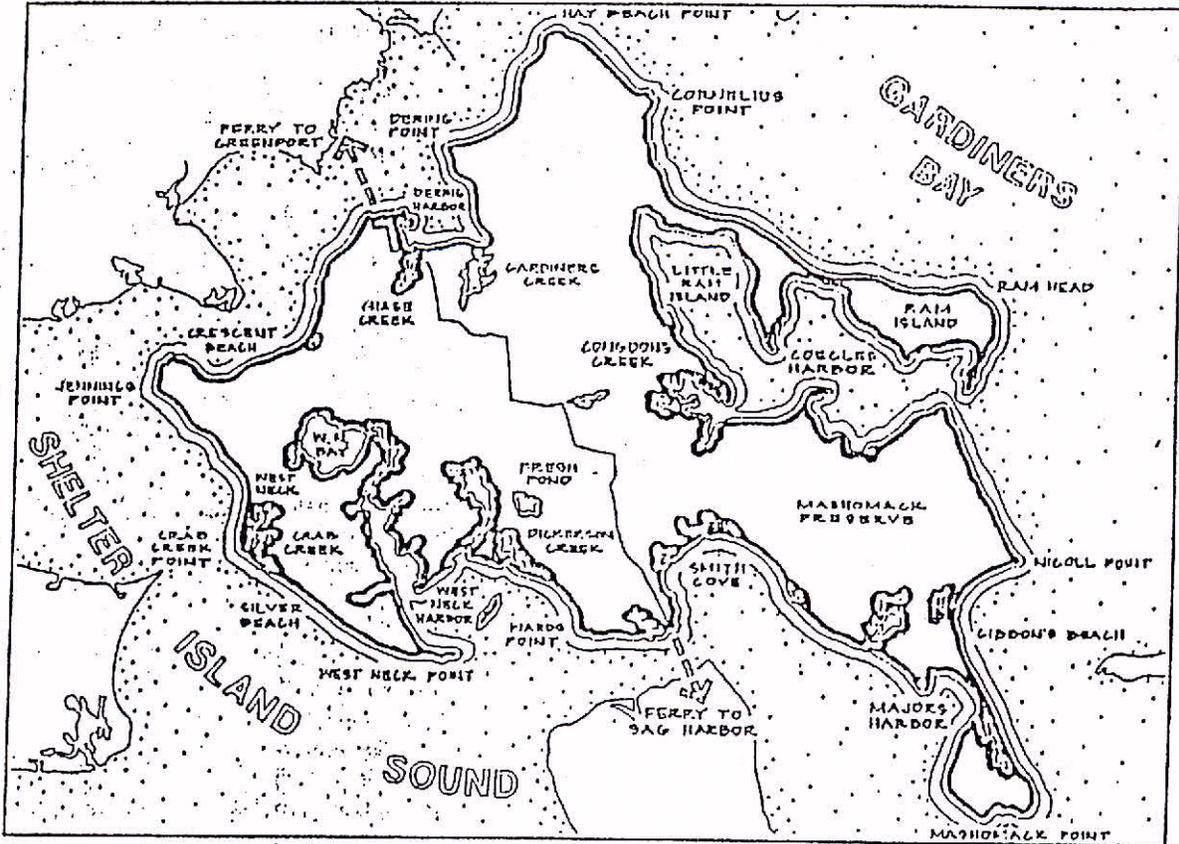


Shelter Island, New York

A PRACTICAL GUIDE FOR NEAR-SHORE LIVING



"The land was ours before we were the land's"

Robert Frost

Introduction

Shelter Island is a unique and wonderful place to live. Standing at the entrance to the Peconic Bays and washed by Shelter Island Sound and Gardiners Bay waters, Shelter Island has over twenty two miles of shoreline indented by bays, creeks, harbors and wetlands. The Nature Conservancy's Mashomack Preserve covers one third of the Island. The life style is relaxed, close to nature and still pretty rural. Of course, development is happening, especially along the shores.

This guide is intended to offer practical suggestions to people who reside, or plan to buy, build or renovate a home in the shore areas of Shelter Island. It offers ideas for enjoyable living within the limits of our fragile natural resources and enjoying the bounties of our shore lands. The ideas collected here are based upon the experiences of many residents and the advice of experts.

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Produced by
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About Your Well

The fresh water we get comes from rainfall. That's all we get. And there is plenty on the Island. But, shore area home owners are more susceptible to salt water intrusion into their wells and sometimes cause their own water quality problems.

The fresh water aquifer floats on top of salt water. And, the weight of the inland mound of water presses outward toward the shore. Typically, in the shore areas, the top of the fresh water table is less than 1 1/2 feet above sea level. In low rainfall periods, the "interface" of bay and fresh water tends to move inland, making shore area wells more sensitive to well pumping. There is adequate good water quality, if used wisely. But, it is easy to ruin a shore area well with salt water intrusion. And, once a well is damaged water quality is slow to be restored.

If you are in an area with a public water system (Shelter Island Heights, Dering Harbor or West Neck Water System) the water comes from community wells and also requires thoughtful consumption.

Cautions learned the hard way:

1. If you are in a near-shore area and your well is less than twenty five feet deep, submersible pumps are not recommended. They have the potential of too much pumping capacity which can lead to salt water intrusion.
2. Your well pipe should not exceed 2 inches in diameter. It is not needed and it encourages excessive pumping.
3. Your well pump should not exceed 1/2 horsepower, which also can lead to drawing water faster than the well area can refill.
4. Fresh water pools should always be filled or refilled with water purchased from an off-Island supplier. "Topping off" your pool with a hose can be done at your own risk. If you "top off" your pool, do it slowly at no more than five gallons per minute. Hopefully, this will not over burden your well. See "Pools" (page 5) for other guidelines.
5. Sod requires excessive watering and may over-tax your fresh water supply. Is it worth the risk?
6. "Heat pumps" are not recommended. They require excessive amounts of water and tend to cause "up-coning" (sucking in salt water) and pumping the salted water into the receiving well.
7. New wells should be placed as far inland as possible, and preferably up-slope from the septic leaching field. This is not always possible since you must have separation from neighboring wells and septic systems. Keep in mind that water runs downhill. Water drawn from a well will be replaced by the outward movement of the aquifer towards the shore, but it takes a little time. Drawing well water at five gallons per minute for a limited period will generally not over-draw a shoreline area well. The Suffolk County Health Services Department will tell you where a new well should be placed.
8. Collecting and recharging roof rainwater into the ground is an excellent way to help to protect the water table under your land. Downspouts to drywells or "French Drains" are commonly used. Runoff from driveways and slopes should be retained on your own property. Some homeowners have installed cisterns to collect roof rainwater. If cistern water is used for drinking water, it will need anti-bacterial treatments and should be tested regularly.

9. Leaky faucets or plumbing waste a lot of your water and cause excessive wear on your well pump. If your pump keeps recycling when you aren't using water - you probably have a leak.

Septic Systems

Septic systems are very effective if properly sited and maintained and will not harm your water supply. It is best to have them as far away and down-slope from your well (or neighbors well) as possible.

The Suffolk County Department of Health Services regulates the design and placement of septic systems. The State Department of Environmental Conservation (DEC) regulates the distance from marine or fresh waters. You may need permits from both.

It is recommended that septic systems have a maintenance check every 3-5 years.

Be careful what you put into your septic system or public sewer. Remind the kids that it's not a wastebasket or garbage dump. And some household chemicals, such as toilet bowl cleaners (especially the installed type which dose every flush) can destroy the bacterial action that breaks down wastes.

Irrigation Systems

Lawn sprinkler systems are not recommended. They are heavy consumptive water users. And grass turns green again after the cooling rains of the early fall. Some areas of the Island have been restricted from any new or replaced sprinkler systems. These areas are designated in Chapter 82- "Irrigation" of Town Code along with guidance on when to water. Other shallow water table areas are also vulnerable to salt water intrusion from sprinkler systems.

"Soaker hoses", above or below ground, can waste your water. It is hard to tell how much water is used - especially if you forget to turn it off. A 100 foot length of "soaker hose" can consume about 10 gallons per minute. It is recommended that they only be used above ground and in gardens or among shrubs that need watering.

Wetlands

Wetlands are generally thought of as marsh areas with grasses that can live in water. However, a marine wetland includes vegetation to about seven feet above the mean bay or creek level. A wetland is generally larger than we think and it may expand dramatically in major storms.

Our wetlands are a nursery for marine life. They should not be filled in or used for a dump, or sprayed with pesticides. Wetlands should not be loaded with fertilizer and sediments in rain runoff. Wetlands need help to stay healthy. Any construction within 300 feet of a wetland (or 100 feet of a fresh water wetland) may require a D.E.C. permit.

Shoreline Vegetative Buffers

A building lot near the shore (or fresh water ponds) being newly developed needs a natural vegetative buffer of about 100 feet to prevent runoff of lawn and garden chemicals to nearby waters, permit absorption of excessive nutrients and in some cases prevent erosion. Owners of developed lots can help by creating vegetative buffers of a reasonable width.

Fuel Tanks

Petroleum fuel storage tanks should be above ground and placed in an area capable of containing the full contents of the fuel tank in the event of a leak. Metal tanks last about 15 years in our acid soils and plastic tanks have cracked. The idea is to prevent leaking fuel oil from entering the ground.

Lawn Care

Most of us waste our money on too much fertilizers and/or pesticides. It has been estimated that a farmer would use about 1/10 of the fertilizer the average homeowner uses. What you put on the lawn on the near shore areas easily drifts down through our sandy soils to the water table, or, runs off to marine waters and adds excessive nutrients or poisons to the creeks or bays.

**Suggestions For A
Healthy And Safe Lawn**

Styles have changed somewhat. A trend is to not go for the entire property having a velvet lawn. The recognition that the chemicals we put on lawns - pesticides, herbicides, fungicides and fertilizers are not good to drink after they leach down to your well - has changed peoples thinking about lawns. These chemicals also cause serious damage to marine species when they drain off the lawn to bay or creek waters. Besides, it can cost plenty to maintain that perfect lawn.

An alternative is to leave a portion of the property in its natural state or as meadow which can be cut about twice a year. For shore front properties, it is critical to have a natural vegetative buffer to absorb excess nutrients and other chemicals before they reach marine waters.

Here are some lawn care suggestions:

- * Have the comfort of a "pesticide free " lawn. If you do use a pesticide, let your neighbors know, for their protection. Use pesticides only as a last resort. Get expert advice to be sure you treat the right problem, at the right time, with the right stuff. See "Pesticides" in this guide.

- * "Overseed" your lawn to thicken the grass and patch sparse areas. A lazy man's way is to spread seed on top of snow or during frost season. Mother Nature does the work of settling the seed into the ground.

- * Talk to your garden center about grass seeds for your lawn conditions. Many changes to seeds in recent years make them the grass more resistant to drought, disease and pests. Buy "endophyte enhanced" seed which is unappetizing to chinch and other bugs.

- * If you think you really need to use chemical fertilizers, apply the "slow release" and organic kind.

- * Don't apply more than 1 lb. of actual nitrogen per 1000 sq. ft. of lawn at one time. To determine what 1 lb. of nitrogen really is multiply the weight of the bag by the first number of the three shown as percents of the contents. For example, a 40 lb. bag of 10-3-4 contains 10% nitrogen. $40 \times .10 = 4$ lbs. of nitrogen in the bag.

- * Top-dress the lawn with 1/4 inch of compost, weed free topsoil or a mulch such as peat moss. It helps replenish nutrients in our sandy soil.

* Make your own compost by saving plant materials from garden and kitchen on a pile or in a container. Nature will do the rest and you will have nourishing soil for your garden or lawn. A booklet on composting is available at Town Hall and the Highway Department will give you a free compost container.

* Leave short grass clippings on the lawn. They are an excellent source of nutrients and decay quickly.

* Dethatching is recommended for lawns with more than 1/2 inch of compacted thatch. Thatch is dead roots and does not come from grass clippings left on the lawn. Dethatching assists water movement to the roots and allows grass to spread by removing the cover over the soil. A fixed blade machine works best.

* Mow high, especially in hot weather. Set the mower at 2-2 1/2 inches and 3-3 1/2 inches in summer. Cut closer on the last cut of the season. Cutting high blocks many weeds, especially crabgrass.

* If your lawn is serviced by professionals, be sure they understand your concern for protecting the environment while growing a healthy lawn.

* Aerate compacted soil. This can be done with hole punching holes with hand tools or by machine. Opening passages for air and water can be a key step to rejuvenating a lawn. Wearing golf shoes or poking holes with a pitchfork can help aerate small compacted areas.

* If you feel you *must* water - don't over-do it. It can lead to damaging fungal growth. Grass can only absorb about one inch per week, including rainfall. If you do water the lawn, follow the Town's irrigation regulations. Most grasses will turn green again after a dry spell, as soon as it rains.

Expert advice is readily available at garden centers or from Cornell Cooperative Extension's Home Horticultural Information line on (516) 727-4126. Mail them a sample and they will test your soil. And remember, you may end up drinking what you put on the lawn or garden.

Plants

Our native plants have stood the test of time and thrive in our soils. Some can be pests. This is also true of some non-native plants, sometimes called "alien" or "exotic" plants.

The Building Department can give you lists of recommendations for plants of three types:

1. Non-native pest plants that are not recommended for your property.
2. Recommended plants that are known to survive droughts.
3. Plants that deer don't like. (No guarantees)

Pesticides

Pesticides are killers that can drift down to well water and drain to marine or pond waters. The labels on many pesticides caution against applying to pond or marine waters. Pets and children can pick up pesticides in the yard. The risks reported of damage to animals, fish and people are scary.

Routine maintenance spraying and lawn applications are not needed, a waste of your money and risky for you and your neighbors. Wind blown spray that reaches a wetland, creek or pond will kill the living organisms there.

If you have a pest problem get expert advice. Treat the right problem, at the right time, and with the right stuff. Some pest problems can be treated without toxic chemicals. For instance, if you have a fungus in your garden, try drying out the leaves by not watering for a few days. Water in the early morning so the sun can dry the leaves. Ask about the developing techniques of non-toxic Integrated Pest Management (IPM).

If you do have to apply a pesticide to the lawn or spray the trees, let your neighbors know in advance.

Pools

Pools may be filled with either fresh or salt water. Fresh water pools take a lot of water to fill. They must be filled or re-filled with an off-Island water source. This means buying the water. Drain water only after chemicals have been depleted. Drained water must go to a drywell and be confined to your property, or removed and trucked away. Pool effluent can end up in your drinking water, so be careful placing a drywell.

Salt water pools must be drained to a tank truck or into the open bay waters after all chemicals have dissipated. Don't drain salt water pools onto the land. You don't want salt water leaching to your well. Pool chemicals will also destroy marine life.

Pool Management Recommendations

- * To install or reconstruct a pool and to fill one with fresh water, you need a permit issued by the Building Inspector. You may need a D.E.C. permit.
- * Since pools use chemicals, precautions must be used when discharging pool effluent to avoid damage to properties, vegetation, marine or pond life, or your well or your neighbor's. Allow time for chemicals to be depleted.
- * Filling or refilling fresh water pools must be with water from an off-Island source.
- * "Topping off" with a garden hose is "OK" to maintain the proper water level. But, do it slowly so you don't end up sucking salt water into your well.
- * Safety fencing around the pool is a "must" for good reason and State Law.
- * A summer pool cover will greatly reduce evaporation, and winter covers should be permeable to allow collection of rainwater. Lowering the water level about two feet for the winter will enable the rain to refill the pool by the next spring.
- * A drywell for effluent of fresh water pool is important to provide a safe way to lower the water level. For an average pool the drywell should be at least 8 X 8 feet and vented.
- * If you empty the pool for cleaning or repair, and an acid wash is used - be sure to neutralize the acid before draining the residual effluent into your drywell.

Beach Cleanups

The Town's Highway Department has a program to assist you in cleaning up litter on your beach, or beaches where you'd like to pick up litter that washed in - but don't know how to get rid of it. The Highway Department will provide you with litter bags and will pick them up at designated spots.

If you have a homeowner's association, check with them. Many already have joined the program and have made arrangements for bags and pick-ups.

Help!

In addition to the resources noted in this guide, your garden center and Cornell Cooperative Extension, there are several volunteer advisory committees that can help you with shore area ecology questions and practical advice. These committees serve in an advisory capacity to the Town Board, know a lot and meet regularly. They include the:

- Conservation Advisory Committee
- Water Advisory Committee
- Waterways Management Advisory Committee

To contact one of the advisory committees ask at the Town Supervisor's Office or call 749-0291.