



Township of Hillsborough

COUNTY OF SOMERSET
THE PETER J. BIONDI BUILDING
379 SOUTH BRANCH ROAD
HILLSBOROUGH, NJ 08844
(908) 369-4313
www.hillsborough-nj.org

HILLSBOROUGH TOWNSHIP PRIVATE WELL TESTING ACT REPORT

Many residences in Hillsborough Township get their potable water from a private well. Historically, potable wells were only required to be tested for quality after the well was first drilled/installed. In 2002, New Jersey passed the Private Well Testing Act (PWTA), which made it a law that all potable wells must be tested for a wide range of possible contaminants at the time of sale of the property, or every 5 years if the property is being leased.

NJDEP estimates that since the PWTA began in 2002, 25% of the state's approximately 400,000 private domestic potable wells have been tested by the PWTA. While test results are required to be sent to NJDEP by the testing laboratory, specific results are not made available to anyone, including local health departments. Instead, NJDEP has developed an online map of NJ, where results of testing are available based on 2 mile square blocks (to access this map, go to

<https://njdep.maps.arcgis.com/apps/MapSeries/index.html?appid=826ec9fae77543caa582a787d5f088e7>).

While testing results are only provided by 2 mile square blocks, this information is still very useful to both residents and government officials alike, as it can be used to determine what possible contaminants are most likely to be an issue in a particular area.

IMPORTANCE OF REGULAR WELL TESTING

If you have a potable well, it is extremely important that you regularly have it tested for quality to ensure the water you are drinking and bathing in is safe. Even if you had your well tested in the past and no contaminants were found, it is advisable that you follow the recommended testing time frame (see section below titled "Recommended Testing Time Frame" below). **The Hillsborough Health Department strongly recommends that anyone with a private well should have it tested annually for bacteria and nitrates, and at least periodically for the full range of contaminants required by the PWTA.**

HOW TO USE THIS REPORT

The included map of Hillsborough Township is divided into 2 square mile grids. While testing laboratories are required to submit the results of these tests to the New Jersey Department of Environmental Protection (NJDEP), NJDEP does not make publicly available any confidential information regarding the results of individual wells. Instead, they only provide general results based on areas within the municipality where the tests were conducted.

Locate the grid where your home is, and look at the corresponding data reported through testing by the PWTA. Results indicated in this report represent 1) the constituent tested (ex: nitrate, Arsenic, etc), 2) the percent of wells tested in that grid that exceeded, and 3) the total number of wells that have been tested in that grid under the PWTA. This information will be useful to you when trying to determine what you may want to have your well tested for. SPECIAL ATTENTION should be given to items noted in BOLD, as these figures represent exceedances of 10% or more of wells tested in that grid.

** PLEASE NOTE THAT THESE RESULTS ONLY REPRESENT A SAMPLING OF WELLS. Results of your well water may be significantly different than those listed.

Map of Hillsborough Township and Corresponding Grid Numbers



- Note: the grids above indicate 2 mile by 2 mile.
- Please refer to the information following the grid number data for details on each contaminant.
- % Exceedances of 10% or greater are in bold.
- For

****PLEASE NOTE:**

- **Data listed by the PWTA report, as well as this document, may significantly underestimate the presence of Gross Alpha contamination, especially in areas of significant bedrock, such as the Surland Mountain region of Hillsborough. Testing for Gross Alpha contamination went into effect in 2018, which is the last year that the PWTA report data was taken for this report (2002 - 2018). Residents, especially those who reside near the Surland Mountain region, should seriously consider testing for the presence of Gross Alpha at least once.**

HILLSBOROUGH TOWNSHIP DATA CUMULATIVE DATA:

% of Exceedances (# of wells tested)

Municipality	Hillsborough Township, Somerset County
Nitrate	1.0% (893 wells sampled)
Arsenic	21.4% (893 wells sampled)
Iron	8.7% (893 wells sampled)
Manganese	5.2% (893 wells sampled)
Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required under PWTA
VOC	1.2% (893 wells sampled)
Fecal coliform or E. coli	3.1% (893 wells sampled)
pH	7.3% (893 wells sampled)

Grid Number **798** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	1.4% (143 wells sampled)
Arsenic	40.6% (143 wells sampled)
Iron	3.5% (143 wells sampled)
Manganese	2.1% (143 wells sampled)
Gross Alpha	3.4% (143 wells sampled)
Mercury	Testing is not required in this grid
VOC	0.0% (143 wells sampled)
Fecal coliform or E. coli	0.7% (143 wells sampled)
pH	3.5% (143 wells sampled)

Grid Number **799** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	3.6%	(28 wells sampled)
Arsenic	10.7%	(28 wells sampled)
Iron	28.6%	(28 wells sampled)
Manganese	10.7%	(28 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	0.0%	(28 wells sampled)
Fecal coliform or E.coli	0.0%	(28 wells sampled)
pH	17.9%	(28 wells sampled)

Grid Number 877

% of Exceedances (# of wells tested)

Nitrate	0.0%	(47 wells sampled)
Arsenic	40.4%	(47 wells sampled)
Iron	8.5%	(47 wells sampled)
Manganese	8.5%	(47 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	0.0%	(47 wells sampled)
Fecal coliform or E. coli	2.1%	(47 wells sampled)
pH	2.1%	(47 wells sampled)

Grid Number 878

% of Exceedances (# of wells tested)

Nitrate	0.9%	(113 wells sampled)
Arsenic	43.4%	(113 wells sampled)

Iron	5.3%	(113 wells sampled)
Manganese	4.4%	(113 wells sampled)
Gross Alpha	6.3%	(16 wells sampled)
Mercury	Testing is not required in this grid	
VOC	0.0%	(113 wells sampled)
Fecal coliform or E. coli	3.5%	(113 wells sampled)
pH	7.1%	(113 wells sampled)

Grid Number **955** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0%	(30 wells sampled)
Arsenic	40.0%	(30 wells sampled)
Iron	30.0%	(30 wells sampled)
Manganese	23.3%	(30 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	0.0%	(30 wells sampled)
Fecal coliform or E. coli	3.3%	(30 wells sampled)
pH	20.0%	(30 wells sampled)

Grid Number **956**

% of Exceedances (# of wells tested)

Nitrate	0.0%	(39 wells sampled)
Arsenic	30.8%	(39 wells sampled)
Iron	25.6%	(39 wells sampled)
Manganese	12.8%	(39 wells sampled)

Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	0.0% (39 wells sampled)
Fecal coliform or E. coli	2.6% (39 wells sampled)
pH	28.2% (39 wells sampled)

Grid Number **957** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0% (93 wells sampled)
Arsenic	22.6% (93 wells sampled)
Iron	7.5% (93 wells sampled)
Manganese	2.2% (93 wells sampled)
Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	3.2% (93 wells sampled)
Fecal coliform or E. coli	5.4% (93 wells sampled)
pH	5.4% (93 wells sampled)

Grid Number **958** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0% (101 wells sampled)
Arsenic	37.6% (101 wells sampled)
Iron	4.0% (101 wells sampled)
Manganese	1.0% (101 wells sampled)

Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	4.0% (101 wells sampled)
Fecal coliform or E. coli	2.0% (101 wells sampled)
pH	0.0% (101 wells sampled)

Grid Number **1107** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate 1.6% (191 wells sampled)

Arsenic 14.1% (191 wells sampled)

Iron 5.8% (191 wells sampled)

Manganese 5.8% (191 wells sampled)

Gross Alpha Less than 10 wells sampled

Mercury Testing is not required in this grid

VOC 0.5% (191 wells sampled)

Fecal coliform or E. coli 2.1% (191 wells sampled)

pH 1.0% (191 wells sampled)

Grid Number **1,111**

% of Exceedances (# of wells tested)

Nitrate 0.0% (29 wells sampled)

Arsenic 0.0% (29 wells sampled)

Iron 6.9% (29 wells sampled)

Manganese 3.4% (29 wells sampled)

Gross Alpha Less than 10 wells sampled

Mercury	Testing is not required in this grid
VOC	6.9% (29 wells sampled)
Fecal coliform or E. coli	0.0% (29 wells sampled)
pH	6.9% (29 wells sampled)

Grid Number 1,033

% of Exceedances (# of wells tested)

Nitrate	0.0% (65 wells sampled)
Arsenic	13.8% (65 wells sampled)
Iron	13.8% (65 wells sampled)
Manganese	7.7% (65 wells sampled)
Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	0.0% (65 wells sampled)
Fecal coliform or E. coli	6.2% (65 wells sampled)
pH	9.2% (65 wells sampled)

Grid Number 1,034

% of Exceedances (# of wells tested)

Nitrate	0.0% (124 wells sampled)
Arsenic	20.2% (124 wells sampled)
Iron	7.3% (124 wells sampled)
Manganese	4.8% (124 wells sampled)
Gross Alpha	Less than 10 wells sampled

Mercury	Testing is not required in this grid
VOC	0.0% (124 wells sampled)
Fecal coliform or E. coli	2.4% (124 wells sampled)
pH	8.9% (124 wells sampled)

Grid Number **1,035** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	8.5% (94 wells sampled)
Arsenic	28.7% (94 wells sampled)
Iron	1.1% (94 wells sampled)
Manganese	0.0% (94 wells sampled)
Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	0.0% (94 wells sampled)
Fecal coliform or E. coli	0.0% (94 wells sampled)
pH	3.2% (94 wells sampled)

Grid Number **1,108** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0% (30 wells sampled)
Arsenic	3.3% (30 wells sampled)
Iron	6.7% (30 wells sampled)
Manganese	13.3% (30 wells sampled)
Gross Alpha	Less than 10 wells sampled

Mercury	Testing is not required in this grid
VOC	0.0% (30 wells sampled)
Fecal coliform or E. coli	0.0% (30 wells sampled)
pH	0.0% (30 wells sampled)

Grid Number 1,109

% of Exceedances (# of wells tested)

Nitrate	0.0% (90 wells sampled)
Arsenic	0.0% (90 wells sampled)
Iron	1.1% (90 wells sampled)
Manganese	2.2% (90 wells sampled)
Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	1.1% (90 wells sampled)
Fecal coliform or E. coli	1.1% (90 wells sampled)
pH	1.1% (90 wells sampled)

Grid Number 1,110

% of Exceedances (# of wells tested)

Nitrate	0.0% (36 wells sampled)
Arsenic	2.8% (36 wells sampled)
Iron	8.3% (36 wells sampled)
Manganese	2.8% (36 wells sampled)
Gross Alpha	Less than 10 wells sampled
Mercury	Testing is not required in this grid
VOC	0.0% (36 wells sampled)
Fecal coliform or E. coli	2.8% (36 wells sampled)
pH	5.6% (36 wells sampled)

Grid Number **1,111** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0%	(29 wells sampled)
Arsenic	0.0%	(29 wells sampled)
Iron	6.9%	(29 wells sampled)
Manganese	3.4%	(29 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	6.9%	(29 wells sampled)
Fecal coliform or E. coli	0.0%	(29 wells sampled)
pH	6.9%	(29 wells sampled)

Grid Number **1,181** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.5%	(210 wells sampled)
Arsenic	32.9%	(210 wells sampled)
Iron	9.0%	(210 wells sampled)
Manganese	7.1%	(210 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	0.0%	(210 wells sampled)
Fecal coliform or E. coli	3.3%	(210 wells sampled)
pH	5.2%	(210 wells sampled)

Grid Number **1,182**

% of Exceedances (# of wells tested)

Nitrate	0.0%	(42 wells sampled)
Arsenic	9.5%	(42 wells sampled)
Iron	11.9%	(42 wells sampled)

Fecal coliform or E. coli	0.0%	(32 wells sampled)
pH	12.5%	(32 wells sampled)

Grid Number **1,185** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0%	(21 wells sampled)
Arsenic	0.0%	(21 wells sampled)
Iron	0.0%	(21 wells sampled)
Manganese	0.0%	(21 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	0.0%	(21 wells sampled)
Fecal coliform or E. coli	4.8%	(21 wells sampled)
pH	0.0%	(21 wells sampled)

Grid Number **1,254** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate	0.0%	(27 wells sampled)
Arsenic	14.8%	(27 wells sampled)
Iron	7.4%	(27 wells sampled)
Manganese	3.7%	(27 wells sampled)
Gross Alpha	Less than 10 wells sampled	
Mercury	Testing is not required in this grid	
VOC	0.0%	(27 wells sampled)
Fecal coliform or E. coli	14.8%	(27 wells sampled)

pH 3.7% (27 wells sampled)

Grid Number **1,255** (*Grid includes property in an adjoining municipality)

% of Exceedances (# of wells tested)

Nitrate 2.7% (74 wells sampled)

Arsenic 16.2% (74 wells sampled)

Iron 9.5% (74 wells sampled)

Manganese 4.1% (74 wells sampled)

Gross Alpha Less than 10 wells sampled

Mercury Testing is not required in this grid

VOC 0.0% (74 wells sampled)

Fecal coliform or E. coli 1.4% (74 wells sampled)

pH 23.0% (74 wells sampled)

RECOMMENDED TESTING TIME FRAME

Below is a list of recommended testing, and the frequency of when it should be done. Please note, these are minimum recommendations, and do not account for all possible types of contamination. For a complete list of contaminants required to be tested for, see <https://www.nj.gov/dep/dsr/pwta/>.

CONTAMINANT	TESTING FREQUENCY
Nitrate	Every other year
Arsenic	At least once
Iron	Every 5 years
Manganese	Every 5 years

Gross Alpha	At least once
Mercury	At least once
VOC	At least once
Fecal Coliform / E.coli	Every year
pH	Every year

SOURCES OF CONTAMINATION, HEALTH IMPACTS, & REMEDIATION

As can be seen from the above noted data, the most commonly exceeded parameter in Hillsborough Township is Arsenic. Since arsenic in drinking water has significant potential health impacts, it would be strongly recommended for residents with wells to test for arsenic, even if the specific grid they live in did not show a significant percent of exceedances.

*The following is not a complete list of potential health impacts or remediation.

The Environmental Protection Agency (EPA) standards for drinking water fall under two different categories: Primary and Secondary Standards. Primary Standards are based on health considerations and are designed to protect people from three classes of pollutants: pathogens, radioactive elements and toxic chemicals. Secondary Standards are based on taste, odor, color, corrosivity, foaming and staining properties of water.

Below is a list of basic information regarding the reported contaminants, including common remediation for each. For more information, please refer to NJDEP

Arsenic (Primary Standard)

- *Source:* Naturally occurring in rock.
- *Potential Health Impacts:* Can increase your risk of cancer, diabetes, and cardiovascular disease.
- *Recommended testing frequency:* At least once.
- *Remediation:* Distillation; Granular Ferric Adsorption.

Fecal Coliform / e.Coli (Primary Standard)

- *Source:* found in the stomach of warm blooded animals, as well as human and animal waste. Old wells with no or limited casing, or wells that do not have casing extending above-grade are easily contaminated.
- *Potential Health Impacts:* Gastro-intestinal problems, dysentery.

- *Recommended testing frequency:* Every year.
- *Remediation:* Chlorination; UV light; microbial purifier.

Nitrate (Primary Standard)

- *Source:* Naturally occurring, but is also from human sources such as septic systems.
- *Potential Health Impacts:* Impairs ability of blood to carry oxygen. Especially dangerous to babies, can cause “blue baby syndrome”.
- *Recommended testing frequency:* Every other year.
- *Remediation:* Reverse Osmosis.

Gross Alpha (combined measurement of radioactivity from Radium & Uranium; Primary Standard)

- *Source:* Naturally occurring from decay of rock.
- *Potential Health Impacts:* increased risk of cancer, kidney damage, etc.
- *Recommended testing frequency:* At least once.
- *Remediation:* Ion exchange system; reverse osmosis.

VOC (Volatile Organic Chemicals; Primary Standard)

- *Source:* Gasoline, solvents, degreasers
- *Potential Health Impacts:* Can cause cancer, damage to the central nervous system & liver.
- *Recommended testing frequency:* at least once.
- *Remediation:* Activated carbon filtration; Reverse osmosis.

Manganese (Secondary Standard)

- *Source:* Naturally occurring in rock.
- *Potential Health Impacts:* can cause problems with memory, attention, learning problems in babies.
- *Recommended testing frequency:* Every 5 years.
- *Remediation:* Ion exchange.

Iron (Secondary Standard)

- *Source:* Naturally occurring in soil / rock.
- *Potential Health Impacts:* Usually does not present a health risk at levels occurring in wells. Some harmful bacteria require iron to grow, so iron in water can make it more difficult to get rid of bacteria.
- *Recommended testing frequency:* Every 5 years.
- *Remediation:* Air Stripping (packed tower aeration) with filtration; Ion exchange.

pH (Secondary Standard)

- *Source:* naturally occurring.
- *Potential Health Impacts:* pH is generally considered an aesthetic concern, rather than a health concern. High pH in water is more likely to leach metals, such as lead, into the water.
- *Recommended testing frequency:* every year.
- *Remediation:* acid neutralizing filter; water softener.

LIST OF CERTIFIED LABS

Below is a list of some of the water testing laboratories which practice in the area. This listing is for informational use only, and does not represent a specific Health Department endorsement. In addition, there should not be any implications derived from the order in which firms are listed. Lastly, more certified labs can be found online.

RAdata, Inc.	(973) 927-7303	www.radata.com
South Jersey Water Testing	(866) 875 - 3506	www.Sjwatertest.com
Eurofins QC Laboratories	(215) 355-3900	www.eurofinsus.com/qc
CRC Services, LLC	(732) 548-7363	
NJ Analytical Laboratories	(609) 737-3477	www.njal.com
All - State Well Testing Services	(908) 835-2510	www.all-statewelltesting.com
Garden State Laboratories	(800) 273-8901	www.gslabs.com

**** THE HILLSBOROUGH HEALTH DEPARTMENT, ALONG WITH RARITAN HEADWATERS, WILL BE CO-HOSTING WELL TESTING EVENTS AT THE HILLSBOROUGH MUNICIPAL BUILDING SEVERAL TIMES EACH YEAR. IF YOU HAVE A PRIVATE WELL AND WOULD LIKE TO HAVE IT TESTED, PLEASE CONTACT THE HILLSBOROUGH HEALTH DEPARTMENT TO CHECK FOR AN UPCOMING EVENT (NEXT EVENT IS SCHEDULED FOR MAY 22, 2021).**

For the complete Hillsborough Township PWTA report (2002-2018), please contact Mike Carr at mcarr@hillsborough-nj.org , or (908) 369 - 5652.

For the NJDEP PWTA site, see https://www.state.nj.us/dep/watersupply/pw_pwta.html