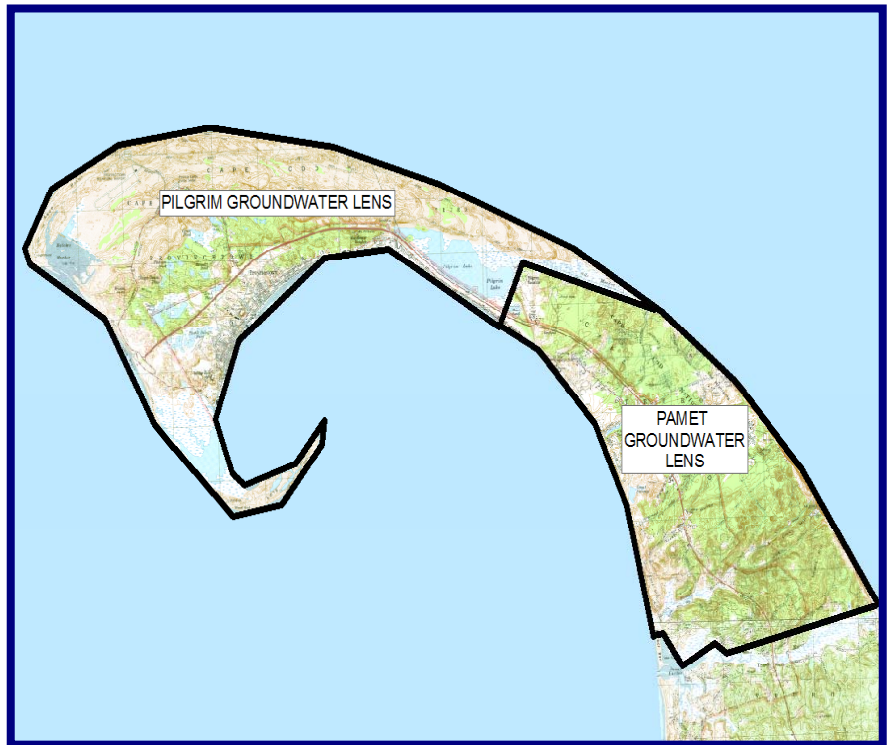


## *2002 Annual Drinking Water Quality Report for the Provincetown Water Department*

The Provincetown Water Department is proud to provide you with the Year 2002 Annual Drinking Water Quality Report. Our objective is to help keep you abreast of ongoing and upcoming water system projects; local, state and federal drinking water regulations; and Provincetown's annual water quality results. The Provincetown Water Department is committed to supplying our customers with high quality drinking water 24 hours a day, 365 days a year. The Town of Provincetown Public Water System DEP identification number is 4242000.



## **Customer Views and Questions**

Please call the Water Department at **508-487-7064** with any questions, concerns, or problems regarding your water service (billing, water quality, meters, leaks, policies); or the water system (water main breaks, fire hydrants, upcoming activities). Our staff of drinking water professionals are there to assist you:

<b>Director of Public Works</b>	<b>David F. Guertin</b>
<b>Superintendent</b>	<b>Louis A. Briganti</b>
<b>Deputy Superintendent</b>	<b>Albert R. Robinson</b>
<b>DPW Project Coordinator</b>	<b>Kathleen C. Meads</b>

The Water Department Office is open Monday through Friday 7 a.m. until 4 p.m. Supplemental information about the Water Department including Rules and Regulations for water service can be found on our internet web site: [www.provincetowngov.org](http://www.provincetowngov.org).

The Provincetown Water Department is governed by the Provincetown Water & Sewer Board, which meets once a month at 5:00 p.m. at the Grace Gouveia Building, 26 Alden Street in Provincetown. The public is invited. You can contact the Water Department for a meeting schedule.

In addition to these local resources, supplemental information about drinking water quality and potential health effects can be obtained by calling the Environmental Protection Agency's **Safe Drinking Water Hotline: 800-426-4791**.

# Water System Information

The Provincetown Water Department supplies drinking water to the Town of Provincetown and several areas within the Town of Truro. Provincetown's water supply sources consist of three wellfields located in the Pamet lens of the Cape Cod Aquifer. The Pamet lens extends from the north side of the Pamet River to Pilgrim Lake. The primary source is the South Hollow Wellfield, which consists of eight individual wells. Provincetown's secondary supply is the Knowles Crossing Wellfield that consists of two active wells. During the summer peak season (June 1 through October 1) the Town of Provincetown also uses two additional wells located at the former North Truro Air Force Base, which now lie within the boundaries of the Cape Cod National Seashore. Provincetown, Truro and the National Park Service own the land around the South Hollow Wellfield. Provincetown owns the land surrounding the Knowles Crossing Wellfield. The North Truro Air Force Base wells are within the boundary of the Cape Cod National Seashore. Activities are restricted on the grounds surrounding the wellfields by the Town of Provincetown and by the Cape Cod National Seashore on lands adjacent to and surrounding the wellfields.



The groundwater pumped from these sources is treated at two chemical addition facilities. The Paul D. Daley facility is located at the South Hollow Wellfield. The other chemical addition facility is located at the Knowles Crossing Wellfield. At these two facilities potassium hydroxide is used to increase the pH of the water to a target level of 7.5 for corrosion control. Chlorine (sodium hypochlorite) is added for secondary disinfection as a means of protecting the water distribution system from microbiological contaminants. In addition, a polyphosphate sequesterant is used for the control of trace levels of iron and manganese.

Treated water from the wellfields is pumped into the water distribution network by means of submersible pumps installed within each well. Water is delivered to the Town of Provincetown by means of 12-inch water transmission mains traveling from South Hollow Road and along Shore Road in North Truro to the Provincetown town line. The water distribution system is made up of approximately 38 miles of pipe of varying size between 16-inches and 6-inches in diameter. These pipes are made up of a mixture of ductile and cast iron, PVC, and asbestos-cement. The water distribution system also includes three water storage tanks: the Mt. Gilboa tank in the east end of Provincetown which has a capacity of approximately 2.7 million gallons; and the two Winslow Street tanks located adjacent to Veteran's Memorial School, which have capacities of 1.1 million gallons and 3.8 million gallons, respectively. Together these three water storage tanks provide water during peak hourly water demands and for fire protection.



## Projects and Activities



The Water Department continues to work hard to make improvements to the Provincetown Water System. During calendar year 2002 the Water Department completed several capital improvements including: rehabilitation of the Knowles Crossing Pump Station including structural and building improvements, site work, and an upgrade of the chemical feed facilities; replacement of approximately 9,100 feet of 90-year old 10-inch cast iron pipe along Shore Road in Truro; and inspections and repairs to the water storage tanks. Together these improvements have enabled the Water Department to more effectively produce consistent high quality drinking water to our customers. Improvement projects planned for calendar year 2003 include: implementation of a radio based water meter reading pilot program; installation of new standby generators at the Paul D. Daley pump station and Knowles Crossing pump station; the evaluation of new water supply sources; the construction of additional features to the Town's computer SCADA system; and the completion of a water system vulnerability assessment. Once completed, these future projects will help ensure that our customers receive the highest quality water and reliable service.

# Water Quality Summary



The Provincetown Water Department is committed to providing our customers with the highest quality drinking water that meets or exceeds state and federal drinking water standards for quality and safety. Each year the Water Department conducts over 10,000 water quality tests, examining them for more than 120 potential drinking water contaminants. A summary of the most recent annual data for contaminants with primary drinking water standards detected during the period January 1, 2002 through December 31, 2002 is provided in the Table below. **All of the contaminants detected were below allowed levels.** Not listed are contaminants that were tested for but not detected.

Substance (Contaminant)	Average Level Detected	Range Detected	Highest Level Allowed (EPA's MCL)	EPA's Goal (MCLG)	Source of Contaminant
Alpha emitters (pCi/L)	1.5	1.5	15	0	Erosion of natural deposits
Chlorine (ppm)	0.42	0.0 – 0.99	MRDL= 4	MRDLG= 4	Water additive used to control microbes
Chromium (ppm)	0.01	0.0 – 0.02	0.1	0.1	Erosion of natural deposits; discharge from pulp mills
Copper (ppm) 40 Sites	0.88 (90%tile)	ND – 3.6 1 > A.L	A.L 1.3 in less than 10% of the samples taken	1.3	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.
Lead (ppm) 40 Sites	0.006 (90%tile)	ND – 0.032 1 > A.L.	A.L. 0.015 in less than 10% of the samples taken	0	Corrosion of household plumbing; erosion of natural deposits
Nitrate (ppm)	0.6	ND – 0.8	10	10	Runoff from fertilizer; leaching from septic tanks; sewage; erosion of natural deposits
Sodium (ppm)	42	23 - 60	NR	NR	Naturally present in the environment; runoff from the use of road salt, by-product of treatment process
Total THMs (ppb) (Trihalomethanes)	2.0	1.0 – 5.3	80 running quarterly average of samples	0	By-product of water chlorination
Total Coliform Bacteria (Present/Absent)	Absent	Absent – 2.7%	< 5% of monthly samples can be positive	0	Naturally present in the environment

**Special Information Concerning Lead** - Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water to reduce lead content. Additional information is available from the **Safe Drinking Water Hotline, 800-426-4791.**

## Definitions

- 90<sup>th</sup> %tile** Out of every 10 homes, 9 were at or below this level
- MCL** Maximum Contaminant Level: The highest level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- MCLG** Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- MRDL** Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbiological contamination.
- MRDLG** Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- PPM** One part per million.
- PPB** One part per billion.
- A.L.** Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.
- NR** Not regulated (currently there is no MCL for this compound).
- N/A** Not applicable.
- ND** Not detected. Refers to the detection limit of the chemical analysis instrument or procedure.
- Sodium** Although there is no MCL for sodium, the Office of Research & Standards Guideline is 20 ppm.

# Public Health and Drinking Water

The sources of drinking water (**both tap water and bottled water**) include rivers, lakes, reservoirs, streams, and wells. As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals, and radioactive material, and can be polluted by animals or human activity. Contaminants that might be expected in untreated water include: biological contaminants, such as



viruses, protozoa, and bacteria; inorganic contaminants, such as metals and salts; pesticides and herbicides; organic chemicals from industrial or petroleum use; and radioactive materials. In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's **Safe Drinking Water Hotline (800-426- 4791)**.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly , and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **EPA (Safe Drinking Water Hotline 800-426-4791; Web page <http://www.epa.gov/safewater>) or the Massachusetts DEP (Southeast Regional office 508-946-2700; Web Page <http://www.state.ma.us/dep>).**

## Water Conservation

**Fix Leaks** – a little leak loses a lot. Just a slow drip can add up to 15 or 20 gallons a day, while a 1/16-inch faucet leak can waste as much as 100 gallons in a day. Worn washers cause most faucet leaks. Household faucets should be checked monthly for drips or leaks. If the drip does not stop once the faucet is firmly closed, replace the washers in the faucet. Toilet leaks are also common. If a toilet tank flapper valve hangs up, hundreds of gallons a day of water could be wasted. Most toilet leaks are at the overflow pipe or at the flapper valve. The potential for un-noticed leaks can be determined by observing your water meter. When all water fixtures are off in the house, the small red triangular shaped low flow indicator dial on your water meter (between the 7 and 8, see photo to the right) should be stationary. If it is not, either check your water fixtures yourself, or have a plumber check them for you.

**Be Honest** – at several locations in Town the Water Department has found unmetered water usage. This unmetered usage causes the Town to be penalized in its annual reporting to DEP, and costs everyone money. Please call the Water Department if you are aware of any unmetered water usage that should be corrected.

