

Water Quality on Block Island

2003 Report of the Island Steering Committee



A key goal of Block Island is to protect the quality of its drinking water supply and the waters of its ponds and harbors. During the year 2003 water quality was in general excellent. There were problems – improvements are still needed – but mostly the news is good.

To help in this protection effort, in 2000 the Town of New Shoreham received an \$840,000, five-year grant from the federal Environmental Protection Agency. The Town Council created an Island Steering Committee (ISC) to coordinate efforts funded by this grant. ISC works cooperatively with the public and private agencies concerned with water quality — the Harbors Department, Water Department, Sewer Commission, Shellfish Commission, and the Committee for the Great Salt Pond, a nongovernmental community group performing water-quality monitoring. This is the ISC report for the year 2003.

WASTEWATER MANAGEMENT

While the town's sewage disposal plant handles wastes for much of the town's commercial district, nine out of ten private homes have individual septic systems. Underway now is a major effort to inspect all of these private systems (there are 1,135), to replace the ones that have failed, and to upgrade the rest to the high standard necessary to protect the island. Remaining cesspools are to be replaced with approved treatment systems. Further, the law now requires that all underground fuel storage tanks be removed.

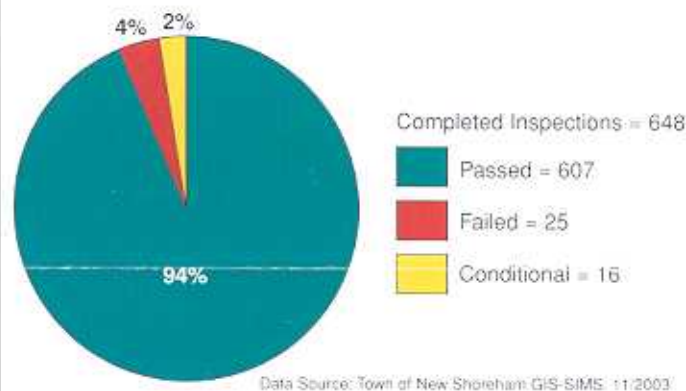
The timetable: About one-half of the island's septic systems have already been inspected. The rest are to be inspected by the end of the year 2004. Required upgrades or replacements are to be completed by the end of 2005. Responsibility for getting this done is centered in the town's Office of Wastewater Management, which is partially funded by the EPA grant.

Of those inspected, 94 percent have passed. The inspections also identified 35 cess pools and steel tanks which must be replaced by the end of 2005.

In addition, as of year-end 2003, 37 underground fuel tanks had been found and removed. However, an accurate listing of the number and location of these tanks is not available and the Town Council is currently considering adopting a regulation requiring their removal rather than relying on voluntary action.

Beginning in November 2003, a private company, under contract with the town, took over the septic-system

Individual Sewage Disposal Systems (ISDS)
Inspection Status, November 2003



inspection process. Costs for this service, plus the costs to run the wastewater management office, are covered by the EPA grant. Property owners are not charged for the initial inspections, but are responsible for any costs involved in uncovering the tank to provide access to the inspector.

Financial Assistance: Money is available from the EPA grant to help homeowners defray the costs of inspecting and upgrading septic systems.

A rebate of up to \$350 is offered to property owners to help pay for tank improvements (e.g., adding a filter and risers to provide access). There are funds available for the first 800 properties to be upgraded.

Further, the town has added a new plan for people age 65 and over who live on fixed incomes, and for property owners living on the island six months of the year or more. They can qualify for rebates of up to \$1,000 to help cover tank improvement costs. These funds are available for work completed before the end of March 2005.

Island Steering Committee Members 2003

Bill Healy, Chair

Scott Comings, Ann Cunningham, Nancy Dodge-Town Manager, Carl Kaufmann, Dorothy McCluskey, Claire McElderry, Jack Savoie-Town Council

PROTECTING THE GREAT SALT POND Cleanup plus prevention

Block Island's Great Salt Pond is one of the busiest boating harbors in New England, and the goal is to keep it one of the cleanest, so that it meets safety standards for fishing, shell fishing, and swimming. To that end the island has an extensive program to monitor water quality and to dispose of sewage from boats (there are more than 1,500 of them in the Great Salt Pond on some busy summer weekends).

Cleaning up Sewage: It is against the law to discharge sewage from any boat in any Rhode Island harbor. Block Island led the state in setting this "No Discharge" standard.

Successful enforcement requires cooperation from boaters, and convenient pumpout facilities for marine holding tanks. Pumpout boats, operated by the town, are available on radio call throughout daylight hours. In addition, marinas are required to offer pumpouts.

There is no data on how much sewage the marinas pump from boats (those wastes go into the town's sewer lines along with on-shore wastes generated in the marinas, and cannot be differentiated), but there are figures from the pumpout boats, and they are impressive: In 1992, the pumpout service collected about 15,000 gallons of waste from 883 boats. In 2003, pumpout boats collected more than 110,000 gallons from 5,208 boats.

A key point: On Block Island, this pumpout service is free to boaters. Costs are covered by the taxpayers and by private donations.

Monitoring for Quality: Two groups keep an eye on water quality in the Great Salt Pond, the Harbors Department and the Committee for the Great Salt Pond (CGSP). Harbors takes water samples at 14 locations, and has them analyzed for fecal coliform. Every two weeks during the summer CGSP volunteers collect samples at four locations in the Great Salt Pond and from six tributaries feeding into that harbor. Tests measure dissolved oxygen, clarity, chlorophyll, and salinity. Once a month, these samples are checked for bacteria, nitrogen, and phosphorus.

The results? At many test locations, most of the time in 2003, bacterial counts were well within limits considered safe for shell fishing and swimming. However, both groups doing the testing reported trouble spots. Harbors Department's tests showed higher coliform counts near the marinas than in the anchorage areas or elsewhere in the Great Salt Pond. Bacteria could have come from boat sinks and showers (so-called "gray water") or from ille-



Block Island Maritime Institute Sailing School at the BI Club.

gal discharge of toilet wastes. CGSP's tests show mostly low bacterial counts in the Great Salt Pond, but high bacterial counts at several tributaries. In some cases these coliform counts were high multiples of safe levels. Clearly, while the Pond was mostly clean and healthy through 2003, some of the streams and drain-pipes that feed into it were not. Land-based sources were polluting the Pond.

Two particularly bad problems, brought to light by CGSP's testing, were tracked down and corrected. In one, the Sewer Department identified an equipment failure that allowed sewage to flow into a pond that drains to the sea, instead of being routed to the sewer system. In the other, wastes were traced to a private home, and the owner was required to hook into the sewer as an abuser.

PROTECTING THE FRESH WATER SUPPLY

While 90 percent of the island's homes have private wells, most hotels, stores and other commercial establishments are supplied by the town Water Company. The public company has six wells, with Sands Pond used as a stand-by. Water is treated with reverse-osmosis equipment. Periodic testing is done to assure that drinking water is safe for human consumption. In 2003, testing showed that town water was well within limits for contaminants —microbials (bacteria and viruses), inorganics (salts and metals), pesticides and herbicides, and various other organic compounds.

Further, a program was introduced using grant funds to monitor ground water by sampling tap water in private homes. Every spring and fall tap water samples are taken from 15 houses and analyzed for bacterial and chemical contamination. The areas selected were matched to a 1986 study in order to identify potential water quality changes. So far none has been found.

HAZARDOUS WASTE DISPOSAL

After seven years of Town efforts, initiated by the Conservation Commission, to arrange for an on-island household hazardous waste pick up, the first collection in fifteen years was held on August 9, 2002. The response was far greater than expected. The success of this first collection of paints, chemicals, and pesticides led to a second hazardous waste pick up held on October 23, 2003, when more than 4,000 pounds of waste from pesticides to poison to paint was collected. This collection was conducted by Clean Harbors, an environmental contractor, for transport to the Rhode Island Resource Recovery Corporation CEO-Depot on the mainland for safe disposal.

PUBLIC WATER SOURCES

The condition of public water sources, which includes community wells (Ministers/Sheep's Meadow, Searles Ball, Transient (hotel and restaurant) as well as the Town water supply, is constantly monitored by the Rhode Island Department of Health and water company personnel. Transient water sources have bacterial analysis done monthly. Reports of fecal coliforms may indicate human contamination and the water supply is condemned until the source is found and fixed. At this time there are 27 transient water sources, three community wells and the public water company on Block Island.

The water company has 6 wells, 5 actively in use. Wells #1,2,3 are relatively shallow, while wells #5 and 6 are in a cretaceous aquifer over 200 feet deep. Wells are measured monthly for water column height, drawdown and

pumping capacity. The height of the water column when not being pumped reflects the aquifer level. There was no variation between spring 2003 and fall 2003, indicating the aquifer is stable. In addition 50 analates are measured yearly pre- and post-treatment, giving data on the condition of water being used and distributed. This includes inorganic, organic and radiologic compounds. A water confidence report is mailed to all customers and is also available at Town Hall. The state of Rhode Island has conducted numerous classes and assessments dealing with possible bioterror targets. To this end a study was done that showed the water company wells were not under the direct influence of surface water.

SPECIAL PROBLEMS

Some special problems occurred during the year. To wit:

— Heavy spring rains in 2003 raised the water table on the island and overloaded many septic systems. Many systems required extra pumpouts. Some were flooded to a point where they were condemned as "failed," which triggered mandatory replacement.

— A sewage spill occurred at one of the town's five pumping stations when an old pump failed. That pump and another older unit have been replaced. A portable generator is being added to the system, to be taken to the pump sites if needed because of power failures or brown-outs.

— Oil spills were reported on several occasions. One was in the Hog Pen at the south end of the Great Salt Pond, during a fuel oil transfer. Others appear to have been leakage from small craft in the harbor. The Great Salt Pond now has a spill-containment boat—a diesel-powered lifeboat manned by volunteers. Loaned by the Block Island Maritime Institute, and equipped with the help of the Tourism Council, the boat is kept on anchor near the marinas.

— Boat sewage violations have occurred despite the law. No one knows how often this has happened, but eyewitness accounts tell of toilet wastes seen in the water near boats at marinas, and along beaches downwind. While the cleanup effort generally rates as a success, and most boaters seem willing to do their part, it is clear that the "No discharge" law is not 100% effective.

— Leaking underground fuel-storage tanks are a serious threat to the island's fresh water supply, but the tanks have to be found before they can be removed. Large, commercial tanks have already been removed.



Fresh Pond is designated by the Rhode Island State Department of Health as an auxiliary drinking water reservoir.

but the town's building official believes that 40 to 50 tanks still exist at residences on the island. No one is sure where all of them are located. Some homeowners may have tanks and not know it. The town offers a \$300 rebate for digging out tanks, but this covers only a fraction of the cost of removal and replacement.

SHELLFISHING AND AQUACULTURE

Shellfishing and aquaculture are important to the island, and it is vital to keep the water clean for clamming and oystering. Shellfish are particularly "pollution sensitive." The bacterial limit considered safe for swimming is 50 fecal coliform colonies per 100 milliliters of water; One third of that is above the limit set for safe shell fishing. Thus, water monitors keep a close eye on coliform counts in the Great Salt Pond locations where there are two oyster farming operations, and in areas that are opened to clamming at different times of the year. The Shellfish Commission has the authority to stop shell fishing any time pollution numbers reach limits.

About 2,000 clamming licenses are sold each year by the town. In recent years clambers have harvested more than the Pond can supply. Thus the town has been seed-



Sorting oysters, Wendell Corey and Catherine Puckett

ing the Pond with additional shell fish — about 100,000 quahogs a year plus top necks and cherrystones. This year they will be adding about 10,000 pounds of bay scallops.

Many New England harbors heavily used by boaters cannot safely permit shell fishing. Block Island can, but only if it can be kept clean.