

Psyching Out the Crisis Response to Oil Spills: The Human Factor

The date is June 23, 1976. The NEPCO 140, a barge owned by the Oswego Barge Company, runs aground in the Thousand Islands area of the St. Lawrence River and spills 300,000 gallons of heavy oil. Within hours, a threatening slick spreads from Alexandria Bay to Massena, 60 miles north. Four months later after \$8.5 million is spent, the spill — the river's third in three years — is called the worst freshwater spill in the nation's history.

Although oil spills are a relatively new phenomenon, the victims of a spill in the United States have come to expect a high degree of efficiency in the control of a spill and the removal of oil. But the sad truth is, oil spill technology is not as advanced as people think especially when the oil is subject to winds, currents and tides. Add to this the emotional concern of coastal residents who see their own backyard or business threatened, and a crisis develops. This crisis continues until massive amounts of money, materials and services are able to return the area to normal.

That an oil spill takes on the proportions of a major crisis is an understatement, according to John Omohundro, associate professor of anthropology at the State University of New York in Potsdam.

Omohundro should know. He's one of the few social scientists who's studied how people react under the stress and strain of an oil spill. During the summer of 1976, funded by the U.S. Coast Guard, he was on hand to study the NEPCO 140 spill. He's also one of the few to publish his findings in two handbooks on oil spills, one for coastal residents and one for public officials. The handbooks are published by New York Sea Grant.

When asked why these particular audiences are so important, Omohundro's reply is direct and to the point. "They have the most to lose."

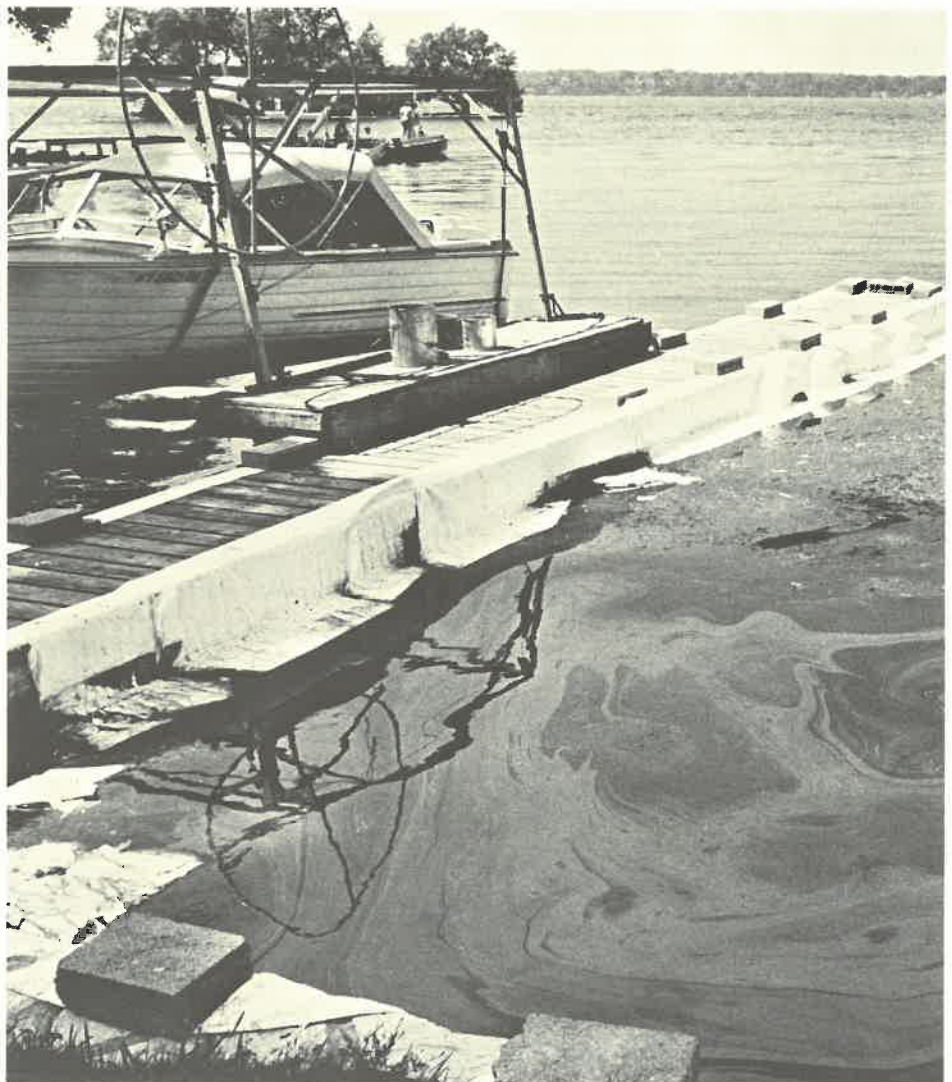
He goes on, "They see their property threatened by an approaching oil slick, and they don't know what to do. They respond without knowing what is going on, and what they might have done often remains undone."

For public officials, the problems are different. They find themselves caught between demanding coastal residents and an oil spill bureaucracy consisting of state and federal officials. The effects of the spill on the community and the crisis stages

through which the community must go are as overwhelming for public officials as for property owners.

In *Oil Spills: A Coastal Resident's Handbook*, Omohundro gives a thorough account of what to expect from the national and regional response teams which are charged by the government to carry out decisions following a spill. Against this background, he explains the laws and liabilities of those involved, and the

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Vessel Leasing: An Alternative to Buying

by John Scotti, Sea Grant Specialist in Riverhead

"I know of a boat that's for sale or lease with an option to buy. What does a lease involve?"

Questions about leasing fishing vessels are frequently being asked by commercial fishermen, especially in recent months. And a reasonable assumption being made is that opportunities to lease fishing vessels during this period of fishery growth and tight money are presently very good.

Since the adoption of the 200-mile limit, which some are calling the "Fishrush of '76," increased speculative investment has resulted in the construction of more commercial fishing boats. The boat-building industry was happy to expand to meet this demand.

But after experiencing absentee ownership and longer-than-over-night development of the fishing industry, many investors have sought new ways to keep vessels earning a return without day-to-day involvement. Although the born-again boat-builders want to continue building vessels, they are getting fewer purchase orders for new fishboats because of tight money. And because many fishermen lack the necessary capital and want to avoid high interest rates, leasing from boat-builders with the help of investors looks attractive.

So if you're vessel shopping, leasing is an option that you may want to review. Here are some facts about leasing that can help you make

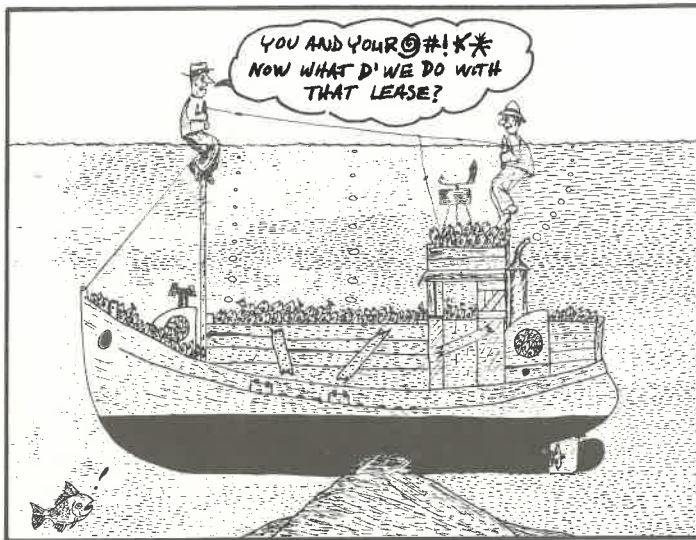
an informed decision:

- Although leases usually cover new vessels, used boats may also be leased. The length of the lease can vary from one to 15 years depending on the age of the vessel or the inclusion of an option to buy. Repayments are typically made in equal term payments equivalent to three to five per cent above the prime interest rates offered by banks.

However, if tax benefits and vessel acquisition are not included in the leasing agreements, payments could fall well below the present prime rate.

- In the lease agreement, the lessor, that is, the company leasing the vessel, maintains ownership. The lessee, or the person operating the vessel, may have an option to purchase the vessel at the termination of the lease. Since the leasing company retains ownership during the duration of the lease, the lessee is usually not required to provide collateral other than worthiness of personal credit and fishing experience. A refundable security deposit equal to the marine insurance deductible or a fractional portion of the annual lease is sometimes requested. Normally, lease agreements are not restrictive, but can be difficult to change.

- The entire lease payment is tax deductible by the lessee. Investment tax credits and depreciation are not



Cartoon from "Tips for Fishermen", a 1974 publication by the U.S. Department of Transportation and U.S. Coastguard. Caption adapted for Coastlines.

granted to the lessee unless stated in the lease. The lease agreement process is relatively quick depending on the qualifications of those involved and vessel availability. Before signing a lease, it is important to determine the closing costs including attorney fees, application fees, commitment and security deposits. To eliminate surprises, ask for a letter detailing all payments needed to meet your lease commitments. If the lease plan includes an option-to-buy the vessel, make sure the lease agreement has been approved by the Internal Revenue Service to avoid problems later.

When compared to other financing alternatives, vessel leasing is the most expensive method of obtaining a vessel. However, with the high cost of boat-building, continued aggressiveness of investors, tight money and high interest rates, commercial vessel leasing may be a practical short-term solution.

Psyching Out the Crisis Response

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clean-up process.

Having seen the frustrations of coastal residents trying to protect their property, the author includes a section on "how to protect yourself and your property." Here protective measures such as sandbagging, skirting and flooring of boats, docks and shoreline are described and illustrated. Believing that spills are a reality which residents must face, he also stresses the importance of being organized before a spill takes place. Here guidelines for setting up an alert system, an observer's corps and

contingency plans are provided. For emergencies, the name, address and telephone number of appropriate organizations are given.

In **Oil Spills: A Public Official's Handbook**, the author has pulled together information of use to elected representatives; fire, rescue, police, civil defense, Red Cross and Chamber of Commerce organizations; resident associations, sport clubs and other local groups which would be involved in carrying out a contingency plan. Because spills tend to polarize a community, the empha-

sis is on understanding how and why the public responds the way it does and what problems are encountered. As in any crisis, the author points out, a community experiences many different responses to a spill including shock, helplessness, frustration and anger. To help alleviate this crisis situation, Omohundro offers suggestions on how public officials can work with coastal residents as well as the press, the clean-up crew and emergency teams which come from outside the community.

To order copies of these publications, see I WANT MORE.



Spend Less Money to Protect Your Coastline

by Bruce DeYoung, Assistant Program Leader in Riverhead

Each year residents of New York State are confronted by two seemingly unrelated dilemmas: gaining increased wave protection and disposing of used tires in an environmentally acceptable manner.

Now Sea Grant sponsored research and educational programs provide a joint solution to this dilemma.

Taking the form of floating tire breakwaters (FTB), significant savings can be enjoyed by coastal businesses and communities throughout the state. Since first reported in Coastlines in 1975, FTBs have been refined, improved and used widely.

FTBs protect Lake Erie harbors

The breakwater is built of tires which float on the water's surface absorbing wave energy. Dunkirk along the Great Lakes, the first community in New York to use a floating breakwater, installed a temporary

structure to allow expanded use of the harbor until a permanent bottom resting structure could be constructed.

Following Dunkirk's lead, another Lake Erie community is building a floating tire breakwater at Barcelona Harbor. With the leadership of Don Eno, a harbor commissioner and Sea Grant Advisory Committee member, Barcelona will have FTBs placed strategically within its arrowhead-shaped harbor.

FTBs improve marina facilities

Coastal businesses along Lake Ontario and the St. Lawrence River are also benefiting from FTBs. Captain Jeff Baker, owner of the Boathouse Marina in Fairhaven says he's "impressed with the structure's performance." Baker is using an FTB to shelter floating docks and recreational craft from damaging waves. By

using FTBs, he has expanded his marine facilities to accommodate about 30 more boats. It's working so well that Baker again anticipates expanding his marine facility this summer, by using FTBs.

Bill and Bea Schermerhorn, owners of Schermerhorn Boat Sales on the St. Lawrence, installed an FTB last spring. Soon after, a severe storm nearly demolished unprotected floating docks and facilities. According to Schermerhorn, those behind the breakwater were "just fine. It saved me a lot of money because those floating docks would cost about \$4,000 each to replace!"

These successes are but a few experienced by FTB users across the state. The chief advantage cited by users are: portability, low cost and effectiveness when appropriately designed.

When Dunkirk Harbor pioneered an FTB in 1975, guidance on design was limited by sparse research. Crude "rules of thumb" were the only guidelines available on design, size of structure, and mooring. At best, this information bordered on outright guesswork.

Research improves FTB Performance

Sea Grant recognized this engineering problem and funded researchers in New York to experiment with small scale FTBs in wave tanks which simulated natural wave conditions. As a result, Sea Grant and the U.S. Army Corps of Engineers identified independently similar modifications in design to strengthen the performance of FTBs. These design changes are discussed in detail in an information bulletin on FTBs, written specifically for coastal residents and businesses. See I WANT MORE.

To date, floating tire breakwaters have proven reliable when appropriately designed for areas having limited fetch and severity of wave conditions. The future challenge is to develop a "heavy duty" FTB design for use in severe wave climates. To meet this challenge, Sea Grant is funding a cooperative research effort between the Town of Westfield, N. Y. and the Lake Erie Marine Science Center of Erie, Pa.

The future of FTBs in New York is clear. As protected moorage space in desirable locations is filled, new facilities will be built to accommodate the demand. In locations where FTBs are suitable, many decision-makers will find it attractive to consider FTBs to enhance wave protection.

Long Island: Coastal Bluff Erosion

by Stanley Boc, Sea Grant Specialist
formerly in Stony Brook, now in Fredonia.

People who live on coastal bluffs are forced to defend their property against a multi-faceted attack by erosion. The agents of erosion on a bluff are rainfall, surface runoff, groundwater, and wave attack at the toe of the bluff. As one can see from the list of erosive agents, bluff erosion is probably not caused by one problem but in most cases a combination of problems. This combination of problems calls for a combination of solutions that will, at least, help retard the effects of erosion.

A good place to start looking at your problem bluff is at the toe or bottom of the bluff. This is the foundation. If it is stable, this will help make the rest of the bluff stable. If it is not stable, then no matter what you do to the rest of the bluff, it will eventually become unstable and erode. First, see if the water and waves attack the toe of the bluff directly, especially during storms when water levels and wave heights



COMBATING EROSION

are higher. If so, toe protection is required. This may be accomplished by the use of a bulkhead or a revetment.

Now let's look up the slope. Do you notice gullies? If they start from the top, then you may have a rain runoff problem. If the gullies start somewhere down the slope, you may have a groundwater problem.

Let's say you have a runoff problem from the top. This means that most of the water from rainfall or even a sprinkler system is running along the surface of the lawn and over the edge of the cliff causing these eroding gullies from the top. This problem is helped by building a small ridge, called a berm, near the edge of the bluff. A berm does not allow the water to go over the cliff and directs it to a spot where a drain and a pipe have been installed to bring the excess water safely to the bottom

of the bluff. Planting the area near the bluff's edge with shrubs and trees is also very helpful.

Let's now say that the gullies start somewhere down the bluff. This is probably a groundwater problem. This is caused by surface water that soaks into the soil. The water works its way down through the soil until it reaches a barrier that it can not go through. This barrier may be a layer of clay or even a layer of rock such as shale. The water now starts to move along the top of the barrier and may seep out of the side of your bluff causing the gullies that start down the side of the bluff. This problem is remedied by intercepting the water that is moving along the top of the barrier before it reaches the surface of the bluff slope and concentrating it into a drainage pipe or tiled area. Such interception allows the water to move down the bluff surface without causing any erosion. A Sea Grant fact sheet entitled, **Controlling Bluff Groundwater Along the Great Lakes**, will help further explain these tech-

niques which are also effective for Long Island. See I WANT MORE.

Now that you know where the water is coming from, look at the slope of your bluff. A slope of about 35 degrees or approximately 1:1.5 is preferred. If this slope is impossible and a steeper one is necessary, then terracing is suggested.

Although you have now accounted for all of the problems that are causing your bluff erosion, one more finishing touch is needed. That is vegetation. Vegetation is like the perfect ingredient that makes the whole thing work. It helps bind together the soil with its roots and also uses a lot of the water that causes the erosion.

Be sure to choose the right kind of vegetation for each part of your slope. The plants suggested here are found to grow well on Long Island, but particularly on the North Shore bluffs. Sources of many of these vegetation types can be obtained from your local Soil Conservation Service, U.S. Department of Agriculture.

Minimum Standards Proposed for Controlling Erosion

Brian Doyle, Sea Grant Specialist in Brockport

Anyone who has lived in a coastal area has probably witnessed a scene similar to that in the accompanying photograph. How do owners of houses in these situations get into such a predicament?

Generally, either one of two things has happened. The builder of the house was not familiar with shoreline erosion rates and therefore, located it too close to the edge of the bluff. Or, the erosion protection device, that is, the bulkhead, seawall, revetment, etc., built to protect the house from shoreline erosion did not perform as planned. This was probably due to a lack of experience on the part of both the owner and contractor in the marine construction field.

Recognizing that coastal erosion causes extensive damage to publicly and privately owned property each year, a section of New York's proposed Coastal Management Program is designed to assist present and prospective shoreline property owners in avoiding these problems. Entitled "Coastal Erosion Hazard Areas," this legislation would provide for the regulation of all new land use or development within clearly defined erosion hazard areas.

Simply, an erosion hazard area would be defined as an area measured landward from the bluff's edge, which is 40 times the long-term, annual shoreline recession rate, where such a rate is at least one foot per year. For example, if the recession rate at a certain point was three feet per year, the erosion hazard area would encompass an area 120 feet (3 times 40) landward from the edge of the bluff.

In addition, natural protective features such as dunes and beaches, on which inappropriate development would increase the exposure of land to erosion, could also be considered erosion hazard areas. Boundaries, identifying the limits of the erosion areas, would be drawn on maps and made available to all interested persons. The limits would be reviewed and adjusted every 10 years or after a major coastal storm to ensure that the information is current.

The Department of Environmental Conservation (DEC), in conjunction with local governments, would have the responsibility of identifying and mapping the erosion hazard areas. While overall program administration would remain with DEC, local governments would have an opportunity to issue local erosion hazard regulations and administer the program within their municipality, subject to DEC review.

According to the proposed legislation DEC would publish regulations containing: 1) land-use standards for minimum setback requirements for structures (houses, sheds, etc.), prevention of erosion at site or adjacent sites, and prevention of adverse affects to natural resources; 2) erosion protection standards for the design, siting, construction and reconstruction of erosion protection structures, so that there is a reason-

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Vegetation for Coastal Bluffs on Long Island*

1. Trees that grow well near the cliff tops:

Box Elder (*Acer negundo*); Post Oak (*Quercus stellata*); Mockernut Hickory *Carya tomentosa*); Shadbush (*Amelanchier laevis*); White Poplar (*Populus alba*, good spreader); Ailanthus (*A. altissima*, salt tolerant); Russian olive (*Eleagnus angustifolia*, a lot of dieback); Red Cedar (*Juniperus virginiana*, salt tolerant).

2. Shrubs that will grow on cliffs having a tendency to slide down:

Bayberry (*Myrica pensylvanica*); Salt Spray Rose (*Rosa rugosa*); Beach Plum (*Prunus maritima*); Gray or Prairie Willow (*Salix humilis*); Dwarf Sumach (*Rhus copallina*).

3. Shrubs growing at cliff tops:

Tamarisk (*Tamarix gallica*); Cherry Eleagnus (*Eleagnus multiflora*); Autumn Eleagnus (*Eleagnus umbellata*); Common Privet (*Ligustrum vulgare*); Regels Privet (*Ligustrum obtusifolium* var. *Regelianum*); Common Matrimony Vine (*Lycium halimifolium*); Blackberry (*Rubus allegheniensis*).

4. Vines:

Bearberry (*Arctostaphylos uva-ursi*, doesn't care for too steep a slope, tolerates sun, sand and salt spray well); Poison Ivy (*Rhus radicans*, good cover, grow at your own risk!); Virginia Creeper (*Parthenocissus quinquefolia*); Beach Pea (*Lathyrus japonicus*).

5. Herbs and grasses:

Beach Grass (*Ammophila breviflora*); Seabeach Sandwort (*Arenaria peploides* var. *robusta*); Dusty Miller (*Artemisia arifolia*); Beach Clotbur (*Xanthium echinatum*, a prickly pest); Beach Goldenrod (*Solidago sempervirens*); Early Meadow Rue (*Thalictrum dioicum*, cliff top); Columbine (*Aquilegia canadensis*, cliff top).

* This information was provided by Betty Lotowycz, herbarium curator of the Planting Fields Arboretum, Oyster Bay, New York.

Conferences: Past, Present and Future

Lake Sportsfishery Program Informs Business:

Approximately 120 businesspeople, public officials and concerned anglers learned of the problems, progress and prospects of Lake Ontario's developing sportfishery at a Sea Grant sponsored educational program held last fall near Rochester. The purpose of the program, entitled "Your Business and the Lake Ontario Trout and Salmon Sportfishery," was to inform business interests of the risks and potentials of catering to an expanding sportfishing market.

Lead-off speaker Herbert Doig, assistant commissioner for natural resources of the Department of Environmental Conservation, reported on department plans to increase lake stocking of salmonid species as state hatchery system production improved. Mike Duttweiler of Sea Grant related the realities of toxic chemical contamination problems and fishery management policies. Economic impact data and comparisons on the retail service sector were discussed by Tommy Brown, research associate at Cornell University.

Featured speaker, John Mrozinski, a marina operator from Manistee, Michigan, shared his experiences related to sportfishing-based development and growth in his home state. Lake Ontario area businesspeople, including marina operators, a tackle dealer and a charter fishing operator, outlined their growing dependence on and exploration of the new angler markets.

If you have any questions concerning the contents and topics discussed at this program, contact Mike Voiland at our Brockport office.

Hypothermia Conference Planned for March 28-29

A conference that could help reduce the number of deaths caused by exposure to cold water will be held March 28-29 in Westchester County. Sponsored by a consortium of organizations, including NY Sea Grant and American Red Cross, the conference aims at giving potentially life-saving information to coastal users, winter sportspeople, emergency service agencies and other medical personnel.

The conference, covering all aspects of hypothermia, will be held at the Physical Education Building at the State University of New York, Purchase campus. There will be a session Friday evening and an all-day session on Saturday. Registration will be \$25.

Hypothermia is a term used to describe low body heat which results in slowed metabolism, respiration and heartbeat, and other physiological processes, often to the point that death results. Hypothermia is caused either by prolonged exposure to cold temperatures (chronic hypothermia) or by immersion in cold water causing the body to lose heat rapidly (acute hypothermia). Fifty per cent of all boating fatalities in this country occur from September to June — clearly, not during peak water use months, but when the water is the coldest. Additionally, it is estimated that approximately a third of the nation's 8,000 annual drownings occur as a result of hypothermia.

New resuscitation techniques have saved victims who were totally submerged in icy water for over 30 minutes. One aspect of this conference will be on latest resuscitative techniques for hypothermia patients.

Commercial fisherman, marine contractors, marine educators, and anyone working on or near the water will find this conference extremely valuable. For more information, contact Ruth Folit at New York Sea Grant (212-587-9722), or Gerry Dworkin at the Westchester County Chapter of the American Red Cross (914-946-6500). See I WANT MORE.

'Great Lakes — 80' Program Planned for May

The annual conference, Great Lakes — 80, of the International Association for Great Lakes Research will be held at Queen's University in Kingston, Ontario on May 19-20 with "Towards an Ecosystem Management Strategy" as its theme. For information, contact Dr. E. D. Ongley, Great Lakes — 80, Queen's University, Kingston, Ontario, Canada K7L 3N6.

New Publications

Getting the Most from Wood and Shoreline Erosion Protection for Marinas, two new publications in the Marine Trades Flyer Series, are now available for purchase.

Getting the Most from Wood is written to assist marina operators in understanding the use and preservation of wood as a construction material. Wood is the most commonly used material in dock and marina construction. However, when it is used in either a fresh or salt-water environment, it is exposed to damage from the natural elements and marine organisms. The preservation of wood used in marine structures, including proper treatment and maintenance, is explained in this publication which is based upon a slide presentation, "Improving the Performance of Wood in Waterfront Structures" from Oregon State University's Extension Marine Advisory Service.

Intended for marina operators who continually face the problem of shoreline erosion, **Shoreline Erosion Protection for Marinas** explains the variety of erosion control methods currently available and in use. The seven methods described are revetments, sand bags, gabions, sheet-pile bulkheads, concrete bulkheads, timber bulkheads, and vegetation. The flyer is based upon a presentation "Some Ways to Deal with Shoreline Erosion at Your Marina," by Brian E. Doyle of our Brockport office, at a Sea Grant Conference in 1978. See I WANT MORE.

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New Approach to Commercial Fisheries by N.Y. Sea Grant

New York Sea Grant has augmented its commercial fishing program to include a team approach, new staff and a new location. Two Sea Grant specialists who formerly worked out of our SUNY office in Stony Brook and the Suffolk County Cooperative Extension office are now located at the Cornell University Laboratory at 39 South Avenue in Riverhead.

According to Bruce De Young, assistant program leader in Riverhead, whose responsibilities include working with governmental agencies and fishermen's organizations on the impact of extended jurisdiction on the fishing industry, "The rationale for relocating was to develop a team approach in commercial fisheries which would be better able to serve the fisheries clientele on Long Island."

Relocating from Stony Brook to Riverhead is Sea Grant Specialist John Scotti. Scotti is well known to many commercial fishermen for his program on fisheries development, vessel financing, benefits for commercial fishermen and seafood marketing.

Also joining the team in Riverhead is Christopher F. Smith, a new staff member whose program emphasis is commercial fishing technology. Chris comes to us with research experience on finfish and hard clams from the Marine Sciences Research Center at Stony Brook, the Chesapeake Bay Institute and Chesapeake Biological Laboratory in Maryland. His degrees in marine biology



Street sign of the Cornell University Laboratory in Riverhead, now the location of New York Sea Grant's commercial fishery specialists.

and marine environmental science were earned at the University of West Florida and the State University of New York, Stony Brook.

Plans to add a fourth team member are presently underway. This person will be appointed for a one-year term to work in the field of marine mechanics.

I WANT MORE

Additional information is available from New York Sea Grant. Please check the publications which interest you and send to your nearest Sea Grant Extension Office. Single copies of the following publications are free:

- _____ **Cold Water Drowning: A New Lease on Life**, U.S. Department of Transportation and U.S. Coast Guard, 1978, 13 pp.
- _____ **Discover Sea Grant**, a fold-out pamphlet, 1979, 4 pp.
- _____ **Hypothermia and Cold Water Survival**, U.S. Department of Transportation and U.S. Coast Guard, 1977, 5 pp.
- _____ **Retail Market Tests of Minced Seafood Crispies**, D. C. Goodrich, Jr. and D. B. Whitaker, 1979, 10 pp.
- _____ **The Roles of Research and Extension Education in the Developing Lake Ontario Salmonid Fishery**, S. P. Schuman, T. L. Brown and M. W. Duttweiler, 1979, Fisheries 4(3), 4 pp.

For the following publications, make checks payable to Cornell University except as noted below:

- _____ **Ecologic Separation of Sympatric Muskellunge and Northern Pike**, Sea Grant Reprint Series, E. J. Harrison and W. F. Hadley, 1978, 6 pp., \$1.00.
- _____ **Enhancing Wave Protection with Floating Tire Breakwaters**, B. DeYoung, 1978, 29 pp., \$1.50.
- _____ **Evaluation of a Hard Clam Spawner Transplant Site Using A Dye Tracer Technique**, Marine Sciences Research Center, D. S. Becker, 1978, 37 pp., \$4.00*.
- _____ **New York Bight Atlas Monograph #29: The Lower Bay Complex**, I. W. Duedall, H. B. O'Connors, R. E. Wilson, and J. H. Parker, 1979, 47 pp., \$4.00.
- _____ **Oil Spills: A Coastal Resident's Handbook**, J. Omohundro, 1980, 16 pp., \$1.00.
- _____ **Oil Spills: A Public Official's Handbook**, J. Omohundro, 1980, 16 pp., \$1.00.
- _____ **The Demand of Construction Minerals in the Greater New York Metropolitan Area**, K. Courtney, J. Dehais, and W. A. Wallace, 1979, 37 pp., \$1.50.

* Make checks payable to: The Stony Brook Foundation

Minimum Standards Proposed for Controlling Erosion *continued from page 5*

able probability of controlling erosion for at least 30 years; 3) restoration and stabilization standards to insure that land areas are maintained and where necessary restored to minimize erosion.

The legislation also includes criteria whereby any shoreline owner may appeal for the exclusion of his land from the erosion hazard area or request a variance from the requirements or standards affecting them. This allows the local governments more flexibility in dealing with cases where strict adherence to the requirements would cause practical difficulty or undue hardship.

Although the precise standards for development in erosion hazard areas have not yet been established, some preliminary implications for shoreline owners can be drawn. Anyone within an erosion hazard area wishing to have an erosion protection structure built would be affected.

Either the design and construction of such a structure would have to meet the minimum specifications, as published by DEC, or a variance to such would be required. Obviously, this will help ensure that the shoreline owner is getting a quality structure which has a reasonable chance of lasting 30 years. However, in many cases, the costs of certain structures will quite likely be higher than now due to the expected minimum standards.

In erosion hazard areas where new development takes place, several options appear to be available to the owner. The new structure could be set back some minimum distance from the bluff, for example, 30 times the recession rate; an erosion protection device, meeting the minimum established criteria, could be built, in which case the setback requirement need not be observed; or a variance could be requested if some mitigating circumstances are involved.

Several things should be noted at this point. First, it is still only proposed legislation — the state legislature will be considering it this session. Second, if passed, the requirements of the legislation will not go into effect overnight. In all likelihood, the development of erosion hazard area maps, rules and standards will take one to two years to finalize. Third, local governments will have an opportunity to administer the program. Although a new permitting system is envisioned, it can be controlled through the municipality.

If you would like more information concerning the proposed "Coastal Erosion Hazard Areas" contact: William Barton, technical director or Robert Hansen, program manager, Coastal Management Program, N.Y. Department of State, 162 Washington Avenue, Albany, N.Y. 12231 (518-474-8834), or Brian Doyle at our Brockport office.

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