



## Residential Well Sampling

The Corps has conducted several rounds of residential well testing in the Respass Beach community over the course of the project. Respass Beach is adjacent to the eastern boundary of the former depot near Streeter Creek and is the only community nearby that relies on private wells as their primary water source.



*An example of well sampling.*

The first round of sampling was conducted on 6 residential wells along Streeter Creek on November 11, 1997 because of concerns raised during FNOD Restoration Advisory Board meetings. The concerns were due to a lack of knowledge regarding the potential for any former depot related contaminants migrating into the groundwater serving the Respass Beach community.

The Corps tested the residential well samples for all contaminants known or possibly associated with the FNOD site such as metals, explosives, volatiles, semi-volatiles, and pesticides. The results of the first sampling effort indicated that no FNOD related contaminants were present in any of the wells.

In February 1998, a second round of sampling was conducted as a quality control measure. This effort involved the same 6 residential wells along Streeter Creek. These results

were validated and compared with samples taken by EPA. None of the contaminants found in the preliminary sampling on the FNOD site (i.e. Nitroaromatics or TCE – explosive compounds or cleaning solvents) showed up in the Respass Beach sampling efforts. Sampling results for all six wells were well within federal drinking water standards. Information on these sampling events is available for public review in the information repository at the TCC Portsmouth Campus library.

### ***Latest Sampling Effort***

The Corps is now in the preliminary stage of groundwater sampling and analysis at the FNOD site. The project team currently knows only how groundwater flows in the vicinity of specific sites at FNOD where potential hazards have been found. They do not know yet how groundwater flows throughout the entire FNOD area. To fill this data gap, the Corps will be initiating its third round of residential well sampling this year in the Respass Beach community as a part of a larger groundwater monitoring effort.



*A groundwater monitoring well.*

The project team will be looking at deep and shallow aquifers on both sides of Streeter Creek. In addition to the residential well sampling, the Corps will be installing 3 new well clusters, one of which will be on the Respass

# Upcoming Residential Sampling Effort



A drill rig used to install groundwater monitoring wells.

Beach side of Streeter Creek, and a single additional well towards the northeastern end of the FNOD area for ongoing groundwater monitoring efforts. The new groundwater chemistry data collected will add to the baseline information that has been previously collected at FNOD and Respass Beach and will help the project team to determine if any changes have occurred since the last (February 1998) residential sampling event.

In April 2001, the Corps began trying to identify volunteers in the Respass Beach community to participate in the latest residential well sampling effort. Volunteers were solicited through the FNOD Restoration Advisory Board, *Restoration News* (the project newsletter), and the Respass Beach Homeowner's Association. Eight volunteers have been identified to participate – four with deep wells

and four with shallow wells. The residential well sampling area was divided into four quadrants. The

Corps will sample two residential wells in each quadrant - one shallow and one deep.

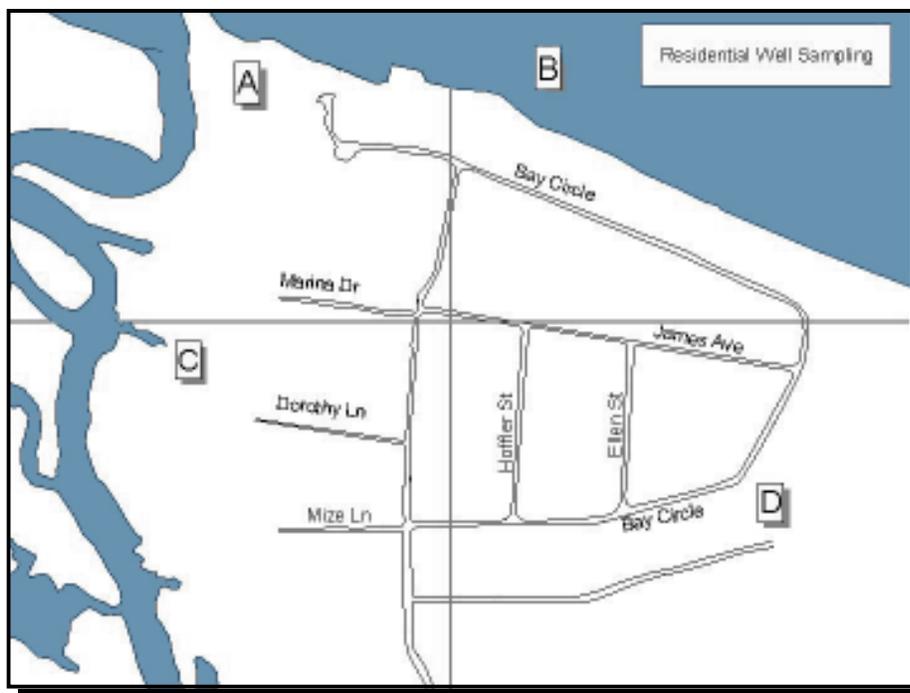
The Corps will be sampling for Volatile Organic Compounds, Semivolatile Organic Compounds, Polycyclic Aromatic Hydrocarbons (such as creosote which is potentially dangerous), trace elements and metals, nitroaromatics and nitramines (explosives), pesticides/PCBs, Nitrite/Nitrate, Fluoride, and Total Coliforms.

**Volatile Organic Compounds** evaporate readily (such as gasoline).

**Semivolatile Organic Compounds** don't evaporate as readily (such as diesel).

Samples from the residential wells will be analyzed using groundwater analysis methods, as opposed to standard drinking water quality methods, to make the results comparable to the data collected in all the other FNOD area groundwater wells. This will allow the project team to study whether there is any possible correlation between the residential well detections and those results found in any of the groundwater monitoring wells on the west side of Streeter Creek.

The Corps will be using drinking water analysis methods for Nitrite/Nitrate, Fluoride, and Coliforms for the participating homeowners.



Respass Beach Sampling Quadrants

# Upcoming Residential Sampling Effort

The Corps submitted the draft work plan for the new groundwater monitoring wells and the residential well sampling effort to EPA and Virginia Department of Environmental Quality (VDEQ) for review in November 2001. Once the Corps receives comments from the regulators, and finalizes the work plan, the Corps will begin the sampling effort.

## *Anticipated Sampling Schedule — 2002*

|   |   |   |   |
|---|---|---|---|
| <b>January</b>                                  | <b>February</b><br>Finalize work plan   | <b>March</b><br>Conduct residential sampling<br><br>Install the additional groundwater monitoring wells | <b>April</b><br>Sample new monitoring wells             |
| <b>May</b><br><br>Conduct lab and data analysis | <b>June</b>   | <b>July</b><br>Prepare draft report   | <b>August</b><br>Conduct internal and regulatory review |
| <b>September</b>                                | <b>October</b><br>Provide results to the participating landowners and a report of findings at the October RAB meeting | <b>November</b>   | <b>December</b>   |

For privacy purposes, the Corps has agreed not to reveal or publish the names or addresses of the property owners who will be having their wells sampled. However, overall results from the sampling effort will be reported at the October 2002 RAB meeting and published in the final study reports. If the sampling results from this effort suggest that there is a connection between FNOD and Streeter Creek or Respass Beach, the Corps will investigate the connection further.



*Collecting groundwater samples*

# Site History & Map

The Former Nansemond Ordnance Depot (FNOD) occupied 975 acres overlooking the Nansemond and James Rivers in Suffolk, Virginia, over a 43-year period from 1917 to 1960. It played a major role in the storage, shipment, inspection, reconditioning, and disposal of munitions during World War I and World War II.

In 1960, the Department of Defense declared the FNOD property excess. Various land transactions

have taken place within the 975 acres since the initial release of the property in 1960.

Today the site is occupied by Tidewater Community College (TCC) – Portsmouth Campus; Dominion Land Management (Bridgeway Commerce Park); General Electric; Continental Properties; the Hampton Roads Sanitation District; and the Virginia Department of Transportation, including a portion of Interstate 664.



## Contact Information

For more information about the Former Nansemond Ordnance Depot project please contact the following people:

Ken Hafner – Project Manager  
USACE Norfolk District  
Phone: 757-441-7507  
Email: kenneth.w.hafner@usace.army.mil

Cheryl Fromme – Project Engineer  
USACE Norfolk District  
Phone: 757-441-7142  
Email: cheryl.l.fromme@usace.army.mil

## Project Web Site

<http://www.nao.usace.army.mil/Projects/Nansemond/welcome.html>

## Information Repository

Information about the Former Nansemond Ordnance Depot project is available for public review at the Tidewater Community College Library

7000 College Drive Portsmouth, VA  
Library Hours: 8 a.m. to 9 p.m. Monday through Thursday  
and 8 a.m. to 4 p.m. on Friday