Coastlines E

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Our Youth— A Sometimes Neglected Coastal Resource

by David Greene, Sea Grant Specialist in East Aurora

If you were asked to identify your most valuable coastal assets, what would your answer be? Would it be your marina facility? your home? your land? or your right of access to the water? Would you think to answer the young people of your community?

Many of the decisions people are forced to make on a day-to-day, year-to-year basis directly affect the maintenance of the coastal waters and the resources derived from them. Correct decisions often depend upon experience and knowledge, often hard earned.

Just as we protect our coastal resources for future generations through direct action, we can protect our youth "resource" through involvement and education. We can give them a head start into the process of proper decision-making that will assure the conservation of coastal resources in generations to come.

How can this be done? There are as many ways to teach youth as there are resources to protect, but probably the most effective method of education is direct involvement in the problem. Having young people work beside you when you make decisions will help these future decision-makers take the appropriate steps when it comes their turn.

Direct Youth Involvement

In many counties the Cooperative Extension office — through 4-H — conducts a County Government Internship program. Here young people



Providing our young people with the experience and knowledge of making coastal decisions in their communities may make the decision-making process less painful for them now and in the future.

get the opportunity to sit in on governmental decisions as they happen. County Government Day involves visiting with legislators and executives in their offices to familiarize youth with the "goings on" of local government. Many counties also take youth groups to Albany to visit the state government.

Members of your community can establish an "internship" program. If you're a county legislator, a planner or marina operator, when you attend a meeting to discuss factors affecting your coastal property, take a young person along who might just have to make similar decisions in 10 years.

In many counties throughout the state, the Federation of Sportmen's Clubs has for many years recognized their youth as future stewards of the environment. This has been reflected by their active participation in conservation education. At the conservation building at the Oppenhein Zoo in southern Niagara County, for example, young people have gone one step farther. The youth themselves, through a club organized at a local high school, have painted, updated, completely

refurbished and maintained the conservation education building. This direct involvement has led to a spirited enthusiasm for the environment. One cannot help but think that this will carry over to their future decisions.

Natural Resource Inventories

One way to involve young people in coastal decisions is to encourage them to conduct a Natural Resource Inventory. Such an inventory not only accounts for the natural resources of an area, but also provides experience in interpreting and understanding natural phenomena. In Westchester and Suffolk counties, youth have already been involved in field work for an inventory. In Westchester, one class is working on an inventory with Cooperative Extension and a local school teacher. In Suffolk County, an open space inventory is the result of cooperation between Sea Grant and the Town of Riverhead. In both cases, youth gained knowledge and experience that will help them make decisions in the future. In addition, the inventory of resources serves as an

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Art Knorr: A Voice for the Marine Trades

by Michael P. Voiland, Sea Grant Specialist in Brockport

When one first enters the small, quiet office of Knorr Advertising, Inc. in Syracuse, it belies just how much activity is actually going on. Moreover, it's difficult to perceive even the slightest connection with marine or boating affairs of any sort.

But when you meet and talk with the firm's namesake, it's quite another matter.

Because in addition to running a successful advertising business, Art Knorr is, by his own admission, "up to my ears in marine trade affairs!" Art has been the executive secretary for the Central New York Marine Trades Association for the past 17 years, and has also served in a similar capacity with the Empire State Marine Trades Association (ESTMA) since 1974. Moreover, as part of his leadership duties with ESMTA, he carries out the role of a registered lobbyist at the state capitol and serves as a member of the state's Coastal Management Advisory Committee. One thing's certain — Art Knorr, as spokesman for marina operators and marine product dealers in the state, keeps very busy.

But it is the ESMTA that one finds Art most eager to stop and talk about. The tone of the conversation is always exciting and very positive.

"In just five years, the Empire State Association has achieved some very significant goals that benefit the marine trades industry in New York. Perhaps, the most important accomplishment, however, revolves around the fact that, for the first time ever, the marine product and service industry can raise a single, unified voice **statewide** on matters of real concern," says Art.

A look at the organizational structure and growth rate of the ESMTA



Art Knorr, Executive Secretary of ESMTA

bears witness that the association is a true reflection of marine trades interests across the state. Since its fledgling years in 1974 and 1975, when regional groups from the Syracuse, Rochester, Buffalo and Albany areas voted unanimously for enrollment, the ESMTA has grown to a membership of over 230 businesses. "At first, we were actually a federation of the regional associations. We wanted to avoid competing for members with our regional affiliates, so we required operators to enlist locally if they wanted to belong. But, it became obvious that many operators wanted to take part in ESMTA and its benefits but could not join a regional association. We solved this by changing our by-laws to allow individual memberships, so we now enroll members from every corner of the state, including the New York City-Long Island area."

And what are some of the benefits for members? "To start, ESMTA offers the operator a voice and watchdog in Albany on relevant legislation and regulatory matters. This is done through my lobbying efforts. Next, a communication mechanism — that is, our newsletter Watermark — gives our members a quick 'feel' for what's happening at the statewide level," Art explains.

The litany of other ESMTA special programs that Art can recite is impressive. Under his direction, ESMTA now offers a business liability insurance plan — "tailormade for marine businesses," beams Art — and a group health and life insurance plan. Art has also helped formulate a special credit card program for ESMTA members. "Now our members can take advantage of a special low group rate when dealing with major bank credit card sales," states Art.

While it appears obvious that he could wax on about the virtues of ESMTA, a conversation with Art reveals much more. He holds strong convictions concerning the future role marine businesses need to play in industry matters. According to Art, "the marine business operator must realize that the destiny of his way of making a living is shaped by many outside forces. Operators have got to be convinced that unless they "give a damn" by participating in issues and voicing their interests, their businesses will not be as productive as they could be and may even fail."

Art feels that the more marina operators are willing and able to work toward common goals and make their views known, the better they'll be able to influence decision-making that affects them. "The recent experience involving the state boat registration rate hike proposals and talk in Albany that dealer registration may be in the wind are clear signals that the marine trades must be continually active in asserting its viewpoint, and not just reacting to individual crises," declares Art.

Education impresses Art as playing a crucial role in the future viability of the marine business industry. "The operator has got to keep 'up to snuff' on the best procedures, techniques, facilities and equipment being used in the business. This is where Sea Grant can serve as a most valuable source of information. It has the expertise and resources to help solve problems faced by operators, and can also help associations develop their own problem-solving approaches." Last year, ESTMA sponsored two educational programs, a marina facilities and maintenance program held jointly with Sea Grant, and a selling skills workshop.

All indications are that Art Knorr is making certain that the voice of the marine businessman is heard — loud and clear — at the state level, and that operators take advantage of benefits never before available to them. Art invites all marina operators and marine product dealers in New York to learn more about ESMTA and to discuss their major concerns by contacting him directly as follows: Art Knorr, Executive Secretary, Empire State Marine Trades Association, 409 Empire Bldg., So. Salina St., Syracuse, N. Y. 13202; phone: 315-472-5431.

Tips for Commercial Fishermen: Marine Insurance

by John Scotti, Sea Grant Specialist in Stony Brook

Marine insurance always has been and will continue to be expensive. For most fishing vessel operators, insurance costs are the third largest operating expense following shares or wages and fuel. Insurance costs for fishing vessels are based on the vessel's sea worthiness, how well its equipment has been maintained, the owner's operating record, and the vessel's loss experience. Insurance premiums are substantial and can represent the difference between making a profit or losing money. This high cost partially explains why many fishermen do not purchase insurance coverage and choose to insure themselves by assuming the risks of vessel loss and personal injury on their own.

Insurance Rates and Coverage

Marine insurance rates are not regulated by state insurance authorities. The rate is determined by the insurance company, which considers its own loss and industry experience in arriving at premium cost, thus explaining the different insurance rates offered by competing carriers.

Marine insurance plans generally include two basic protections: (1) hull insurance; and (2) protection and indemnity which is commonly called P&I insurance.

Hull insurance protects the vessel owner and others against losses of physical property in the case of collisions. This type of insurance covers the vessel and its equipment. It does not cover liability. Hull insurance premiums are based on a percentage of the appraised vessel value determined by the insurance company. Rates on new boats run at about 3.5 percent of the appraised value while the rate on aged vessels is higher.

Protection and indemnity (P&I) insurance covers third party liabilities. It is in addition to hull insurance. Many vessel operators cannot

obtain this insurance without hull coverage which, in turn, may not be available because of vessel age or condition. P&I insurance reportedly is available without hull coverage but the premium is comparatively expensive.

The State of New York defines P&I insurance as: "Insurance against legal liability of the insured vessel owner for loss, damage, or expense arising out of incident to the ownership, operation, chartering, maintenance, use, repair, or construction of any vessel or craft for use on ocean or inland waterways including liability of the insured for personal injury, illness or death or for loss or damage to the property or another person."

In short, P&I insurance protects against losses resulting from damage to the property of others or from injury, illness, or loss of life caused by actions or negligence of the insured. P&I insurance protects against the cost of legal liability if the insured is found at fault or responsible for the losses of others.

Many lenders require breach of warranty coverage. Breach of warranty protects the lending institution if certain vessel warranties are violated. Wars, strikes, and riots, vandalism, and malicious mischief are included in this coverage.

Marine Insurance Concerns

The insurance problems facing vessel owners are many:

- · rates are skyrocketing;
- insurance is not available for certain fishing industry members;
- better vessels and operators are penalized for the bad experience of poorly maintained and operated vessels:
- coverage is becoming more limited:
- additional coverages are required to qualify for some loan programs.

Solutions to Insurance Problems

As the fishing industry expands, both nationally and locally, insurance access and terms will become more available. To some extent, there has already been growth in marine insurance program availability through increased carriers and interested independent agents. Fishermen have formed marine insurance cooperatives in Alaska and established group insurance plans to combat high insurance costs in New England. A National Council of Fishing Vessel Safety and Insurance has been established to deal with all matters relating to fishing safety and insurance.

Marine operators should be sure to have coverage for lending requirements and personal protection for loss of property and injury to others.

One way of assuring this it to have full and complete communication with your agent and underwriter. Make the agent completely familiar with your operation, equipment, and contracts. The agent should be fully advised of new developments throughout the year. Losses due to lack of coverage can be avoided when good communications exist between you and your agent.

Marine insurance to many people is very complicated, dubious in intent and meaning, and very costly. When in doubt, ask an experienced marine insurance agent or broker to help plan your insurance needs. The expense of their advice can easily be recouped in savings over the insured period.

Editor's Note: To receive more information on marine insurance, vessel owners may subscribe to the National Council of Fishing Vessel Safety and Insurance Newsletter by writing to: Agust Felando, President, National Council of Fishing Vessel Safety and Insurance, 1 Tuna Lane, San Diego, CA 92101.

New York's **Great Lake Ports**

by Donald F. Squires, Director, New York Sea Grant Institute in Albany

Ports, like ships and those who go down to sea in them, are romantic and raise our curiosity. Because ships and the activities in the harbor appeal to us, we sometimes equate a busy port with a bustling economy. But what about the oft heard cry "if we could just bring the ships back," by local officials seeking to revive the sagging economy of their port cities? It sounds good, but is it true?

Ports, ships, waterborne commerce — all are components in the continual flux of local, regional, national and international, economic and political circumstances. Our industrial society is now dependent on the flow of oil which moves by fleets of supertankers — but the circumstances are always changing. For example, a change in the international scene which results in a Presidential re-allocation of beef import quotas may result in a new fleet of refrigerator container ships to carry grass-fed Australian beef halfway around the world to the fastfood hamburger stands across our nation.

The St. Lawrence Seaway, which celebrated the 20th anniversary of its first ship passage earlier this year, was a major change. But how did it change waterborne commerce on the Great Lakes and New York ports? What can we project for the future? What impact will our new energy-consciousness have on our ports and their commerce?

New York State has many ports on its marine. Hudson River and Great Lakes coasts, but all are dwarfed by the Port of New York, the nation's busiest. Small harbors serve as shipping or receiving points for bulk cargoes, still most efficiently shipped by water, or for raw materials for local industry. Petroleum, constituting nearly half of the nation's waterborne commerce, is the major component of commerce in New York's ports. Other major commodities carried by vessels include ores, cement, sand and gravel. The relative size of some New York ports is shown in the following table.

New York's Great Lakes ports continued on page 6

GREAT LAKE NAVIGATION

Winter Navigation: A Lesson for the St. Lawrence River

by Stephen D. Brown, Sea Grant Specialist in Potsdam

Editor's note: Sea Grant Specialist Stephen D. Brown recently visited the St. Mary's River in Michigan to learn the consequences of winter

navigation and their implication for residents of the St. Lawrence River. Here are his observations.

Two Great Rivers

The St. Lawrence and St. Mary's Rivers have more similarities than differences. Both are conduits within the Great Lakes system: the St. Mary's connects Lake Superior to Lake Huron: and the St. Lawrence connects Lake Ontario and the Atlantic Ocean. Both rivers are transportation corridors for Great Lakes shipping in the northern part of their respective states - New York and Michigan. Both are international borders, surrounded by a rural setting, dependent on tourism. Both have enjoyed the traditionally symbiotic relationship between tourism and Great Lakes shipping which, in the case of Massena, N.Y. and Sault Ste Marie, Mich., have created a major tourist attraction without significantly diminishing the natural resources. In fact, Sault Ste Marie has capitalized on this by adding a visitors'

center, a tour boat which goes through the locks, a museum and lock-viewing areas.

The two rivers do have differences. Compared to the St. Lawrence River, the St. Mary's is shorter and less developed, has different physiographic features, and winter naviga-

St. Mary's River

Winter navigation on the St. Mary's

Impact of Winter Navigation on the

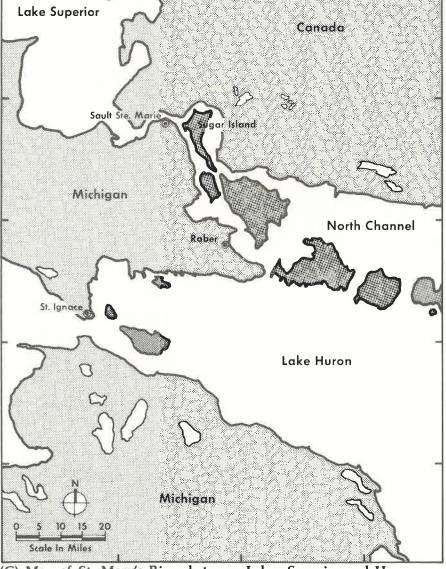
measures established. While technical modifications River came about because Congress have altered life along the river, especially in the narrow channels, their impacts are only beginning to be defined. Changes in the ice cover and waves created by ship transits have caused dock damage, erosion, Canada and in the opinion of many residents. a general decline in the quality of the river's natural resources. These changes are especially noticeable in narrow channels, but an attempt to assess their impact is difficult because information on the river prior to winter navigation is lacking. Effect of Navigation on Economy The economic conditions along the



Above photo courtesy of New York State Department of Commerce



Explanation: (A) Shipping on the St. Lawrence Seaway; (B) Sugar Island, Mich. ferry station; (C) Map of St. Mary's River between Lakes Superior and Huron.



river also are changing. People who work in winter navigation support functions have brought money into the economy. About 25 Coast Guard personnel have been added to the stations at St. Ignace and Sault Ste Marie. In addition, a few people have been hired to work at the locks. The introduction of more people into the area, except for the initial housing problems, has been beneficial.

in 1970 authorized the Secretary of

the Army to conduct a Survey Study

and a Demonstration Program on the Great Lakes-St. Lawrence Seaway system. The study was to deter-

mine the feasibility of extending

the navigation season while the de-

monstration was to test practical, shipping and engineering technolo-

In 1972 the Demonstration Pro-

gram extended the navigation sea-

son on the St. Mary's River. To ac-

commodate the extended season,

the channels, locks and the river it-

self were modified; ice breaking

assistance and escort services were

set up; air bubbler systems installed

in tight turns; ice booms installed;

plans for islander transportation

implemented; and shore protection

However, winter navigation appears to have been a drain on certain segments of the St. Mary's River economy. The cost of owning a home or doing business along the river is increasing. One resort owner in Raber, for example, indicated his business was deteriorating because the area's fishery had declined. According to this person, the herring are not running where they were, the perch population has almost disappeared, and northern pike spawning areas have shifted. Morecontinued on page 6

1977 Waterborne Commerce in Selected New York Ports (in short tons) Tonnage Port of New York (district) 185,292,125 (includes New Jersey facilities) 9,591,325 8,696,209 Port of Buffalo (district) 5,488,186 Port lefferson Hempstead Harbor 1,502,662 1,346,112 Oswego Ogdensburg 257,443 Rochester 206,457 Sackets Harbor 84,781 Dunkirk 118

were a significant factor in the development of commerce in this nation. But in recent years they have been by-passed due to: 1) the westward shift of grain production and their associated milling industries; 2) demographic shift in population and market locations; 3) an aging industrial base in New York; and 4) the complications of environmental concerns, energy distribution, etc.

While these factors have affected all New York's ports, including New York City, some Great Lakes facilities have been particularly affected. Buffalo, once the greatest port on the Great Lakes, is plagued by weather and fluctuating automobile markets. Its port now finds itself largely by-passed as ships move through the Welland Canal to Rochester and Oswego. But highway development and rapid trucking to-and-from the Port of New York make these ports uncompetitive.

Aside from Buffalo, the smaller ports along Lake Ontario have held their total tonnages. While this commerce has slowly grown over the last decade, most of their growth has been in petroleum products. They are the only products moving through Sackets Harbor; over 88 percent of Oswego's commerce is composed of oil products, for its oil-fired, steam-electric generating complex; Ogdensburg's traffic is 78 percent petroleum products. Aside from oil, Oswego receives cement, aluminum and cocoa beans for local use; Ogdenburg's commerce is diverse; while Rochester receives little in petroleum products, its port commerce being dominated by cement.

These figures for waterborne commerce reveal New York's dependence on oil not only for energy, but for port traffic as well. They show, in the absence of diversified commerce, the competitive impact of the Port of New York on the region.

Let's look at these points in greater detail: Petroleum products don't account for a high proportion of Seaway commerce. For example in 1977, gasoline, fuel oil, lubricating oils and greases, and other petroleum products made up for little more than 4 percent of the Montreal-Lake Ontario commerce. But 80 percent of this constituted nearly 20 percent of New York's total commerce. In this same survey, agricultural and mine products accounted for 82 percent of Seaway traffic, the remainder being manufactures and miscellany including the petroleum.

It is this latter portion of the commerce which port developers eve most greedily. For while general cargoes comprise a small proportion of total commerce, they produce the largest port revenues and generate substantial direct community income. For over the last decade, these cargoes have been moving in containers. These large standardized boxes (8' × 8' × 16" or larger) permit vessels to be loaded quickly, reducing port time and shipping costs by as much as 25 percent, lower pilferage and damaged, and permit shipment of perishable materials like fresh fruits and vegetables in controlled atmosphere.

A decade ago, the future of Great Lakes shipping was thought to be in the container trade. This has not happened. The reasons are many, but obvious. Vessels can make the Port of New York, load and unload, and be away in the time it takes to steam to the St. Lawrence and the Seaway. A container going from New York City to Buffalo is only an overnight truck trip — but five days

continued on page 8

The St. Lawrence River,

continued from page 5

over, physical changes in the shoreline have resulted in an increased need to repair docks, dredge, build protective devices, and apply for work permits — all without compensation

The real test for the St. Mary's River is how well the tourist industry survives the onslaught of winter navigation. If tourism declines, the economy will decline also.

Effect on Transportation of Islanders

Before winter navigation, islanders used both ice bridges and ferries to move to-and-from the mainland. Once winter navigation began, the formation of ice bridges was prevented by the passage of ice breakers and deep-draft vessels. Also, some areas previously free of ice have become collection points of broken ice carried down the shipping channel by wind and current.

Although the Corps of Engineers is currently trying to solve these ice problems, islanders still face transportation disruptions. For example, ferry service for the 450 residents of Sugar Island is unreliable because broken ice occasionally jams the ferry crossing. When a jam occurs, ferry service stops and residents are stranded until Coast Guard vessels clear the ice away. Because of these disruptions, residents are often penalized for missing work or school. In addition, the reliability of emergency health care worries many residents.

In the case of Lime Island, a 16-foot flat-bottom air boat is used to transport residents. Since the advent of winter navigation, air boat rides have often been a frightening experience. According to a two-volume log book kept by residents, islanders were stranded for three weeks on the island when the boat broke down. To date, an acceptable alternative has not been found.

Implications for the St. Lawrence

Winter navigation may or may not be in the nation's best interest but clearly it can adversely affect people and their communities. Before winter navigation comes to the St. Lawrence River, residents may want to look at the St. Mary's example. Without adequate study by local citizens, the St. Lawrence Valley may echo the experience of the St. Mary's River.

New Materials from New York Sea Grant

Are Floating Tire Breakwaters for You? This new slide-tape program by Assistant Program Leader Bruce DeYoung explores the pros and cons of using floating tire breakwaters (FTBs) to protect coastal harbors and marinas from nature's forces, namely wind and waves. A newly designed device which uses automobile tires, FTBs have proved to be a relatively inexpensive, effective way to reduce damage caused by wind-generated waves.

The purpose of this slide-tape program is to help coastal businesses and communities understand how floating tire breakwaters can be used to protect marinas and other facilities from wave damage. It provides practical information on planning a breakwater, the limitations of breakwaters, obtaining permits, and how to get more information. De-

signed for use at various public meetings, the tape is professionally recorded, and includes background music and sound effects.

To borrow this program, write to our Ithaca office. To purchase it, see I WANT MORE. Allow six weeks for delivery.

Intended to help individuals and organizations in New York City address the problem of their city's deteriorating shoreline is Sea Grant's new publication Changing New York City's Waterfront: A Citizen's Guide by Specialist Stephen Lopez.

For hundreds of years the ocean waters surrounding the City of New York have brought waves of prosperity to its shores. A port of plenty with miles of well-maintained shoreline, the city's waterfront has fostered growth through commerce and

recreation. But long stretches of waterfront have also become a tangle of decaying buildings and wasted shore. Whether through neglect or disuse, they suffer a decay that pervades the economy and vitality of the city's many communities.

Changing New York City's Waterfront is divided into two sections. The first describes ways in which waterfront property can be improved. The second provides a brief look at federal, state, and city agencies that can help bring about change. A checklist near the end of this guide is designed to help individuals and organizations evaluate the condition of their community's waterfront. In addition, a list of addresses and publications serve as a reference for information about waterfront planning. See I WANT MORE.

I WANT MORE

	1 44 414 1	IVIOIL
		rant. Please check the publications which interest you and copies of the following publications are free:
Discover	Sea Grant in New York, 1979, 4 pp.	
Cold Wat 1978, 13 j		S. Department of Transportation and U.S. Coast Guard,
Hypother 5 pp.	mia and Cold Water Survival, U.S. De	partment of Transportation and U.S. Coast Guard, 1977,
Stabilizat	ion of Subtidal Sediments by the Trant Short Report Series, A. C. Churchill,	nsplantation of the Seagrass Zostera Marina L., New York A. E. Cok and M. I. Riner, 1979, 3 pp.
		D. C. Goodrich, Jr. and D. B. Whitaker, 1979, 10 pp.
For the following	publications, make checks payable to C	ornell University:
Changing New York City's Waterfront: A Citizen's Guide, S. Lopez, 1979, 12 pp., \$0.00		
St. Lawre	ence County: Tourism Fact Book, L. Pa	rks and S. Brown, 1979, 34 pp., \$1.00.
Are Floating Tire Breakwaters for You? B. DeYoung, 1979, a slide-tape program, 7:45 minutes long with audible pulses, 33 slides and script, \$21.50.		
Tasty Dishes from Minced Fish, R. C. Baker and J. M. Darfler, 1979, 21 pp., \$0.75.		
Stabilizat A. W. Col	ion of Subtidal Sediments by the Transp k, M. I. Riner, 1978, 48 pp., \$1.50.	plantation of the Seagrass Zontera Marina L., A. C. Churchill,
A Study o \$1.00.	f Vibriosis at a Long Island Shellfish H	atchery, Sea Grant Reprint Series, Louis Leibovitz, 23 pp.,
Environm Research	ental Effects of Sand Mining in the L Center, K. A. Kastens, C. T. Fray, and	ower Bay of New York Harbor Phase I, Marine Sciences J. R. Schubel, 1978, 139 pp., \$4.00.*
		in New York's South Shore Bays: An Assessment from the R. Jones and J. R. Schubel, 1978, 80 pp., \$4.00*.
category and send	to the Albany Sea Grant office. Be sur	s by New York Sea Grant, please check the appropriate to include your name and address.
		Aquaculture, Fisheries, Seafood
	Oceanography, Limnology, Geology	
*Make checks paya	able to: The Stony Brook Foundation	

UPDATE

Bruce DeYoung has assumed the role of assistant program leader for Sea Grant specialists located in New York City, Nassau and Suffolk counties. He will be stationed in a newly-opened Sea Grant office at Cornell's Horticultural Research Laboratory in Riverhead. Specialists with commercial fishing responsibilities will be housed there also, forming a technical team in that commodity area.

DeYoung holds an undergraduate degree in geology from Augustana College and M.S. in oceanography from Oregon State. Previous employment included positions in maritime commerce, coastal planning and marine education in Clatsop County, Oregon. A Sea Grant specialist in Fredonia since 1976, he attained national recognition for educational programming conducted to enable coastal business and communities enhance wave protection using floating breakwaters built of tires. He also worked with county agents and agricultural leaders to stimulate the use of drainage tile by coastal property owners having unstable, water saturated bluffs.

Our youth are a resource to be

protected just as our shorelines

need protection from erosion. In-

volving youth in decisions can lead

to a brighter tomorrow for our

by sea. Transit delays for expensive

manufactured cargoes cost a manu-

facturer or purchaser money. So

long as fuel and other shipping costs

Our Youth, continued from page 1 awakening for them to the environment that exists in their county.

Youth development is not solely a service project like youth cleaning up a stream bank or shoreline park. While such services are needed, they don't give youth any opportunity for decision making. A better program might be to give youth the responsibility for establishing a clean-up program involving an entire community.

New York Sea Grant Institute State University of New York 99 Washington Avenue Albany, New York 12246 Tel (518) 474-5787

Sea Grant Extension Program Fernow Hall Cornell University Ithaca, New York 14853 Tel (607) 256-2162 Sea Grant Extension Program Morgan III SUNY/Brockport Brockport, New York 14420 Tet (716) 395-2638

Sea Grant Extension Program Cooperative Extension 111 Broadway — 17th Floor New York, New York 10006 Tel. (212) 587-9722 Sea Grant Extension Program Cornell University Laboratory 39 Sound Avenue Riverhead, New York 11901 Tel (516) 727-3910

coastal communities.

Ports, continued from page 6

Sea Grant Extension Program Cooperative Extension Regional Office 412 E. Main Street Fredonia, New York 14063 Tel (716) 672-2191 Sea Grant Extension Program 66 Sheldon Hall SUNY/Oswego Oswego, New York 13126 Tel. (315) 341-3042

Sea Grant Extension Program 129 Merritt Hall SUNY/Potsdam Potsdam, New York 13676 Tel (315) 268-3303

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from the Port of New York remain low, increasing general cargoes from Lake Ontario ports will be difficult

But the picture is not bleak. If the flow of oil dries up, will our ports be affected?

Given the fact that for each gallon of fuel oil, waterborne commerce now provides 600 ton miles compared to 200 for trains, 58 for trucks and 4 for aircraft, we think not.

Sea Grant Extension Program South Campus, Building H SUNY/Stony Brook Stony Brook, New York 11794 Tel. (516) 248-7777

Sea Grant Extension Program Farm & Home Center 21 South Grove Street East Aurora, New York 14052 Tel. (716) 652-5453

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