

# Coastlines

NEW YORK STATE SEA GRANT INSTITUTE  
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## Owning Coastal Property

by Chuck O'Neill, Brockport

For many people, a home or cottage on New York's coast is a dream come true. It's a dream not without costs, however.

The pursuit of nautical vistas, the sound of the surf, the smell of the water often take precedence over the recognition of how that same body of water can quickly turn the dream into a nightmare when Nature's forces are unleashed. The dream doesn't have to end, however, with a little bit of advanced planning.

Coastal storms pack quite a punch. Winds accompanying a storm across an open expanse of water can do a terrific amount of damage when they reach shore. In the face of approaching foul weather, a coastal home owner should "batten down the hatches." Lawn furniture should be either fastened securely to the ground or stored away where high winds cannot turn it into unguided missiles.

Periodic checks of roofing shingles and siding can help prevent gusts of wind from blowing a section loose, which could lead to water damage inside the structure. A home owner might consider functional shutters on windows on the side of the house facing the shore to protect window glass from flying objects. Later, during winter gales, shutters have the added benefit of conserving energy.

Flooding danger can be severe along low lying coastal areas. Storm water levels and tides can be as much as five feet or higher than ordinary levels, causing or adding to flooding. Storm waves on top of this high water cause additional damage.

Ideally, homes shouldn't be built in such flood prone areas. If, however, a home is already there, a person can still take steps to flood proof their home. Diversion ditches or berms



can direct flood waters away from a house. Removable door and window covers can "lock out" flood waters. Home owners should also check to see if their area is participating in the National Flood Insurance Program and how to qualify for such insurance.

Homes on bluffs and dunes are often threatened with collapse into the water as waves chew away chunks of land and undermine foundations. People just buying shorefront property should find out the erosion potential for their areas and then decide accordingly. The shore is not necessarily undevelopable, but should be approached with respect and information. Bluff and beach erosion control projects can change the hazard level, but usually will *not* protect property from *all* storms or completely stop erosion.

Controlling coastal erosion is not an easy or a cheap job, nor will it

always work. A bulkhead that works in one area may last only a few years in another. A seawall designed for a certain size nor'easter may fail when hit by a hurricane. Property owners often rely on friends and neighbors for information on how to control coastal erosion, rather than relying on engineers or other professionals who know how to design for a coastal environment. When a home-made, self-designed erosion control structure fails, not only is land lost, but the cost of the control structure is lost, as well.

People who own coastal property, or who are looking into buying on the shore, and who would like more information on coastal flooding and erosion can contact the nearest office of the New York Sea Grant Extension Program. With information and understanding, coastal landownership can remain a dream, not a nightmare.

# Year of the Ocean 1984-1985



On March 8, 1984 President Reagan proclaimed 1984 as the Year of the Ocean. The proclamation text follows:

*I want to take this opportunity to recognize 1984 as the Year of the Ocean. This special designation will heighten awareness of the essential role of the sea in the life and future of our nation.*

*From its earliest days America has been a seafaring nation and a naval power, depending on the ocean for food, transportation, and recreation. The ocean is a significant element in our national security.*

*As our country has grown, its ties to the sea have assumed greater importance. In this era of expanded need for resources, the oceans will play an even more critical part in helping mankind build a better world. To underscore this fact, I proclaimed in 1983 a United States Exclusive Economic Zone over all resources out to the 200-mile limit.*

*This great saltwater resource reaches, directly or indirectly, into every American life. Among other things, it provides fish for our tables, petroleum for heat and fuel, and waterways for transportation. It serves as our pathway to the rest of the world and as the medium for the majority of our foreign trade.*

*As we rely increasingly on the ocean's bounty, the demands for its resources will grow. The Year of the Ocean will provide an excellent opportunity to examine our ocean heritage and our ocean future as we approach the twenty-first century.*

— President Ronald Reagan

The Year of the Ocean looms as an exciting year for New York's coastal residents and ocean industries alike. In this and future issues during the Year, we will feature major developments shaping New York's "ocean future".

—Mike Duttweiler, Ithaca

## The Exclusive Economic Zone

The concept of a coastal exclusive economic zone (EEZ) is to establish sovereign rights to living and non-living resources within defined areas including exploration, exploitation, conservation and management rights. The EEZ concept resulted from the third United Nations Law of the Sea Conference.

Although the United States to date has opted not to become a signatory to the Law of the Sea Treaty, on March 10, 1983 President Reagan established through proclamation our EEZ to extend 200 nautical miles from the coast of the United States, its commonwealths, territories and possessions. As such, the EEZ covers the same geography as the U.S. 200-mile exclusive fishery zone. In general, the U.S. proclamation is consistent with the provisions of the Law of the Sea Convention.

The value of the EEZ at this time is largely undefined. Oil and gas potential within the EEZ appears significant yet needs considerably more evaluation. Similarly, hard mineral resources such as sand and gravel, salt, phosphorite, potassium, poly-metallic sulfides and cobalt-rich manganese deposits are poorly documented. Also, the economic and technical feasibility of extracting many of these mineral resources remains unproven.

The 1983 EEZ proclamation by the United States established general principles with subsequent legislation and executive branch regulations to provide operating details. In a very real sense, our responsibilities and capabilities for managing our EEZ are yet to be determined during this the Year of the Ocean.

—Contact: M. Duttweiler, Ithaca

## Seafood Laboratory

The New York State Legislature recently approved the allocation of funds to create a New York Seafood Technology Laboratory. This new facility will be located on the campus of Kingsborough Community College of the City University of New York (CUNY) across from Sheepshead Bay in Brooklyn. The new Seafood Technology Laboratory will serve as a focal point for research, education and extension programs in seafood technology in New York and the surrounding region. The new laboratory is a collaborative effort of Cornell University, CUNY and the New York Sea Grant Institute.

Seafood research, training and demonstration projects conducted in cooperation with private industry and other organizations will occur at the lab. Specifically, the Seafood Technology Laboratory will focus on:

- Research and development in seafood handling, processing, marketing and waste treatment.
- Collaborative research between universities and industry with opportunities for seafood firms to work with laboratory personnel and facilities to experiment with new processes relevant to their products.
- An extension program to provide information and educational programming in seafood technology, commercial fisheries and seafood marketing.
- Interaction between industry and researchers from federal laboratories and universities to sustain a high level of technical competence in New York State.

- Training and retraining programs for potential employees for seafood processing and handling firms.
- Formal education programs for technical positions requiring special courses or degrees ranging from the associate degree to graduate education.

The need for a Seafood Laboratory located in New York's marine district has been recognized for many years. Research and development programs will be based on the well established and widely recognized seafood sciences program at Cornell University. Problem-solving and applied research activities and a Sea Grant Extension program in seafood technology conducted in collaboration with industry are vital components of the laboratory. This new facility will also provide the means to coordinate course offerings ranging from high school short courses to advanced graduate study in seafood sciences.

The new Seafood Tech Laboratory will house a state-of-the-art pilot seafood processing plant which meets or exceeds federal and state food processing codes and standards. The pilot plant will be flexible and equipped to handle experimental processing lines and to demonstrate new and existing processing machinery. Provisions will be made to ensure proper security for proprietary work conducted by industry. The facility will also contain modern laboratories for conducting chemical and microbiological seafood research, a preparation and handling area and classroom space for the extension education programs.

The new laboratory will be directed by a Board of Governors who will oversee its operation and establish

policies. Two faculty members in Cornell's Department of Food Science and one faculty member of the City University will conduct research at the laboratory will contribute to New York's seafood industry by assisting in the development of improved processing, handling and harvesting technologies. The NY Seafood Technology Laboratory is expected to begin operations in 1985.

—Contact: Ken Gall, Plainview

### "Fishport"

The Port Authority of N.Y. and N.J. recently announced plans to develop a new commercial fishing complex along the Brooklyn waterfront. The new "Fishport" will be located at the Erie Basin Terminal, in the Red Hook section of Brooklyn. The Port Authority plans to convert the relatively unused terminal into a modern centralized facility for fish handling, storage, processing and distribution.

As an integrated fishing complex the Port Authority expects Fishport to provide:

- Harvesting and vessel services for berthing, maintenance and repairs.
- Handling facilities for offloading, sorting and packing.
- Processing and storage including freezer and cold storage facilities and various seafood processing businesses.
- Marketing and distribution opportunities due to the facilities unique location in the NY/NJ metropolitan marketing region and proximity to the existing transportation network serving both domestic and export markets.

The first phase of the Fishport will

have pier facilities for unloading vessels and vessel support services such as berthing, fishboxes, fuel, water and ice. The Fishport will include a handling hall and facilities for small to medium sized processors. It is estimated that construction of the Fishport will get underway by the middle of 1984 and that fish processing operations will commence by early in 1985. The Port Authority is negotiating with five tenants for a total of 180,000 square feet at the complex. It's expected that the prospective tenants will handle a full line of seafood products including fresh, frozen, smoked, traditional and non-traditional seafoods.

The Port Authority estimates that the first phase of their program will include an annual payroll of \$23 million, regional sales of \$130 million and regional taxes of \$3 million. It is also expected that 460 direct jobs would be created, most of which could be filled with unskilled labor with adequate training support.

According to Alan Sagner, Chairman of the Port Authority Board of Commissioners, their proposed fisheries program, which includes plans for Fisheries projects in New Jersey, will have positive long term implications for the commercial fisheries in both states. It is hoped that the new facility will complement the industry in both states by providing new opportunities rather than competing with existing businesses and markets. The Port Authority cites increasing fish consumption in the NY metropolitan area, potential for increasing the harvest of non-traditional species and export markets as opportunities for penetrating new markets.

—Contact: Ken Gall, Plainview

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# I Want More!

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Please check the publications which interest you and send to your nearest Sea Grant Extension office. Make checks payable to Cornell University.

\_\_\_\_\_ **Weather warnings.** 1984. Robert B. Buerger. Sea Grant Fact Sheet. 2 pp. \$0.25.

\_\_\_\_\_ **Waves.** 1984. Robert B. Buerger. Sea Grant Fact Sheet. 2 pp. \$0.25.

\_\_\_\_\_ **Coastal Development Checklist.** 1984. Robert B. Buerger. Sea Grant Fact Sheet. 2 pp. \$0.25.

\_\_\_\_\_ **More Fish For Your Fuel.** 1984. Robert B. Buerger and Christopher Smith. Sea Grant Fact Sheet. 4 pp. \$0.25.

## Profile of Seafood Buyers

Fresh fish is often touted as the preference of fish consumers. However, what people say is not always what they do. The 1981 National Marine Fisheries Service Study of Seafood Purchasing, Attitude and Consumption gives a good indication of what types of seafood actually are bought in the Mid-Atlantic region, including New York, New Jersey and Pennsylvania. The demographic information also gives some clues as to who the primary buyers are.

The table below lists the top eleven products in decreasing order according to the amount purchased. Price per pound is included for comparison. All of the products listed are purchased primarily in metropolitan areas of over 2 million people. Notice that canned products are the top three selling items. In addition, larger amounts of fresh whole shellfish and finfish are purchased than any one type of fillet. However, the different product forms of fresh fillets may serve the needs of different market segments. To find out, we need to know who's purchasing what products.

<i>Product Form Purchased</i>	<i>Total Pounds Purchased</i>	<i>Average Price per Pound as Purchased</i>
1. Canned tuna and bonita, not in oil, light, not diet	34,523	2.03
2. Canned tuna and bonita, in oil, light	30,229	2.13
3. Canned tuna and bonita, not in oil, white, not diet	17,336	2.76
4. Fresh shellfish whole in shell at fish market	15,506	2.17
5. Canned tuna and bonita, in oil, white	12,784	2.70
6. Fresh whole fish, headed and gutted at fish market	12,707	1.37
7. Other canned fish, not in oil, not diet	12,203	2.05
8. Fresh frozen fillet at supermarket	12,033	2.07
9. Prepared coated fish fillets	11,567	2.29
10. Fresh fillets at fish market	9,209	2.94
11. Fresh fillets at supermarket	9,125	2.63

Summary findings include that:

- Families with young children are the purchasers of the moderately priced canned light tuna, fresh frozen fillets and coated fillets.
- Older and smaller households with the same income can afford the higher priced white tuna either packed in oil or not. A significant portion of these buyers are foreign and Jewish.
- Buyers of fresh shellfish at the open market are older couples without children, white, Protestant and native born.
- The buyers of whole fresh fish at the open market are almost equally divided between non-Hispanic whites and blacks. The price makes this product affordable to middle income, one wage earner families.
- Other types of fish canned in oil are bought by retired couples on a limited income.
- Fresh fillets appeal to older, both native and foreign born couples, either retired or professionals who can afford the higher prices.

Although fresh fish products are usually the expressed preference, buying patterns indicate a strong preference for the convenient, economical canned fish products. This product form apparently meets the needs of young families in urban areas. As these young families proceed through the life cycle, one might expect to see an increase in the amount of fresh fillets and shellfish purchased. Fresh fillets and shellfish tend to be bought by couples over 50 without children. Perhaps this population segment is the one whose personal preferences no longer have to be compromised for economy or family preferences and so what they say is actually what they do.

## Lighthouse Keeping

In June of 1871, the US Coast Guard completed construction of what's now referred to as the "Old Sodus Point Lighthouse" on a western headland on the shore of Lake Ontario, overlooking Sodus Bay. Years later, the light was replaced with a modern installation on the federal jetty at the mouth of the bay. Today, this beautiful gray limestone lighthouse, listed on the National Register of Historic Places, finds itself no longer needed for guiding sailors on the lake, abandoned by the Coast Guard, and in imminent danger of being swallowed up by the ravages of coastal erosion.

But all is not lost! Through the efforts of Town of Sodus, Village of Sodus Point, and Wayne County officials, the concerned citizens of the Sodus Bay Historical Society, and Congressional Representative Frank Horton, this historic structure has a brighter future and a new mission. The building and adjacent property have been turned over to the town by the federal government for use as a maritime museum. Now the major effort will be to stop Nature before erosion takes its final toll. This is where Sea Grant comes into the picture.

In 1982, the town and village asked Sea Grant for help in determining how bad the erosion problem was, what was causing it, and what steps might be taken to control the erosion. Working with the county planning department, the USDA Soil Conservation Service, and the US Army Corps of Engineers, a Sea Grant erosion control specialist put together a history of the erosion of 20 foot high Lighthouse Bluff. In 1938, 110 feet separated the structure from the top of the bluff. This fell to 55 feet in 1974 and has further shrunk to only 15 feet in December 1983. Using current recession rates estimates, the lighthouse has a life expectancy of only 7 years if nothing is done to stop erosion.

Based upon Sea Grant information, the town and village have put together a three phased plan including: surface and subsurface drainage improvements, bluff reshaping and planting of deep-rooted vegetation, and, if future funds become available, the construction of a 300 foot rock

## Downrigging

Today's sport angler has an array of modern equipment to assist in catching fish. From video-screen depth finders to computer assisted navigation aids, the sportfishing industry has kept abreast of new technological advancements. However, an age-old quandry still faces the modern angler: how to get the fish to bite. For the boat sportsfisherman, the problem can be more than just coming home empty handed. The fuel and maintenance cost associated with operating a boat has drastically increased. The more time spent trying to locate and catch fish, the higher the cost of a day's sportfishing outing. The successful angler today is the one who not only catches fish, but comes back to port with fuel remaining in the tank.

Advances in sportfishing technology are available that can improve the chance of locating and catching certain fish. The quicker fish are caught, the less time is spent operating the boat and thus the less money spent on fuel and maintenance.

Downrigging is a technique that has proven very successful in catching fish species that are sensitive to specific water temperatures. Most fish have a certain temperature range in which they most actively feed. The angler who knows at what depth the ideal feeding temperature is for the fish species being pursued and that can get bait to that depth increases the chance for successfully "filling the box".

The problem arises that when fish are in deep water, traditional "flat lining" will not get the bait to the depth where the fish are feeding. For years, some anglers have solved this problem by attaching heavy weights to their lines or using lead core line. Although this technique has proven successful, much of the sporting "fight" has been taken out of catching the fish due to the excessive weight needed to get the line down to the appropriate depth. Downrigging provides a means of fishing at specific depths without sacrificing the excitement of catching fish on light or medium tackle.

The downrigger is a winch-type mechanism that feeds cable off a rotating reel through a guide system along an extension arm. A weight is attached to the end of the cable to draw the cable to the appropriate

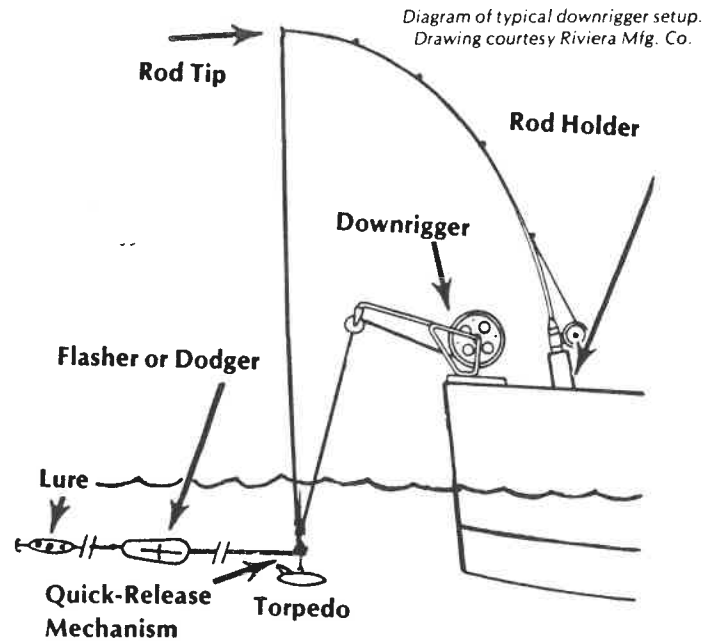


Diagram of typical downrigger setup.  
Drawing courtesy Riviera Mfg. Co.

depth. Located near the bottom of the cable is the line release. The fishing line from an independent rod is attached to the release mechanisms on the downrigger cable. Lowering the weight takes the line down to the desired depth. Usually, some type of meter is attached to the reel unit to provide a specific count of the amount of cable that has been let out. When the desired depth has been reached, the reel of the downrigger is locked into place. The independent fishing rod is set in a rod holder either attached to the downrigger or directly behind it on the gunwale. A bow is placed in the rod by tightening the line between the rod and the release on the downrigger cable. When a fish "strikes", it pulls the line for the release on the cable. With the release of tension on the rod, the rod appears to snap straight up usually setting the hook and allows the angler to play the fish with no excess weight on the line.

Sea Grant has recently published a new fact sheet on downrigging entitled, "More Fish for Your Fuel." For more information on downrigging, see "I Want More".

—Contact: Bob Buerger, Oswego

Lighthouse (from page 4)

revetment at the base of the bluff. The State Office of Parks, Recreation, and Historic Preservation has awarded the town a \$10,000 grant to undertake the first steps to stabilize the slope. With the help of the county planning department, the local government is applying to the State Department of State for funds through the New York Coastal Management Program to implement the second phase of the project. Fund raising efforts by concerned citizens are being directed toward the more costly final phase of heavy construction to armor the slope where it is attacked by storm waves.

The battle to save the Old Sodus Point Lighthouse is not over yet, and as the town and the historical society point out, it's going to take a team effort to accomplish this goal... and that team is definitely banner-bound.

—Contact: Chuck O'Neill, Brockport

**COASTLINES** is published quarterly by the New York Sea Grant Extension Program. This program is funded by the National Oceanic and Atmospheric Administration, the State of New York, and the New York Sea Grant Institute. Subscriptions to Coastlines are free for New York residents. Two-year out-of-state subscriptions are \$4. Request Coastlines from Sea Grant Extension Program, Fernow Hall, Cornell University, Ithaca, N.Y. 14853.

## Weather Warnings

Changes in weather can spoil a day at the beach or turn a fishing trip into a dangerous outing. Over large bodies of water, weather conditions can change quickly, especially on a localized basis. Even a seasoned observer may not be able to foresee sudden changes in the weather. A number of weather information services are available to help mariners and recreationists plan their coastal outings. Understanding where to locate these services and what information they provide can help reduce the chances of a day's outing being hampered by the weather.

The National Oceanic and Atmospheric Administration (NOAA) provides continuous twenty-four hours a day broadcasts of the latest weather information directly from National Weather Service offices. Taped weather messages are repeated every four to six minutes and are routinely updated every one to three hours or

more frequently if needed. Broadcasts are made over VHF-FM transmitters on one of seven high-band FM frequencies ranging from 162.40 MHZ to 162.55 MHZ. Reception range is limited to approximately 40 miles. Presently, most "home" radios cannot receive these weather frequencies. However, a number of special radios equipped to receive the weather band frequencies are now available.

The U.S. Coast Guard also transmits weather information over VHF-FM frequency 157.10 MHZ (channel 22 on citizen's band). Coast Guard forecasts are updated every 6 hours or as needed. In severe weather emergencies, special marine warning bulletins are broadcast on VHF-FM frequency 156.8 MHZ (channel 16 on citizen's band).

For more information, see "I Want More."

—Contact: Bob Buerger, Oswego

## New Factsheets

Understanding wave patterns and behavior can be a key to boating safety. For those who venture onto Lake Ontario, or any other large body of water for that matter, a new fact sheet simply titled "Waves" should help anticipate dangerous wave conditions. It describes how waves are formed and suggests safety precautions. See "I Want More" to order.

With the lure of the Great Lakes coasts for private residences and commercial enterprises, many new "developers" are encountering confusion and frustration in sorting out permit requirements and procedures. A new "Coastal Development Checklist" suggests procedures for minimizing such hassles. Although developed specifically for use in Oswego County, the strategies and regional and state agency contacts suggested would apply for any Great Lakes location. See "I Want More" to order.

## Home Ports

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Sea Grant Extension Program  
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512 Raymond Hall  
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### Hudson River

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### Marine Coast

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