

Coastlines

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Getting Permits For Coastal Construction

by C.R. O'Neill, Jr., Brockport

New York's coastal waters and wetlands are valuable natural resources: they provide habitat and food sources for game fish and waterfowl; they act as natural sponges, helping to prevent flooding by catching runoff and releasing it slowly; they host numerous recreational activities; and, they serve as a natural transportation corridor for commercial navigation.

When someone buys land on the shore, they usually do so with the intent of putting that land to residential, recreational, commercial, or agricultural use. Developing coastal land for such uses often involves activities which may alter the physical characteristics of the water body. While these activities may be legitimate social and economic uses of the shore, they also have the unfortunate potential of adversely impacting the natural resources of the shore.

Water is a mobile resource; while it is in front of one property today, yesterday (or only minutes ago) it was someplace else, and in a short time it will be yet another place. What one person does on the shore that impacts that resource doesn't affect only that individual's use of the resource, but other people's uses as well. Protecting the quality of water resources, coastal wetlands, water-based recreation, navigable waters, and other important coastal resources and preventing use conflicts is the name of the game. For this reason, various federal, state, and local regulatory programs require permits for shoreline development.

A number of coastal activities require one or more permits from one or more agencies. A good rule of thumb for determining whether a

permit is required is that a permit *usually IS required* when work will be performed below the mean high water level, in or abutting adjacent wetlands, when the bed or banks of the water body are being changed or disturbed, or when a structure is being placed in the water. Typical coastal activities which require either state and/or federal permits include: beach nourishment, dredging and filling, building erosion control projects, installing boat ramps, mooring buoys, dolphins, and other boating features, building piers, docks, and wharves, and mining of sand and gravel from the bottom.

A number of permit programs involving coastal projects are implemented by the NYS Department of Environmental Conservation (EnCon). These include: dredge or fill of navigable waters, construction of docks in certain waters of the state, disturbance of bed or banks, activities within or adjacent to freshwater

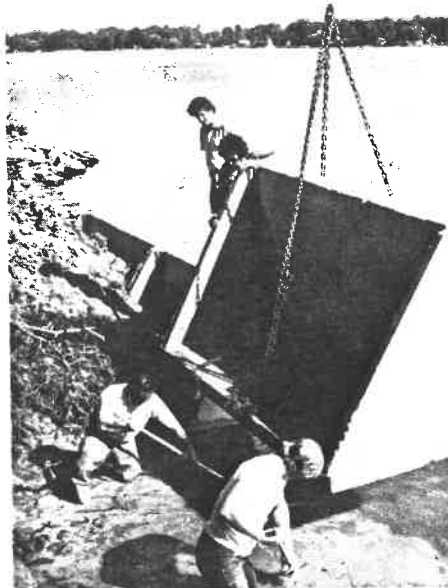
and saltwater wetlands, coastal erosion hazard area permits, flood hazard area development, and State Environmental Quality Review.

The U.S. Army Corps of Engineers is involved in permits for actions which take place within, over, or on the banks of a navigable waterway or if an action will result in excavation in or discharge of dredged material or other fill into any waters or wetlands. The Corps is also responsible for seeing that the provisions of the National Environmental Policy Act (NEPA) are adhered to when issuing its permits.

Finally, various local (town, village, city) permits or approvals such as zoning variances and building permits may be required for development on the shore. The Corps of Engineers, EnCon, and local agencies are all required to ensure that projects which they permit do not conflict with the policies of the New York State Coastal Management Program.

While the process of getting a permit for a project on the shore may seem an imposition, the fact is that these are the laws. The goal of these laws, protection of natural resources, is something most people agree with very strongly. However, the delay in building a project which may result from regulatory programs is often a source of frustration. Some people, having heard "horror stories" of projects denied permits or of lengthy waiting periods, think about building projects without obtaining permits. If a project is built without a permit or if the conditions of a permit are not complied with, both EnCon and the Corps can assess a fine, require that the illegal project be removed

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Reader Survey Results

This issue is the first utilizing results of our recent subscription renewal survey for New York State subscribers. About two-thirds of current subscribers responded requesting renewals. Cards are still trickling in from our second mailing and we expect to reach about a 70% renewal rate. Selected results from the reader survey questions included on renewal cards follow.

The most obvious question was how readers view "Coastlines." Eighty percent of respondents found the newsletter to be "useful" or "very useful" while twenty percent found it to be only "somewhat useful." Considering the broad range of audiences included among our clientele and the broad range of subjects we cover, we feel good about that assessment.

Another measure of value was willingness to pay a hypothetical subscription fee for New York readers. Two-thirds of current subscribers indicated they probably would be willing to pay a \$2.00 per year subscription fee. At the current time, we do not anticipate changing our policy of free subscriptions for New York State residents.

Approximately 3,000 persons receive each issue. Survey responses indicate about four persons read each copy of "Coastlines" making our effective readership about 12,000 persons per issue.

More than 230 respondents made specific comments on their renewal forms. About 20% of these were expressions of "job well done." Many of the remainder were specific suggestions for future topics. These are being tabulated and passed along to appropriate Sea Grant staff for possible inclusion in future articles.

The variety of topics identified is

difficult to summarize. Thirty respondents asked for more articles on their particular geographic region with an even split between "more upstate" and "more downstate." Concern for geographic focus was less common in responses to this survey than in any of the previous three. We will continue to attempt geographic balance in our articles.

Popular suggested technical topics included aquaculture, commercial uses of the coastline, and coastal environmental concerns. These will be included as relevant to current educational or research programs of New York Sea Grant.

A variety of editorial suggestions were provided. About 20 readers asked for more in-depth articles in subjects of their particular concern. "Coastlines" is viewed as a mechanism for introducing current topics or resources. All articles include

sources for additional information. This seems the most effective way of covering the broad range of subjects with which we are involved with the resources available for our free newsletter.

Ten readers suggested soliciting articles from outside authors or providing a readers comment or question and answer column. We attempt to develop articles around common concerns and questions but will explore other options for addressing these suggestions.

A variety of editorial suggestions will appear as "experiments" in future issues. We'll find out how you like them through on-going correspondence and at the time of our next survey. In the meantime, thank you for your cooperation in keeping our mailing records accurate and in our attempts to make "Coastlines" a useful tool for you.

Slide Program "Oil Spills: A Citizen's Guide" Now Available

The June 1976 NEPCO 140 oil spill in the St. Lawrence River was the largest and most expensive inland oil spill in U.S. history. The hard lessons of this spill in terms of community and individual response preparedness are detailed graphically in a new slide program entitled "Oil Spills: A Citizen's Guide." Authored by Professor John Omohundro, SUNY Potsdam College of Arts and Sciences, the program includes extensive photodocumentation of the NEPCO spill accompanying Dr. Omohundro's research findings on the community impacts of the spill.

This slide program supplements two excellent guides produced by Dr. Omohundro shortly after the spill entitled "Oil Spills: A Coastal Resident's Handbook" and "Oil Spills: A Public Officials Handbook." The program includes audio narration with both electronic and manual slide advance options. See "I WANT MORE" for ordering information.



Research in Short



Researchers Recommend Treating Frozen Fish as Perishable Food

by R. Fein, Albany

Phrases like "frozen solid" and "frozen stiff" imply frozen objects are inert, stable and do not change. This is not the case with any frozen food, and particularly fish.

Two New York Sea Grant researchers at Cornell University, Glenna Ryan, MS, and Joe Regen-stein, Ph.D., say textural and flavor changes occur in fish at temperatures maintained for commercial and retail storage. At these temperatures, fish stored for traditionally recom-

mended periods of time are safe to eat, but the eating quality will be deteriorated.

Because of the way frozen fish is presently handled and distributed at the commercial level, it is recommended to consumers and retailers alike to treat frozen fish, particularly those in the cod family, as a perishable item.

Regenstein is studying shelf-life extension in fresh and frozen fish with a grant from the New York Sea Grant Institute. Quality reduction, such as textural changes, can only be prevented with unique handling procedures, including storage at -30C degrees (-22F), according to Regen-stein.

Currently in the U.S., the best industrial storage of frozen fish is at -20C degrees (-4F). Home freezers are usually set at approximately -15C degrees (5F).

"Consumers should plan to use frozen fish as soon as possible after purchase for best quality," adds Ryan, a Sea Grant extension specialist. "Good rotation of stock is important at the retail level and at home."

Three types of changes occur in most frozen foods: dehydration or freezer burn, ice crystal formation and rancidity. All of these changes affect the eating quality of frozen products. In addition, flavor intensity generally decreases and off-flavors may develop.

In fish, particularly in the cod family (haddock, hake, whiting, pollock), an additional chemical/enzymatic reaction occurs that effects the fish's texture, therefore decreasing its eating quality. These reactions, which cause a gadoid (cod) fish to change from moist and smooth to dry and cottony, continue to occur until the

storage temperature reaches -30C degrees (-22F).

Home freezing allows textural and other changes to occur more rapidly than in commercial cold storage because of the warmer temperatures and the frequent, extreme temperature fluctuations caused by opening and closing the freezer door.

"Proper packaging will minimize but not prevent freezer burn and rancidity," says Regenstein. He has been identifying and studying new packaging and handling techniques to increase the shelf-life of frozen fish, and has worked with industry to encourage proper cold storage practices.

Traditional recommended storage times for frozen fish, which Regen-stein says are too long to maintain quality, are from three to six months depending on the fat content of the fish. The fattier fish, the shorter the shelf life.

In addition, Ryan says, to preserve the quality of frozen fish, it should be thawed in the refrigerator or under cold running water, never at room temperature or with warm water.

Frozen fish can be baked directly by using an adaptation of the 10 minute rule which suggests 10 minutes cooking time at 450 degrees per inch of fresh fish thickness. For frozen fish, allow twenty minutes per inch.

A more detailed fact sheet on this subject authored by Regenstein and Ryan, is available upon request from the New York Sea Grant Institute, (518) 462-5837.

I Want More!

To order, please send to the Sea Grant Extension Program, 12 Fernow Hall, Cornell University, Ithaca, NY 14853, along with your check made payable to **Cornell University**.

- _____ **Getting Coastal Permits: Regulatory Programs on New York's Great Lakes Coast.** 1985. C.R. O'Neill, Jr. 20 pp., illustrated. \$.50.
- _____ **Oil Spills: A Citizen's Guide.** 1985. J.T. Omohundro. Slide program with 80 color slides, cassette tape and script. \$22.00.
- _____ **Oil Spills: A Coastal Resident's Handbook.** 1979. J.T. Omohundro. 16 pp., illustrated. \$1.00.
- _____ **Oil Spills: A Public Officials' Handbook.** 1979. J.T. Omohundro. 16 pp., illustrated. \$1.00.
- _____ **Getting Started in Shellfish Mariculture.** 1984. C.F. Smith and R.E. Malouf. 4 pp. \$.45.

Beach Access on the Great Lakes:

Who has rights to the beach?

David Platt, Sea Grant Law Program
SUNY-Buffalo School of Law

The construction of a chain-link fence across a Lake Erie beach by a private upland property owner highlights the relationship which exists between members of the general public and owners of private property along bodies of water. Does the public have the right to use the beach or the foreshore between high and low water marks along the Great Lakes in New York, or may the upland land owner exclude members of the public from traversing the beach area in front of his premises?

The landowner in the present controversy appeared to own "to the water's edge" according to the language of his property deed. He constructed a four foot high fence which stretched across the beach to a point fifteen feet from the water's edge. This fence, approved by the Army Corp of Engineers and the Department of Environmental Conservation, poses no threat to navigation or to the environment. The fence was constructed for the purpose of protecting private property by preventing loud teenagers from using the beach into the early hours of the morning. Other members of the public objected because the fence limited access to the beach.

The rules used to determine the extent of property titles are the subject of a number of judicial alternatives. General rules hold that title to lands abutting non-navigable inland streams or lakes extends to the center of the water body. On navigable non-tidal waters, the upland parcel extends to the low water mark. Finally, on tidal waters, whether or not navigable, title is fixed at the high water mark.

The problem remains of selecting a method for actually fixing the boundary line on the ground. On tidal water bodies, the high water mark can be located using the physical characteristics of the coastal area, the line of vegetation, the break between freshwater and saltwater vegetation, or the statistical averaging of all tides over a long period of time. In New York, the method chosen to locate the high water mark on tidal water bodies is the line of vegetation test.

The present controversy concerns

the determination of the boundary on a non-tidal, navigable waterbody - the physical characteristics test is used in most jurisdictions. Questions concerning the use of this test abound. What constitutes the natural water level? Are winter and spring water levels not just as natural as are summer and fall levels? What if water levels change as a result of natural or artificial events?

The fencing controversy on Lake Erie serves to illustrate the impact of complicating factors, such as naturally or artificially fluctuating water levels, or irregular shoreline characteristics. How is the public-private boundary affected by lake level regulation? Where is the foreshore and does it have the same legal characteristics as the foreshore on a tidal water body? What are the public rights to this foreshore? Thus, while the public may use the foreshore on tidal bodies, does the selection of the low water mark boundary on Lake Erie not foreclose the public from any use of the foreshore? Or does a public easement exist, which allows passage over the private lands between the high and low water marks? The courts do not appear to have resolved these confusing issues. Ultimately, the outcome of these types of cases seems to rest on the decisions of the individual courts as to whether or not the public or private activities at issue are reasonable, as each sector appears to have limited yet undefined rights to the waterfront area.

Rapidly rising coastal land values and increasing pressures for resource development make it necessary to address these questions. These legal uncertainties directly impact the interaction between private property rights and the navigational and environmental interests of the public sector. While at present, it would appear that the right of the public to use the foreshore of the Great Lakes in New York may legally be limited by the upland landowner, the actions of the courts in controversies such as the Lake Erie beach fence incident may initiate action by the New York legislature should public beach access become a matter of state-wide concern.

Mariculture Fact Sheet Available

For those interested in starting a shellfish mariculture effort, a new fact sheet has become available that details many of the major steps that need to be taken. The fact sheet, *Getting Started in Shellfish Mariculture, A New York View for Beginners*, is authored by Christopher F. Smith and Robert E. Malouf.

Initiating a shellfish mariculture effort can be a frustrating experience. Much background into the techniques, permits, and environmental conditions needed to maximize likelihood of success is needed before a potential investor can make educated decisions. Mariculture in New York can be a successful business venture that might pay a handsome return. For the most part, it has been developed through trial and error methods. Investment risk is best reduced when decisions are made by a well informed potential culturist. This fact sheet covers background into the life history, site selection, and permit and business concerns that one must address before initiating an effort. See "I WANT MORE" for ordering information.

Getting Permits

(from page 1)

and the site brought back to its natural state, and may even undertake criminal proceedings against the developer of the illegal project.

Developing coastal property for reasonable uses doesn't need to be a difficult undertaking. If individuals plan ahead, devise projects which minimize negative environmental impacts, and leave themselves enough time to apply for all of the required permits, there should be no reason for these regulations to pose an unreasonable restraint on the enjoyment of living on the coast. A new Sea Grant publication, "Getting Coastal Permits: Regulatory Programs on New York's Great Lakes Coast," can help coastal landowners steer a smooth course through the permit process.

Boardsailing Brief

by Stephen H. Lopez, New City

The newest and fastest growing category of sail craft today, according to the National Marine Manufacturers Association *Boating 1984* statistics as reported in *Boating Industry* (March, 1985), is the sailboard. Invented in 1967 by two Californians, this sport has grown to well over a million enthusiasts less than 20 years later. The sport is equally accessible to women and men, and the relatively inexpensive price of sailboards and rentals opens the sport to many who cannot afford a larger craft.

Perhaps the most compelling aspect of boardsailing, though, is that it combines a fast, thrilling experience with the challenge of agility and skill. The sport can be mastered by relatively young (early teens) and older (middle aged) people alike.

As skill grows, the physical demand for the recreational sailor in moderate winds greatly decreases. A recent survey of sailboards for beginners in *Consumer Reports* (July, 1985), found that it takes 25 to 35 pounds of force to haul a sailboard rig out of the water - a necessary first step in getting underway. Instructors teach beginners how to use their body weight to counterbalance the rig weight thereby lessening the apparent load. The actual board itself (an "all-round" general-recreation board) will weigh between 45 and 57 pounds out of water.

The initial investment for a beginning sailboarder will likely be well under \$1,000. New sailboards start at around \$500 - while used sailboards can be found for somewhat less. Add to this cost a personal flotation device (pfd), that most people refer to as a lifejacket, at \$10 and up, and a few lessons to get started. A car rack will also be necessary for transporting the board to various sailing spots. A bargain-minded beginner can get underway for as little as \$500.

Since most boardsailors will want to experiment with different wind conditions and different spots, a few cautionary tips are in order. First, check ahead to make sure that local regulations do not preclude boardsailing. Many swimming beaches do not allow launchings of any craft including sailboards. This often rele-

gates enthusiasts to less well groomed or remote areas. It is advisable to sail with a buddy or where others are known to sail. If you do not go with a buddy and there are other sailors in the vicinity, introduce yourself and find out all you can about local conditions. You may be able to pick up some pointers on potential hazards and tips on the best sailing opportunities.

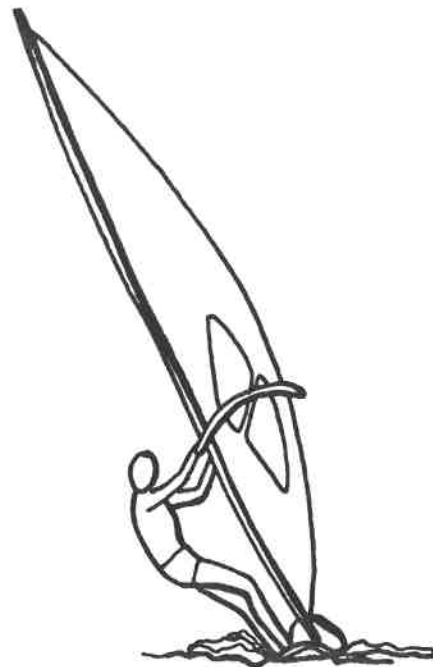
When scouting out potential boardsailing sites, be sure your skill level is up to the site conditions. Wind, currents, and waves should be taken into account as well as potential hazards such as rocks, outcrops and derelict wharfs. Once a suitable site has been identified it is important to mentally plot a course out into the water and back to shore before actually doing it.

Note which direction the wind is coming from to determine where and how you will tack or jibe to maneuver out and back. Generally speaking, a wind parallel to shore will present ideal conditions allowing easy offshore and onshore directional control with a beam reach.

Other conditions not necessarily apparent to the casual observer include presence of seaweed, boating channels or strong currents. Seaweed beds become thick enough to foul daggerboards by early summer and floating mats may require extra maneuvering. Sailing through seaweed is no fun. Often abrupt shallows will be encountered adjacent to boat channels - a result of discarded dredged material. These can also snag daggerboards causing unexpected spills into water frequented by powercraft. Strong currents can often be seen from shore by a change in water surface texture. A beginner should beware of these waters as he or she can be swept far from the launching area while floundering in the water.

Certainly one of the greatest concerns for boardsailors is hypothermia. Exertion and fatigue combined with frequent dunkings can quickly chill the body on a cool breezy day. A wetsuit or a drysuit may be appropriate for these conditions.

As with any sport, caution will increase safety and knowledge will



increase the potential for enjoyment. Boardsailing offers tremendous opportunities for fast exciting sport. It requires agility and skill and is not learned effortlessly. However, as ability grows, so does enjoyment and enthusiasm. Sail safely and sail well!

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.

Marina Spreadsheet Workshop

A workshop for marina managers on the use of computer spreadsheets will be held on November 12 and 13.

The workshop will feature hands-on demonstration in the use of computer spreadsheets. Approximately 8 terminals will be available for use. A specific application, "Dock Plan," developed by Sea Grant Specialist Stephen Lopez will be demonstrated. The workshop will be geared to managers with little or no computer spreadsheet experience. Space is limited so registrants will be taken on a first come, first served basis. Workshop cost is \$15.00 per person to cover materials and related expenses. It will be at the Sea Grant Lower Hudson River office, 62 Old Middletown Road, New City, NY 10956. Call Stephen Lopez at (914) 638-5500 for more details.

Scenic Quality Proceedings

The proceedings of the November 14, 1984 conference on *Scenic Quality in the Lower Hudson River Valley* are now available through the Lower Hudson River Sea Grant Office or from Scenic Hudson, Inc., 9 Vassar Street, Poughkeepsie, NY 12601.

The 42-page document contains the summary comments of 12 experts who addressed various aspects of scenic quality control. The cost of the proceedings is \$3.50 per copy.

Call for Papers

The 20th International Conference on Coastal Engineering is scheduled to be held in Taipei, Taiwan, November 9-14, 1986. The conference is inviting contributions on any of the following topics: Theoretical and

Observed Wave Characteristics; Coastal Sediment Problems; Coastal Structures and Related Problems; Coastal, Estuarine and Environmental Problems; and Ship Motions.

Five copies of a synopsis (not longer than two pages, including illustrations) of each paper proposed for the conference, together with the names, addresses, affiliations and brief curricula vitae of author and co-authors should reach the following address before October 31, 1985: Dr. Billy L. Edge, Secretary, Coastal Engineering Research Council, American Society of Civil Engineers, Cubit Engineering Limited, 207 East Bay Street, Suite 311, Charleston, SC 29401. Authors whose contributions are accepted will be advised by January 31, 1986.

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