to long term and indefinite supply of bottled water to residents impacted by contamination.

A presentation by staff from DWQ was made to the Environmental Review Commission in November 2008 providing an update on situation in the Sandhills region. A copy of that powerpoint presentation is included in this report in Appendix I.

Identification of Other Eligible Sites

The Inactive Hazardous Sites Branch of the Division of Waste Management has conducted an initial file review of approximately 700 higher risk sites that might be eligible for assistance from the Fund. This review identified 61 sites with contamination above federal drinking water standards and no clear responsible party with resources to provide alternative water supply. However, for almost all of these sites the data and information in the files was outdated. Pursuant to the Fund's authorization to use up to \$100,000 for personnel costs, DENR hired temporary staff to update file information on these sites. This work included confirming that the residences have not been connected to public water service, re-sampling of the wells, providing notification to residents of sample results and verifying eligibility of homeowners.

To date over 50 of the 61 files have been reviewed. Multiple sites in Alamance, Lincoln and Union Counties have had drinking water wells sampled and notification of the results provided to residents. This work has also resulted in U.S. EPA investigating nine sites for possible federal assistance in providing alternate drinking water.

The work to identify potential eligible sites continues. The future work will focus on a greater volume of well testing and communication with local governments for long term solutions.

The Fund has also taken steps over the past year to improve the administration of the program. For example, a statewide bottled water contract has been put in place to allow DENR to provide bottled water more quickly when eligible residents with contaminated wells are identified. DENR staff also continues to work with local health departments and local health directors to make them aware of the Fund and its ability to provide assistance for authorized purposes.

Financial Status

Since its establishment in 2006 the Fund has received a total of \$915,000 in appropriations. The Fund also generates revenue from interest, including \$31,040 in the 2008-2009 fiscal year. In the 2009 budget bill, a provision was included reallocating money from the scrap tire tax to the Bernard Allen Fund. The revenue from this re-distribution is estimated to generate approximately \$325,000 for the Fund on an annual basis.

The expenditures from the Fund have primarily come in the form of supplementing local government waterline projects, providing bottled water and paying for well testing. Pursuant to the statutory provision allowing for personnel costs up to \$100,000, in the 08-09 fiscal year the Fund has paid approximately \$27, 000 in funding for temporary staff to verify eligibility, review files and test wells. In addition, the Fund continues to spend a significant amount of money providing bottled water to the residents in the Sandhills region. For the 08-09 fiscal year the cost of providing bottled water was \$59,000. The Fund has recently entered into a bottled water contract with a new vendor which should reduce the costs of this service without any impact to the residents receiving the bottled water.

The Fund has an approximate balance of \$542,000. However, this balance total does not reflect existing obligations, such as the \$200,000 commitment to support a waterline project for Montgomery County, contractual obligations for lab analysis and the ongoing expenses of paying for bottled water.

Conclusion and Recommendations

The Bernard Allen Emergency Drinking Water Fund continues to serve a valuable role for those citizens in North Carolina who have contaminated drinking water wells. The Fund's ability to pay for well testing and provide notification for residents was instrumental in helping the state respond to the emergency situation in the Sandhills Region. Furthermore, the Fund's ability to provide bottled water as a temporary water supply has provided a short term solution, while

longer term alternatives are explored. Before the creation of the Fund, the state had no source of providing emergency temporary water supplies in many situations.

Despite the positives associated with the Fund, critical policy choices need to be addressed as the Fund matures. These policy decisions that merit further evaluation include:

1. The long term implication of the state continuing to provide bottled water indefinitely to residents with contaminated drinking water wells when no long term solution is viable; and
2. Funding a full time administrator who could oversee all aspects of the program from well testing to provision of temporary and permanent water supplies and coordinate activities among the different programs within DENR that deal with groundwater contamination and drinking water.

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For more information about the Bernard Allen Emergency Drinking Water Fund please contact:

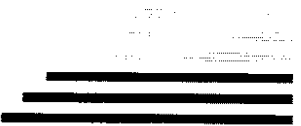
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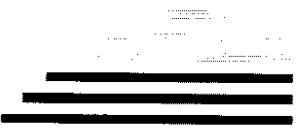
APPENDIX 1

PRESENTATION TO THE ENVIRONMENTAL REVIEW COMMISSION SANDHILLS PESTICIDE CONTAMINATION



Sandhills Region Pesticide-Groundwater Quality Investigation Background

- Sample of well north of Norman indicated the 3 chemicals of concern in (late 2007) all above safe limits.
- 1,2-dibromo-3-chloropropane=1.6 (limit .2 ppb)
- 1,2-dichloropropane=1.3 (limit 5 ppb)
- 1,2,3-trichloropropane=.58 (limit .2 ppb)



Uses of Chemicals

- Chemicals were components of pesticides applied to farmland as soil treatment for nematodes.
- Collectively used between mid 1950's and late 1980's for agricultural purposes.
- Many different product names and crops used on.
- The detection areas, history of peach production and row crops. Now land has converted to residential uses.



Background continued:

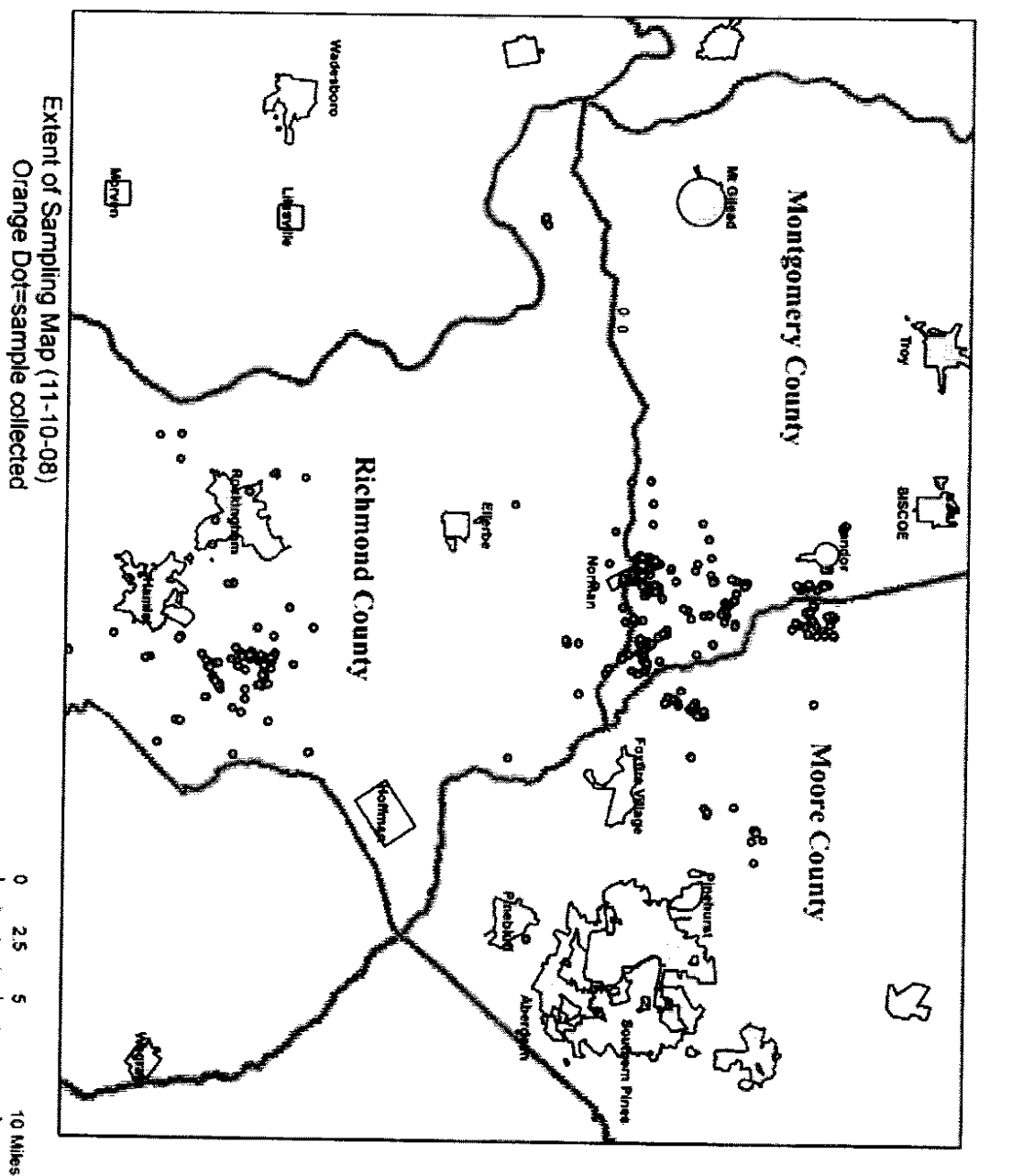
- -Since 12/07, over 400 total samples collected by DWQ & County Health Departments. (Montgomery, Richmond & Moore)
 - -Results: As of 11/10/08 from 402 residences screened
 - 253 non-detects
 - 41 had low detects with water still useable
 - 84 residences (68 wells) had detections at concentrations too high to use water
 - 24 had non-pesticide detections
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Maximum Concentrations Detected

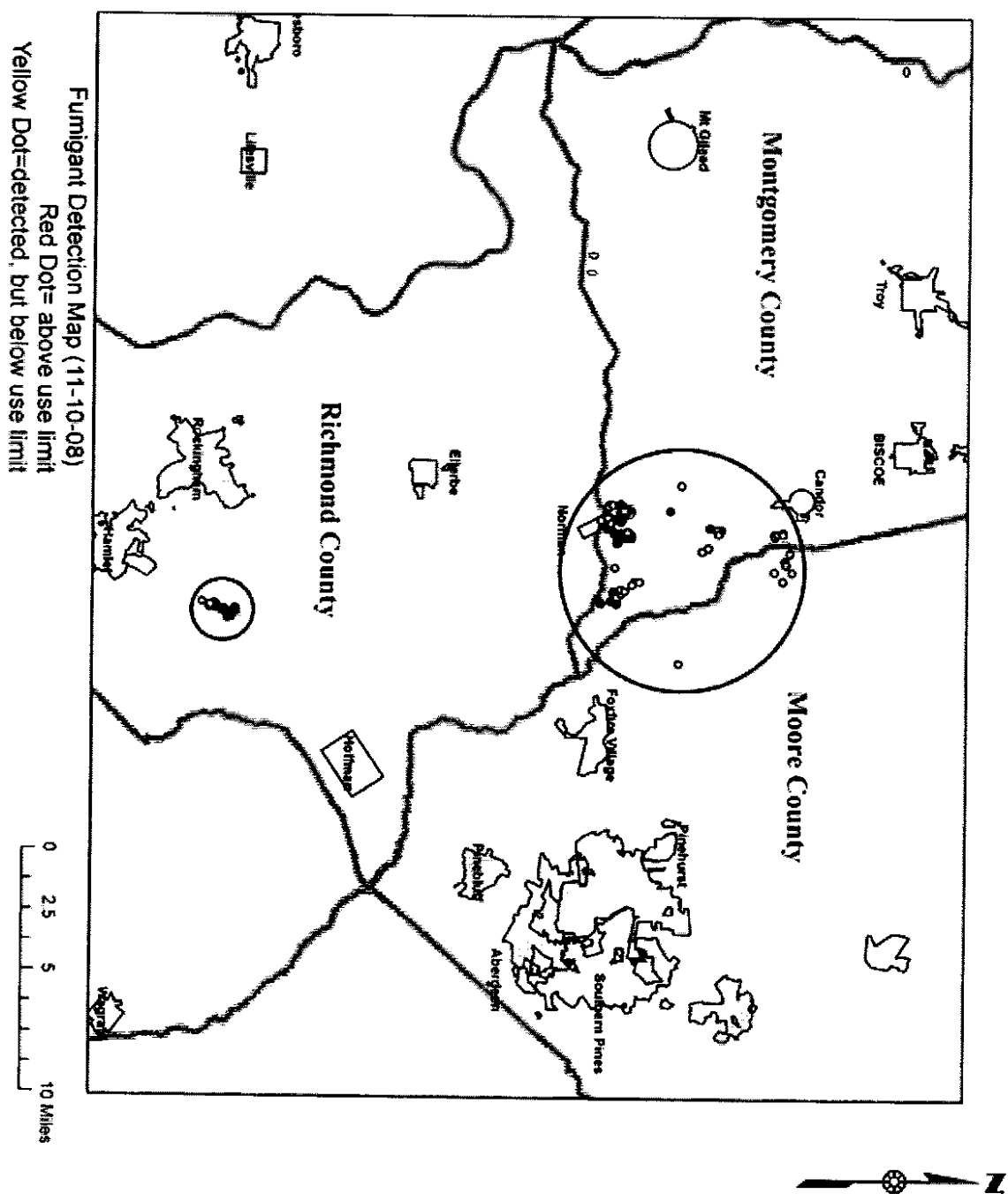
(ppb-parts per billion)

- 1,2-dibromo-3-chloropropane=highest level 11.0 ppb
- 1,2-dichloropropane=highest level 9.0ppb
- 1,2,3-trichloropropane=highest level 3.8ppb
- 1,2-dichloroethane=highest level 8.3ppb, unique to 5 wells (grain fumigant, insecticide uses)



Sample Locations

Montgomery County
Richmond County
Moore County



Locations of Detections




Background continued:

- -EPA Region 4 Emergency Response Branch assisted at residences connected to wells that contained the highest levels 2/28/08 with bottled water.
 - -NC DENR awards Bernard Allen Fund contract on 4/7/08 to fund bottled water, after which deliveries began, and are continuing.
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Conclusions at this time

- ❑ The locations & concentrations of the fumigant chemicals discovered so far appear to be residuals from normal farming practices during the time the chemicals were in circulation.
- ❑ The locations that pose the highest risk to the our citizens are lands that were previously farms where the chemicals were applied and have now been converted to residential uses or for obtaining drinking water (water system wells)
- ❑ Not all converted farm land appears to be impacted. So the use of the these type chemicals probably varied widely from one farm operation to the next.



Solutions:

- Short Term:
- -Bernard Allen Fund-Bottled Water Contractor-Laurel Valley Water Company.
- -Water distribution points from County Systems



Solutions:

□ Other Short Term:

□ -Filters:

- Unsure of the duration and quality of the filter media.
- High maintenance and monitoring costs.

□ -Groundwater well that taps a zone of uncontaminated water:

- Unsure of the location of uncontaminated vs. contaminated zones.
 - Attempts to find these zones expensive for the individual home owner.
 - No guarantee the water will remain good quality.
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Solutions:

□ Long Term:

- -Water System Expansion
 - County System – funding issues, logistical issues, slow process
 - New Local Well System – may be possible where source water is isolated from impacted groundwater. Will require installation of test wells to measure for contamination and well yield to determine if this is an option for an affected area. (Fox Rd. area of Richmond County has potential)
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Looking Ahead:

- -DWQ & County Health Departments are continuing to sample supply wells to screen for detections of these pesticides
 - Anson, Montgomery, Moore & Richmond Counties targeted
 - -DWQ is organizing a study in Norman area to evaluate the specifics of how these chemicals exist & travel in the groundwater system
 - -Recommend VOC analysis be conducted as standard part of the local well program (especially for the Sandhills region)
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