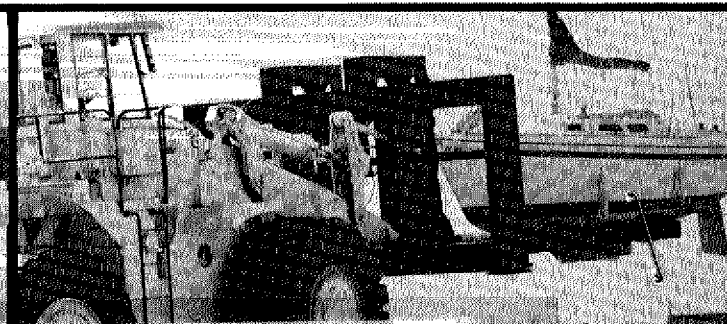
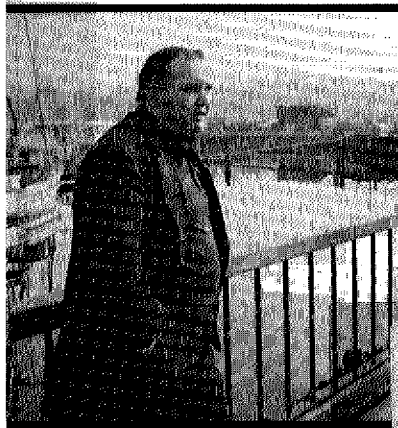


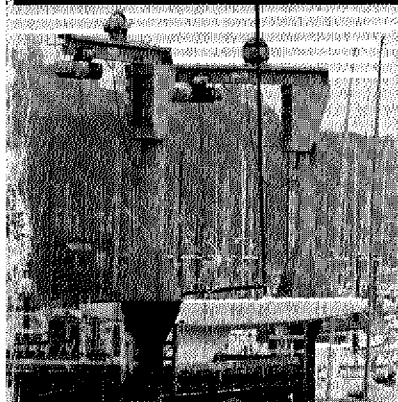
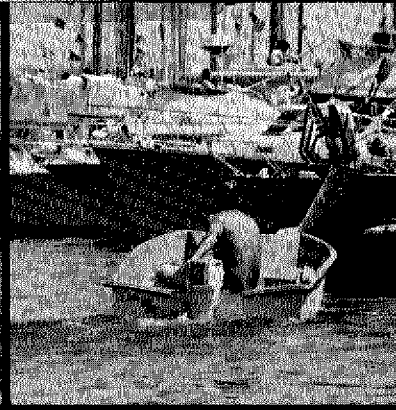
Boating & Moorage in the '80s

Proceedings of a Workshop held at Seattle, Washington
November 4-6, 1981

Robert F. Goodwin, Editor



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The speakers contributed their time to prepare, present, and answer questions about their papers. The uncompensated value of their services was in excess of \$10,000. To them we owe a dept of gratitude.

The most important contributors were the workshop participants themselves. It was from each other, as well as from speakers and panelists, that they learned useful information. This interaction was not limited to formal workshop sessions, but happened wherever participants gathered.

Finally, the workshop coordinators thank the officials of the Port of Everett and Jim Christiansen of Dagmar's Landing, Marysville, for their hospitality during the field trip to their moorage facilities.

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Preface

Since the last joint industry/Sea Grant moorage workshop, held in April 1977, many unforeseen changes have occurred in both the political and economic environments. These changes have affected and will continue to affect the way marinas operate and prosper. Inflation and high interest rates have levied a toll on boat sales--and hence on the growth in demand for pleasure boat moorage--and have pushed construction and long-term financing costs to record high levels. Legislation proposed by the Reagan Administration would levy user charges against boaters and marina operators consuming federal waterway services: Coast Guard search and rescue and navigation aid functions and Army Corps of Engineers harbor and waterway dredging projects have been singled out for recovery of costs from users. Such changes necessitate and promote innovation and adaption on the part of the moorage industry.

There are other factors, however, that have changed little since 1977. The same regulatory framework affecting marina development is in place: Shoreline Management, Corps of Engineers, and other permit requirements constrain development over and adjacent to waterways. Boating interests have continued to forestall state boat registration and new tax measures proposed by the state legislature. These are among the issues taken up by speakers at this workshop. Their papers form the body of these proceedings.

Since 1977 the Washington Sea Grant Program has conducted a series of studies which have better defined the recreational boating industry, its problems and opportunities, and the likely future demand for recreational and commercial fishing boat moorage. This work was supported in part by the Northwest Marine Trade Association and the Washington Public Ports Association. Both these organizations joined Washington Sea Grant in co-sponsoring this workshop.

Robert F. Goodwin
May 1982



Keynote Address

H. Stuart Elway

Toward a New Marine Land Policy

H. Stuart Elway
Washington State Department of Natural Resources

I would like to express my appreciation to you for having me here and the regrets of Commissioner Boyle, who was unable to attend, and who I am sure you would much rather hear from than me. I looked over your agenda and I talked with Bob Coon who has been with you the last couple of days. It is a very ambitious, comprehensive and interesting agenda.

I have been reminded of a story since I came into the Department of Natural Resources, with all of its interests and numerous constituencies that have a vested interest in the Department...it is a story that Lyndon Johnson used to tell when he first got to Washington, D.C. It is about the missionary who had decided to convert the lions to Christianity. He went out into the jungle and was doing quite well. He had come upon this pride of lions and started ministering the Word to them and had converted all the lions except one. One lion was not hearing any of that and not only took a swipe at the missionary but began to pounce and chase him. The missionary started running and all the time he was running he was praying, "Oh Lord, please give this lion religion." He kept repeating that over and over. Finally he ran into a corner that he couldn't get out of and he turned around to face this lion praying, "Oh Lord, please give this lion religion!" Just as he turned the lion stopped and this most benign look came over the lion's face. The lion looked up and said, "Lord, please bless this food I am about to eat."

As I look around I am glad to see that you have all finished dinner. When I was invited up here for dinner, I wasn't exactly sure what you had in mind.

Before we talk about the aquatic lands policies per se, I would like to spend just a brief time talking about the Department of Natural Resources itself. We found during the campaign of last year that almost everyone we talked to knew of Bert Cole. He was in office for

24 years: was an institution in the state of Washington. But very few people really knew what the Department of Natural Resources was or did; or what the Commissioner of Public Lands really did for a living. I suppose the people here tonight know more than most, who normally think of the Department of Natural Resources in terms of timber, forest land, and selling of trees. Certainly the Department is much more than that.

Two aspects, I think, distinguish the Department of Natural Resources from other agencies in state government, or really government in general. One - we are the land managers for the state of Washington. Two - we generate revenue for the state from the management of these lands. Last year the department generated some \$180 million for the state of Washington. Everyone of those dollars was a dollar that did not have to come from taxes. This is a source of great pride among the people who work in the department; and certainly a source of much delight to the legislature who likes to see people making money - especially these days.

There are some 5 million acres of land that the Department of Natural Resources manages for the state. The timberland is about 2.1 million acres, less than half, which surprises most people that I talk to. We have about a half million acres in grazing land in eastern Washington. We have about 150 thousand acres of agricultural land. The Department of Natural Resources is the largest wheat producer in the state of Washington. We have leases for wheat and other crops, we have orchards - 150 thousand acres of this kind of agricultural land which we manage. We have about 60-70 thousand acres of land that we classify as urban land. That is, land that is either inside or very close to urban areas. For example, the Department manages for the state 3400 acres either inside or directly adjacent to the city limits of the Tri-Cities; Richland, Pasco, and Kennewick. We have them surrounded. Any growth that takes place in the Tri-Cities is almost certain to be on land managed by the Department of Natural Resources. The funds from these leases goes mostly into the public trusts for the support of common schools in the state. About half of the construction money for schools that are built around the state comes from money that the Department makes from its land management.

We also have over 2 million acres of aquatic lands, which is what you are most interested in and what we are here to talk about. This includes the beds of navigable streams and lakes, other waters in the state; everything from mean-high tide out to the three mile limit - the Department of Natural Resources manages the beds of those waters.

The marine lands differ significantly from the uplands I have talked about, in that they are not dedicated in the same way to specific trusts. I mentioned the school construction. It also supports research at the universities, penal institutions, and a whole host of other things. The marine land money is not ear-marked, but the lands themselves are held in public trust for all the people of the state of Washington. Our mission in the Department of Natural Resources is to manage that land for maximum public benefit.

As we came into the Department, one of the things we saw immediately as a great potential was this 2 million acres of marine lands. Certainly those waters and the use of those waters is a major factor in

what makes this area the most livable in the United States. A large part of that is the very thing that you all are involved in, that is the proximity to the water, the scenic beauty of the area, the working waterfront, the commerce that is generated from the water and the marine lands of this state. The potential of those lands has really just begun to be tapped.

One of the things that has greatly fascinated me in the Marine Lands Division is an experimental program to grow Nori, edible seaweed, on the beds of Puget Sound. This has been going on for some time. We have had people from the national co-op, which runs the Nori industry in Japan, over here on a number of occasions. Some of our scientists have gone over there. We are exchanging information and technology. It seems fantastic to say it, and I can't stand here and say it is too probable at this point, but the potential is there for the state to realize revenue from the growing and sale of seaweed that is almost equal to the growing and sale of timber. Seaweed is a billion dollar industry in Japan. And Puget Sound is probably the best place in North America to grow it. This is a long way in the future, but it is the kind of potential that exists in the marine lands and is being explored. I think the new team that came in with Brian is wanting very much to look at that kind of potential - to look into the future and see where we can go with the natural resources of this state.

It is no secret to anyone here or anyone who lives in the northwest, that the pressures on our natural resources are great. The social, economic and political pressures that apply to the forest land and to the urban lands and the other upland natural resources, apply no less to marine lands. There is an increasing public awareness of the value and the scarcity of these resources. Along with that, there is an increasing expectation for participation on the part of the public and its various groups.

They want to have a say in how these resources are managed -- how they are used. The economic, recreational and scenic benefits of our natural resources are why so many of us love it here in the northwest. That is why people are coming here from other parts of the country. The increased population only adds to the pressure on already scarce natural resources.

Our job in the Department of Natural Resources is to balance these pressures and develop with policies which best fit the needs and desires and hopes and dreams of people who live here, whether they make their living directly from the natural resources or not. Also, to balance all of those with the increasing demand for revenue.

The legislature, as you all well know, has been looking under every rock for possible sources of revenue. They too know the value of the natural resources which the department manages.

This increasing pressure and the increased attention to natural resource issues heightens the need for enlightened public policy - policy which is born out of cooperation, patience and foresight. That is the challenge that we see in the Department as we come into it after 24 years of a single administration.

For the first time ever, there is a new Commissioner of Public Lands who heads the Department of Natural Resources. This is, in my view, a great opportunity - a tremendous opportunity to put behind us some of the old animosities.

I am sure many of you are familiar with some of the on-going fights between the Department of Natural Resources and other state agencies - Game, Fisheries, Ecology. Over the years, these departments have been squabbling with each other and involved in counterproductive behavior. We are trying to put an end to the 30 years war, and say, "Who started this anyway, and what are we fighting about, and why don't we all try to work in a more cooperative fashion?" A couple of things are indicative of this.

Commissioner Boyle, very early in his term, invited the directors of the other natural resource agencies, and the Governor's assistant for natural resources, to his office for a regular monthly meeting, informally over coffee; no staff - just directors - and they talk about issues of common concern and ways to resolve them. I think the results of that kind of an initiative and that kind of cooperation are beginning to trickle down. Our Department has recently signed a memorandum of understanding with the departments of Game and Fisheries that says, we are going to do everything we can to cooperate in these areas where we have mutual concerns or apparently overlapping jurisdictions. I think there is a clause in the memorandum of understanding with the Department of Game that when one of our guys encounters one of their guys out in the woods, we have to fire one warning shot up in the air first. It seems to be working real well - no fatality reports have come in for months now.

I am not from a natural resources background. I ran a small business. I have worked in public policy research and public opinion research. I have been in a crash course for the past year getting up to speed on the issues that I am speaking about here. When I come before a group like this I always feel a little bit like the fellow who survived the Johnstown Flood of 1848. He was one of the few survivors and it was the big thing in his life. He spent the rest of his life boring everyone he encountered with the story of his heroics and how he had survived the Johnstown Flood of 1848. When he passed on and was at the pearly gates, he mentioned to St. Peter that he would like to tell his story of how he survived the flood to all of the inhabitants of Heaven. St. Peter said, "Well, we will see what we can do. You know we have a busy agenda and I don't know if we can get you on." But he persisted and St. Peter finally relented. So all of the heavenly host were assembled at the meeting and he was prepared to tell his story. St. Peter introduced him: "This is the man who survived the Johnstown Flood of 1848..." And as the man took the podium St. Peter whispered in his ear, "By the way, Noah is in the front row".

Seeing this great potential that I spoke of, and seeing the policies of the Department as they had evolved over the last 24 years, Commissioner Boyle and the new team of managers at the Department have made marine land policy one of our top priorities. To recap the new management, Brian has appointed Russ Cahill as Supervisor of the Department. The supervisor is the person responsible for the day-to-day management of the Department. Russ Cahill is the first person ever to be in that position who did not work his way up through the ranks of the Department. He was brought in from the outside. He is

also the first person in that position who is not a forester. We have changed the manager of the Division of Marine Land Management and put in John DeMeyer in that position.

So we are trying to move in a direction to realize the potential which is out there. We are taking a long hard look at the marine lands policies that have evolved. And I say evolved because they really seem to have been pretty much of a hodge-podge over the years. I think the Marine Lands Division was sort of a step-child for many years in the Department. We have moved it up into the spot light. One of the things you find when you look into the spot light is a lot of conflicts, and possible conflicts. We are looking at those in an effort to develop a consistent, coherent Marine Land policy. We are in the middle of that process now.

I think Bob Coon explained to you yesterday in one of the workshops, somewhat about how that process has been proceeding. One of the first things we did when we got into office was to retain a person who was on leave from the U.S. Foreign Service to talk to port districts all over the state, and to county commissioners, to find out from the point of view of the port districts what the Department of Natural Resources looks like. How do we look from the outside, from people who deal with the Department on a day-to-day basis. The legislature has also commissioned studies of our marine lands policies; we have internal studies going on; and we are reviewing it from top to bottom at the commissioner's level with the new supervisor and new staff. As I said we are not finished yet, it takes a long time. As you would know more than most, it takes a long time to turn an aircraft carrier around. You have to stop it first and then turn it around. We are in that process.

Historically, it has been difficult to create policy, or establish policy in this area - statutes conflict with administrative codes, jurisdictions overlap. All of that has to be straightened out if we are going to have a coherent, integrated policy.

I don't have the policy for you tonight, but I can give you an indication of the kind of questions that we are asking. We are looking at the relationship of the statutes to the administrative code, to the policies as they are stated by the Department, and to the actual practices on the ground - or on the water. Where there is ambiguity we need clear direction. We are looking at the extent of the overlapping jurisdictions and conflicting interests and examining the consequences of those. We are questioning the use conflicts that are always a factor in land use decisions. And we are wondering whether the state should, in fact, encourage some uses and thereby discourage some others.

Part of the problem was illustrated as I was preparing for this talk tonight. I called a friend at the City of Seattle to ask him what the City of Seattle's marine plan policy was. He said, "Well we try to encourage marine related activity on the waterfront". And I said, "Oh yes, you mean Ye Old Curiosity Shop". It is no news to this group that these kinds of conflicts are always present along a waterfront.

In our planning process we are taking a look at the question of, if we should in fact encourage some uses -- which I think we should -- then what should those uses be and how should the preferred uses be encouraged? by what mechanism do we manifest this encouragement?

Another fundamental question is, given the multiple objectives of marine land management, and there are many, what are the impacts of various policies on each other? If we establish a policy to encourage some use, what impact is that going to have on all the other uses. How should these multiple objectives, all of which have their purpose, constituencies, and pressures be balanced.

We are aiming for a marine lands policy which is consistent, integrated, coherent, easy to understand, easy to apply and yet has a flexibility to be responsive, not only to changing conditions over time, but to different situations in different areas. We need to recognize that Moses Lake is not the same as Lake Union.

We aren't there yet. We haven't got a policy that I can lay before you. We have an open process. We are encouraging people like yourselves, who have an interest, to participate in our process. We want to hear from you. I think there is too often a tendency in governmental agencies to go off and set policy, come back, and say "Well here it is folks - how do you like this?" We would like to hear from you as we are developing the policy, so that when it comes out it is clear and consistent and balanced and all of those things that a public policy should be.

If I can leave you with one message tonight, it is that we invite your participation, either individually or through your associations, to contact us in the Commissioner's Office or in the Marine Lands Division. Write to us and let us know what your concerns are, what your experiences have been, your ideas for a policy for the state's marine lands.

Having a new Commissioner of Public Lands gives us the opportunity to look at the old problems in new ways, and gives us the opportunity to open new avenues, or new waterways, of cooperation that may or may not have existed in the past.

Thank you very much.



SESSION 1

Economics of Boating and Moorage in the '80s

PANELISTS

Ron Stone

Robert F. Goodwin

Recreational Boating Industry in the '80s

Ron Stone

National Marine Manufacturers Association

Good morning ladies and gentlemen.

I am here to tell you that despite inflation, record high interest rates, inept Federal bureaucratic policy making such as the proposed weekend motorboating ban to save energy, in spite of all these obstacles the recreational boating industry is still afloat.

Review of Business Activity—1981

Bolstered by a late seasonal surge of sales during the months of June, July and August, the U.S. recreational boating market has staged a recovery from its disruptive 1980 year. Small boat categories led the way, with canoes showing a 20 percent increase in unit sales, well ahead of their average 14% per year growth rate over the past five years. Sales of the smaller sizes of outboard boats led that market, and while unit volumes remained the same, the average length of an outboard boat sold in the 17 ft. and under size category increased by over a foot. Paralleling outboard boat sales, the sales of outboard motors, while not showing much of an increase in overall unit volume, increased in average horsepower by an estimated 10%. The typical buyer in the outboard market this year looked to a 15 - 16 foot outboard boat powered by a 35-45 h.p. motor for overall family recreational use, as opposed to last year when energy shortage scares prompted the sale of 14 footers with undersize motors primarily to fishermen.

Sales of inboard/outdrive (stern drive)boats has experienced a 9% decline in 1981, but inboard boats are expected to end the year with an overall increase in unit volume of 3% centered in the 30ft. and over luxury class motor yachts. According to Boating Industry magazine, boats over 40 ft. sold well, and the 50 ft. and over market was extremely active. Boating Industry goes on to note that these markets are made up of wealthy individuals less affected by interest rates and cyclical changes in the economy.

Another good performer in 1981 was the sailboat market, which has been gaining an increased share of the recreational boating market since 1977. For the year, sailboat shipments are expected to increase overall by 5%. The increase this year was accounted for entirely by the smaller, non-powered type of sailing craft.

Among other segments registering improved shipments in 1981 were open deck boats, up 18%; houseboats, up 33%; inflatable boats, up 26%; and boat trailers, up 8%.

Along with the recovery in unit volume, the dollar volume of factory shipments also showed an improvement in 1981, with an overall gain of 16%.

Thus 1981, while not a robust year for the industry in all of its segments, did show a recovery from its precipitous 1980 decline and actually performed well in a number of areas.

Outlook for 1982

According to industry economic forecasters the outlook for the recreational boating market is bright over the next three years. Some of the reasons for that optimistic outlook are worth reciting here.

The economy is in the recovery stage of its cycle.

- Inflation is down.
- The dollar is strong
- Oil imports are down and energy prices are stable.
- A bumper food crop will hold down food price increases.
- The government has implemented spending reductions, a tax cut and other measures aimed at stimulating investment and improving productivity.

The economic factors having a major impact on the marine industry are geared for an upturn. With the tax cuts, a moderation in inflation, and a gradual improvement in the economy -- disposable income and durable goods spending are forecasted to improve.

- While inflation is expected to continue around the 8% level, real disposable income is forecasted to increase by 9% in 1982.
- Durable goods spending is forecasted to be up 4% this year; 7% in 1982 and 6% in 1983.
- Interest rates are forecasted to remain in the double digits throughout 1982, but they are expected to decline below the unusually high levels of 1981, and here again, it is the trend that is significant.

All in all, it would appear that the boating industry experienced its cyclical low in 1980, and began a gradual recovery in 1981 with some segments showing real strength. Perhaps most noteworthy was the fact that the recovery took place at a time when automobile and housing, two economic sectors which the marine industry has traditionally paralleled, remained at depressed levels.

In summary, with an improved overall national economy and gains forecasted in a number of specific variables which directly impact the economy, the recreational boating market is positioned favorably for a

marked improvement in 1982 and beyond.

Current Regulatory Concerns

In addition to responding to your concern for the impact of the current and foreseeable economic situation on the recreational boating market, I am here today to brief you on several legislative issues pending in Washington, D.C. which could also have a significant effect on recreational boating.

They are:

- (1) The need for funding of the Recreational Boating Safety and Facilities Improvement Act (enacted last year under the sponsorship of Congressman Mario Biaggi);
- (2) the President's proposed user fee for recreational boat owners using navigable waters of the United States to pay for Coast Guard services; and
- (3) our die-hard fight against the proposed 3% Federal manufacturers excise tax on boats, motors and trailers to augment Dingell-Johnson assistance to state fisheries management programs.

With the advent of the Reagan Administration and its pledge to get the Federal government off the people's back and return many areas of responsibility to the states, we thought we would see a return to the halcyon days of the Federal Boat Acts of 1958 and 1971 when state governments with modest Federal incentives were encouraged to take over recreational boating affairs. Today, nine months into the new administration, we are not so certain. Because of the administration's position against Federal spending which is counterproductive to balancing the budget, we are having difficulty securing an appropriation for aid to state boating safety programs even though all the money for it originates in boating. Because the administration is favorably disposed to new money or anything so long as it does not have to dip into general revenues, we are seeing proposals to put the tax bite on boating for a number of programs that we contend will not be used to help boating.

Recreational boaters may justly feel that they are being singled out for new fees or taxes because of a mistaken notion by government that most boaters are wealthy yachtsmen, and if you can afford to own a boat you can afford to pay no end of taxes. The truth is, my friends, more than 98% of the registered boats in this country are small trailerable boats, less than 16 feet in length, owned by family people earning \$15,000 to \$20,000 a year. Yachtsmen make up only 2% of the registered boat population. The Federal government must be made to see that it is grossly inaccurate and unfair to characterize recreational boaters as a bunch of "fat cats." Believe me, we are suffering for it.

Motorboat Fuel Tax Funding

In 1979, Congress terminated Federal assistance payable out of general revenues to state boating safety law enforcement and education programs on the grounds that the program had served its purpose of helping to initiate state programs and the states could afford to go it alone. In the short interim, the number of boating accidents has risen, reversing a 7-year downward trend. That is largely because the states have had to cut back on safety services because they are financially strapped. We thought we had the sure remedy in the Recreational Boating

Safety and Facilities Improvement Act of 1980, using the recreational boaters' Federal fuel tax monies, something which they had paid for years into the Heritage Conservation and Recreation Service Fund and for which they had received very little in return.

Unfortunately, the Recreational Boating Safety and Facilities Improvement Act of 1980 (Public Law 96-451), more popularly known as the Biaggi Bill, is in danger of becoming a casualty of the budget axe. This is the legislation which authorizes expenditures of \$20 million a year from Federal motorboat fuel tax in each of fiscal years 1981, 1982, and 1983 for 50/50 matching grants to the states for boating safety and facilities development.

The Reagan Administration did not ask for, nor were there any monies amended into the Coast Guard's budget for fiscal 1981 or 82 to set up Coast Guard administration and start the grant funding. The Administration views Biaggi funding as a new Federal spending program and therefore contrary to the broad objective of reducing Federal deficit spending in order to balance the budget. Even if Congress were to appropriate what we are asking for, we are afraid that the President would veto it.

This is ironic in that this is precisely the type of program that fits into the Administration's philosophy of user fees or letting the beneficiaries of Federal programs pay their own way. It is not a Federal spending program paid for out of general revenues. The money comes solely and exclusively from the nation's boaters in the form of the Federal 4¢ per gallon motorboat fuel tax, and boaters want and need a return on it in the form of facilities and services.

I repeat, the motorboat fuel tax paid by boaters does not come out of the general treasury. The money is first collected and deposited like all other motor fuel tax to the Highway Trust Fund, then so much of it as Congress deigns to appropriate is supposed to be transferred to the National Recreational Boating Safety and Facilities Improvement Fund in each year of authorized funding. Nothing in the law says that if the money is not used or appropriated it lapses into the general treasury. If the money is not appropriated the law provides that it reverts to the Heritage Conservation and Recreation Service Fund which was where it went before the Biaggi Bill. There may be a design on the part of the Reagan Administration to absorb our motorboat fuel tax money into general revenues by not appropriating the money. The 1965 law which set up the Heritage Conservation and Recreation Service Fund provides that any unexpended balance or surplus in the fund at the end of three years lapses into general revenue. We would seriously object to forfeiting boaters' existing tax revenues in this eventuality.

In principle it is grossly unfair to saddle recreational boaters with new taxes like the proposed national waterway user fee at a time when the Reagan Administration says it wants to reduce taxes to help curb inflation and when boaters are not getting anything for their existing taxes.

It seems to us that if Congress appropriated the Federal motorboat fuel tax money which Congress already has authorized to be used for matching grants to the states for boating safety and facilities improvements, it could do two things. For one thing it would relax current budgetary pressures for a Federal waterways user charge to pay for

Coast Guard boating safety services and aids to navigation. For another it would counter the sports fishing lobby's argument that 3% excise tax on boats, motors and trailers is needed to help build more boat access to fishing waters.

We have our work cut out for us in persuading Congress and the Reagan Administration to listen to reason. But reason and equity are on our side! Unlike so many other special interest groups who go to Congress asking for financial assistance boating is not asking for a handout or for a free ride on general revenues. We are asking for our due, the use of an already dedicated fund contributed wholly by boaters.

This issue demands an extra measure of effort. If we don't get that Federal motorboat fuel tax money appropriated this year for the benefit of boating, it will be lost to boating, then we will be sitting ducks for new taxes and user fees to pay for boating safety and facilities services.

Waterway User Charges

A good example of opening the door to new taxes or fees is the waterways user charge which the Coast Guard, with Administration encouragement, is proposing that all recreational boaters who operate on U.S. navigable waters pay for Coast Guard services. Specifically, they are proposing legislation whereby boaters would have to purchase a decal from their local post office, on the order of a Duck Stamp, at a cost that is graduated according to the size or type of vessel. The decal would have to be displayed on the vessel to prove payment. Anyone caught operating without a decal would face stiff civil penalty and might even have his or her boat attached for nonpayment. They're proposing to raise more than \$200 million a year from recreational boating in this manner.

The purpose of the waterways user fee ostensibly is to pay for Coast Guard services benefiting recreational boaters such as search and rescue, aids to navigation, and water pollution control. Yet, by the Coast Guard's own admission, they cannot be cost specific; they cannot break out how much recreational boaters are benefiting from Coast Guard services. It is also doubtful whether the recreational boater is really the intended principal beneficiary of some Coast Guard services such as aids to navigation and pollution control monitoring and enforcement. A recent NMMA nationwide survey on boating safety costs shows that in many popular boating states the total Coast Guard involvement in boating safety is minimal to nonexistent and it would be wrong to charge boaters for Coast Guard services they do not need and they do not receive.

NMMA is opposed to the waterways user charge in its present form. There are several reasons.

It is inconsistent with the Coast Guard's posture on boating safety. The Coast Guard has told the states repeatedly that it would like to get out of recreational boating safety and leave the primary responsibility for law enforcement and safety surveillance to the states. If Congress would only appropriate the Federal motorboat fuel tax revenue which it has authorized as grants to the states, the states would be able to carry on with their own recreational boating safety and facilities programs, matching the Federal government dollar for dollar and relieving the Coast Guard of the necessity and expense.

Many boaters feel that if they are to be asked to pay directly for Coast Guard services which originated without their being consulted as to need or justification, they should now have the opportunity to select those for which they are willing to pay, and, every effort should be made to see that the money is sequestered so that it may only be spent on programs of direct benefit. Past experience has demonstrated that unless boating revenues are safeguarded in this manner, government will use the money for projects or programs of little or no benefit to recreational boaters. The misapplication of more than \$400 million of Federal motorboat fuel tax money spent on tennis courts, golf courses, hiking trails, and bicycle paths under the Heritage Conservation and Recreation Service Fund is a case in point.

D-J Expansion Bill

Another matter with potential for much greater damaging effect on our industry and ultimately your recreation dollars is the proposed 3% Federal manufacturer's excise tax on boats 25 feet or less in length, outboard motors, and boat trailers to pay for supplemental Federal aid for state fisheries management programs. This is the so-called D-J Expansion Program. NMMA vigorously opposed such legislation in Congress last year, and it never got out of committee. But sportfishing interest groups have mounted an aggressive campaign for another go at it in the current Congress.

Bills H.R. 2250 and S. 546 in this year's Congress are substantially the same as last year's offerings, and NMMA is substantially opposed for the same reasons.

The recreational boating industry has taken its lumps over the past several years. Sales are down substantially compared to what they were a few years ago. The jolt of rising fuel prices, the inept government fuel allocations program which resulted in long gas lines, followed by the Department of Energy's disastrous weekend motorboating ban proposal for emergency energy conservation, now record high interest rates; all have taken their toll. Now comes the proposed 3% Federal excise tax on small boats, motors, and trailers to take another bite out of the little discretionary or leisure time money the average American has after inflation.

This is a new tax that would add \$100 to \$275 to the manufacturer's price of a typical small boat and associated equipment. Really it's a hidden tax on the boat purchaser, because the manufacturer and dealer are bound to add the tax to the purchase price to protect their profit margin. By the time this goes through price markups in the distribution chain, the consumer will wind up paying twice as much as the manufacturer's tax or many hundreds of dollars more. We fear this will cause a further decline in boat sales and impede the recovery of our industry.

The sportfishing lobby which is behind the D-J expansion bill thinks that the decline in fishing license sales in recent years is due to a worsening quality of fishing opportunity and all can be set right by an infusion of more money to improve fishing. They delude themselves. Fishing is suffering from the same ill effects as boating, namely inflation, the cost of energy, high interest rates, and public anxiety over the economy.

For example, sales of bass boat popularly used for fishing are significantly down - the estimated 37,000 bass boats sold last year

do not equal levels reached more than 5 years ago.

The Bass Anglers Sportsmen Society, one of the ringleaders of the D-J expansion bill, claims bass anglers would gladly pay a tax on their boating rig for improved fishing. Even if this is true bass boat fishermen are only a small minority of our new boat purchasers. In 1980, for example, bass boats made up only 18% of all fiberglass outboard boat sales; only 10% of aluminum and other metal outboard boat sales.

The 3% tax bite for D-J expansion affects boats 25 feet and under in length, all outboard motors, and all boat trailers. That is 98% of the nation's registered boats! And the trend is toward more of such smaller boats, because of inflation, high interest rates, energy costs, etc. The smaller the boat, the more affordable it is for more people. According to NMMA statistics, the average length of outboard boats sold in 1980 dropped to 15.8 feet; the first such decrease since 1974.

What really irritates us about the 3% excise tax proposal is how discriminatory it is. You do not have to be terribly analytical to see that it is wrong to tax a lot of boat owners who prefer water skiing or family cruising to pay for the recreation of a larger number of anglers who do not even own a boat. In my home state of Illinois, for example, a recent Conservation Department survey found that 54% of fishing license holders are bank fishermen, not boat owners.

The D-J expansionists claim that a lot of non-fishing boat owners have been getting a free ride on access ramps built with D-J funds from fishing, and it is high time they paid their own way. This is gross misrepresentation. According to a U.S. Fish and Wildlife survey of D-J lakes more than 50% of them are off limits to power boats or have severe horsepower restrictions. In some states every single D-J project falls into this category. Is it fair to tax boat owners to pay for projects they are not even allowed to use? We asked state boating law administrators to investigate the nature of recent D-J projects. Listen to the answers we got concerning D-J projects in fiscal years 1977, 1978 and 1979.

From Indiana's Department of Natural Resources: "The majority of the projects are on streams or small lakes. Most would have motor or speed restrictions either by law or by the very nature of the waterway. Undoubtedly they're used intensively by canoeists and flat bottom floaters. Lakes of less than 300 acres are generally restricted to electric motors only."

From New York's State Parks & Recreation agency: "Little if any D-J money has been spent for projects which would benefit boaters. The funds have been used mainly for fish research, fish propagation, and urban fish programs."

From Wyoming's Game and Fish Department: "The hunters and fishermen benefited from these projects, but the general recreational boater did not benefit except in a few cases where large reservoirs were involved."

Forgive our cynicism, but doesn't this begin to sound like the ripoff experienced under the Heritage Conservation and Recreation Service Fund?

Incidentally, we would like to point out that during the period fiscal years 1978 through 1981, more than \$145 million was paid out of the Heritage Conservation and Recreation Service Fund to the states for 554 different fishing projects. That includes money for fish hatcheries, land acquisition for access to fishing waters, and ocean fishing piers. Need I remind you of our grievances over so much Federal motorboat fuel tax money from the Fund being spent on nonboating projects. Using that money to improve fishing opportunities where boats and/or outboard motors are not allowed or cannot be used by the very nature of the waterway is a good example.

Therefore, when the D-J expansionists tell you that boaters are using access ramps paid for with fishing license fees and excise tax on fishing equipment, boaters can just as righteously claim that bank fishermen, and trout stream fishermen, and ocean pier fishermen have reaped the benefits of boat fuel tax money. The argument works both ways.

The prospect of a new tax on boats, motors and trailers to pay for access to fishing waters is especially galling to us at this time when we cannot seem to get to first base in having Congress appropriate the \$10 million a year of Biaggi funding that was authorized to be spent on boating facilities. We are told that the Office of Management and Budget does not think assistance for boating facilities is a proper function of the Federal government, and the states can afford to take care of such needs out of their own revenues. If this is so, and boaters may not have the benefit of their own existing taxes to pay for access to boating waters, where is the logic in enacting a new tax on boaters to pay for Federal assistance to the states for access to fishing waters?

We suggest that the D-J expansionists look for help to their own following, the licensed fishermen. There were nearly 28 million paid state fishing license holders in this country last year compared to only 8½ million registered boats. Obviously all of the fishing license holders go fishing. They outnumber registered boat owners by about 3½ to 1. Although the D-J expansionists would have you believe otherwise, not all of our boat owners go fishing. A sizeable percentage prefer family cruising, water skiing, scuba diving, and other nonfishing activity. It is not fair to tax them for better fishing, and it is also not fair to say that boaters who do fish are not paying their way. They pay tax on fishing equipment and buy resident or nonresident fishing licenses the same as other fishermen.

If all fishermen, including those who fish from boats, paid just a few dollars more to buy a state fishing license, or if they had to buy a Federal saltwater fishing license, or if the sponsors of bass boat fishing tournaments had to pay an admissions tax, the D-J expansionists could get all the additional money they need to improve sportfishing. It seems to us these are fair and equitable alternatives to the 3% excise tax on boats, motors, and trailers.

With all this controversy about excise tax, a national waterway user charge, Biaggi funding, and more, we have to keep a constant vigil on what is going on in Washington. For that reason, my office is moving me to Washington after the first of the year where I can keep better tabs on developments and where members of the Congress, Federal rule-making agencies and the media will have easier access to us and boating's point of view. I hope to have better, more in-depth coverage for you in the future.

Demand for Moorage In Washington's Coastal Zone

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Introduction

This paper presents a synopsis of a more extensive report being prepared for publication by the Coastal Resources Program of Washington Sea Grant: "Recreational Boating in Washington's Coastal Zone: The Demand for Moorage." The research supporting the report's findings was funded, in part, by the Northwest Marine Trade Association and the Washington Public Ports Association; the remaining costs were borne by the Washington Sea Grant Program.

In preparing an earlier publication, The Moorage Industry in Washington's Coastal Zone,¹ this author noted wide disparities in the distribution of wet moorage slips and dry storage spaces among Washington's marine shoreline counties. These differences in household's accessibility to recreational boating facilities required an explanation, for which certain key questions needed answering:

- Does the supply of moorage correspond to different rates of boat ownership, county-by-county?
- Do some counties "export" moorage services to boaters in other counties?
- Does the marketplace allocate the supply of moorage among counties such that demand is exactly satisfied at prevailing prices?

Washington Sea Grant Studies

To answer these questions we conducted the following studies during the period 1978 to the present year:

- Asked boat-owning households where they moored, stored, and used their boats in relation to where they lived.
- Asked public marina operators where their tenants resided.
- Surveyed marinas to assess prices, occupancy rates, and expansion plans.

The results of these studies enabled us to paint a static, or instantaneous picture of the market (service) areas of marinas in different counties, the prevailing market conditions facing boaters and moorage operators, and the likely future supply of moorage in each coastal zone county, through 1986.

But demand for moorage is not static. The recreational boating fleet is changing in size and character as the region's population and economy change. Therefore, in order to answer the most important question --what is the future demand for moorage going to be?--further studies were performed:

- Analyze the magnitude and causes of historic changes in the recreational boating fleet.
- Using published forecasts of socio/economic characteristics of the state and sub-state regions, project future changes in the size of the fleet and, hence, demand for moorage.

Intractable Data Problems

Unfortunately, in Washington--one of only three states without a state-administered boat registration program--no reliable information exists on the number, size, or type of recreational boats in the fleet. The U.S. Coast Guard (USCG), under the Federal Boating Safety Act, registers all motorized, undocumented smallcraft, but enforcement is poor and registration limited to craft using federal navigable waters. As a consequence, USCG data are of little value in estimating historic changes in fleet size or characteristics.

Boat trailer registrations, maintained by the State Department of Licensing and enforced by state and local police, are accurate, but capture only that portion of the fleet which is trailered. However, estimates of the proportion of the fleet "usually trailered" in both the state as a whole and in Puget Sound counties were available from Washington Sea Grant's Boating Household Survey. Knowing the number of trailers and the proportion of the fleet using them, we were able to estimate the total motorized fleet size in 1978, the year the survey was conducted. The author estimates this number to be approximately 203,000 boats, of which 133,000 were owned by Puget Sound counties' residents, and 150,000 by all coastal county residents in Washington's coastal zone.

Moorage Utilization

a. Boating household survey

Boaters throughout Washington's coastal zone prefer to moor their boats close to home. Of those surveyed, 85-90% moored in their county of residence year-round and seasonally. Only transient and temporary moorage customers moored in large numbers in distant counties: for example, 75% of summer transient boaters moored in counties beyond

those adjacent to their home counties, notably in San Juan, the western parts of Clallam and Jefferson, Island, and Mason counties. Seattle Boat Show attendees, polled in 1980, revealed similar behavior: 75% moored less than 12 miles from home, and only 10% moored more than 30 miles from home, mostly in Skagit County marinas. King County boaters dominated the sample.

b. Marina tenant-origin survey

The coarse results of surveying boaters to determine where they moored their boats were supplemented by surveys of public marinas. The zip codes of tenants' resident addresses were tabulated and mapped to reveal the spatial extent of marinas' service areas, and their variations by season of use. Tenants were grouped into "local" and "non-local" groups, corresponding to those who lived within or outside the zip code of the port city. Variations in the size and population of these zip code areas distort the meaning of "local" and "non-local," but when the actual locations of tenants' resident zip areas are linked to the port, a clear pattern of tenants' distribution emerges. Figures 1(a) through 1(n) display the results for year-round tenants only.

c. Conclusions

Among marinas' tenants in most counties' public ports surveyed, local, in-county residents predominate. The exceptions are Skagit County ports (Figs. 1(d) and (e)) with significant numbers of tenants from the Seattle metropolitan area; the Columbia River ports (Figs. 1(l), (m), and (n)), serving metropolitan Portland/Vancouver, and, in the case of Ilwaco, south and central Puget Sound boaters; and Blaine Harbor (Fig. 1(a)) in north Whatcom County, berthing Canadian small-craft. During the summer season, Ilwaco serves an out-of-state and eastern Washington market of recreational/commercial joint use fishing boats; Shilshole Bay Marina operated by the Port of Seattle picks up additional summer tenants from south Puget Sound and the Columbia River cities.

Some surprises were evident from the data: the author expected a large number of non-local boaters at the Port of Friday Harbor (Fig. 1(c)), a favored destination area for boaters cruising the San Juan Islands. But the patronage of San Juan County marinas by Seattle metropolitan area residents is limited to transient use only. The convenience of Anacortes and LaConnor marinas, easily accessible by road from Seattle, appears to siphon off island-bound boaters wishing to moor at or close to their destination cruising waters. Lugging gear on and off ferries deters boaters mooring in the Islands, either permanently or seasonally.

The absence of public marinas in Pierce and Thurston counties, when the survey was conducted, leaves the service areas of south Puget Sound marinas undefined, but industry spokespersons attest to a significant, but declining² market in Olympia for Portland/Vancouver metropolitan area boaters and use of Pierce County marinas by south King County boaters.

Table 1. Boat trailer registrations, 1965-1973: multiple regression equation results

County/Region	Constant (t-value)	Population coefficient (t-value)	Per capita income coefficient (t-value)	Loge per capita income coefficient (t-value)	Coefficient of determination (R ²)	Trailers per 1000 population
Whatcom	-25897 (16.819)	N.S.	--	3471.3 (18.228)	0.9680	21
San Juan	-221.9 (-5.217)	0.35 (6.211)	0.042 (3.43)	--	0.9146	22
Skagit	-21198.6 (-7.377)	N.S.	--	2857.8 (8.113)	0.8558	39
Island	-10913.3 (-10.982)	0.0168 (3.355)	--	1462.8 (10.709)	0.9755	35
Snohomish	-6461.1 (-3.534)	0.050 (7.288)	N.S.	N.S.	0.8034	27
King	-45219.8 (-2.889)	0.0331 (1.937)	7.227 (3.443)	--	0.7877	23
Pierce	-11414.2 (-8.732)	N.S.	5.849 (15.82)	--	0.9579	24
Thurston	-3161.1 (-5.654)	0.066 (10.171)	N.S.	N.S.	0.8883	32
Mason	-7866.4 (-3.699)	0.066 (3.855)	--	907.42 (2.995)	0.9644	40
Kitsap	-40276.4 (-2.130)	0.0394 (1.976)	--	4888.7 (1.929)	0.8762	31
Clallam	-28325.0 (-11.540)	0.0387 (2.665)	--	3574.1 (10.125)	0.9791	61
Jefferson	-805.1 (-8.580)	0.0628 (5.347)	0.171 (7.130)	--	0.9610	40
Grays Harbor	-18216.0 (-13.208)	N.S.	--	2399.9 (14.132)	0.9478	24
Pacific	-3819.9 (-9.588)	0.0614 (2.893)	--	396.64 (5.109)	0.9513	26
Wahkiakum	-64.78 (-3.073)	N.S.	0.0063 (6.213)	--	0.7785	20
Cowlitz	-22872.7 (-8.114)	0.0513 (2.769)	--	2626.9 (5.598)	0.9610	31
Clark	-34326.7 (-3.183)	0.020 (2.514)	--	4327.1 (2.992)	0.9565	26
Puget Sound Counties	-106573.6 (-4.690)	0.035 (1.912)	20.892 (3.133)	--	0.9069	26
Coast and Columbia River Counties	-75622.2 (-4.676)	0.029 (2.364)	--	9206.9 (3.878)	0.9688	27
Washington coastal zone	-805507.1 (-3.853)	0.033 (1.764)	--	95054.2 (3.141)	0.9204	26
Washington State	-1480338 (-11.729)	N.S.	--	191452.4 (12.498)	0.9232	28

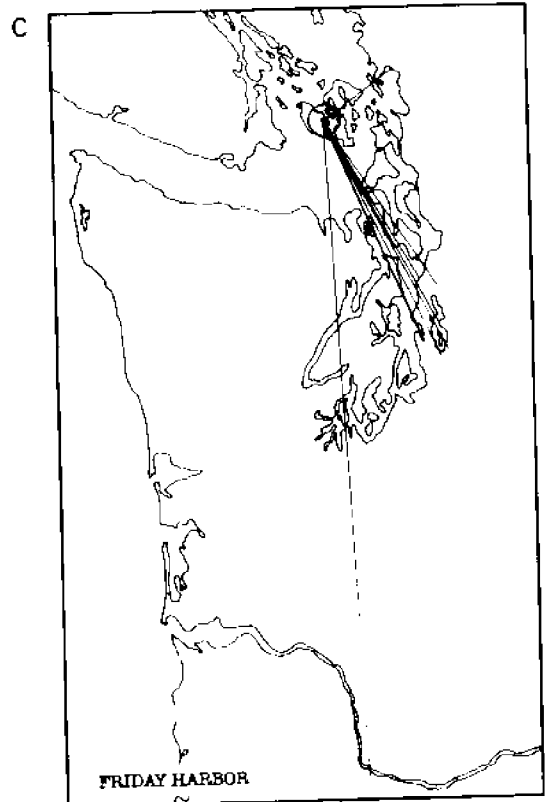
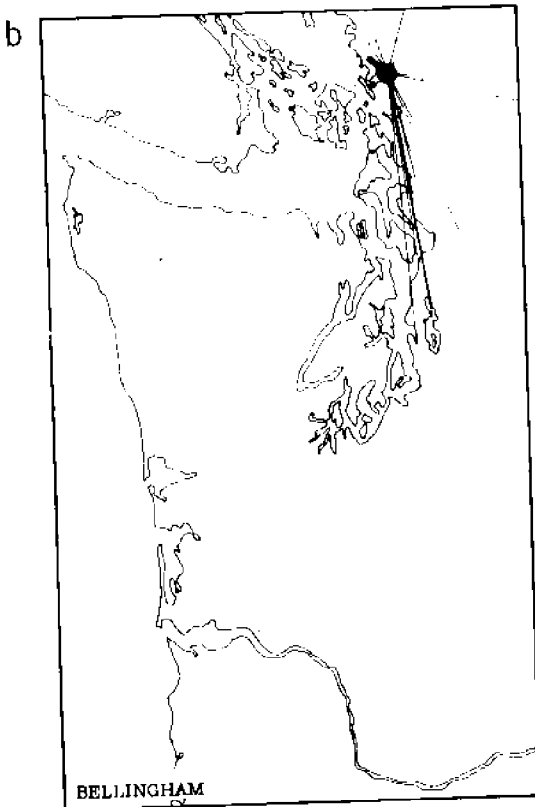
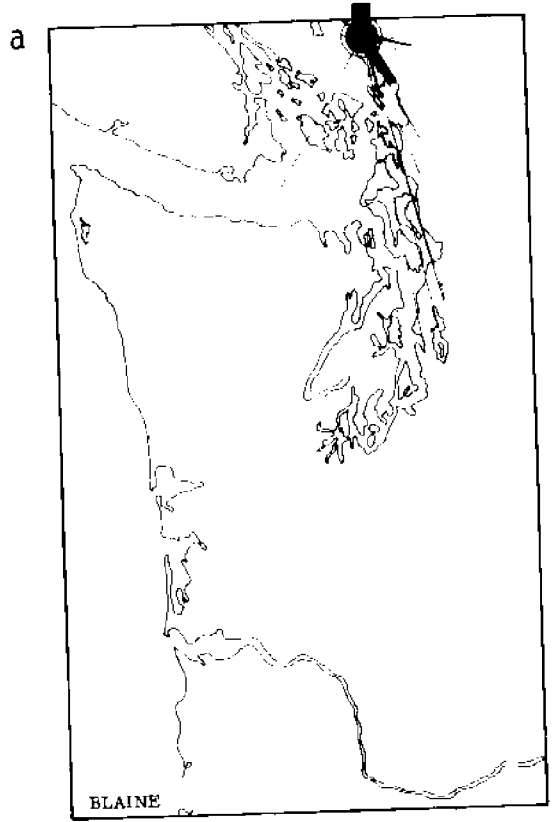
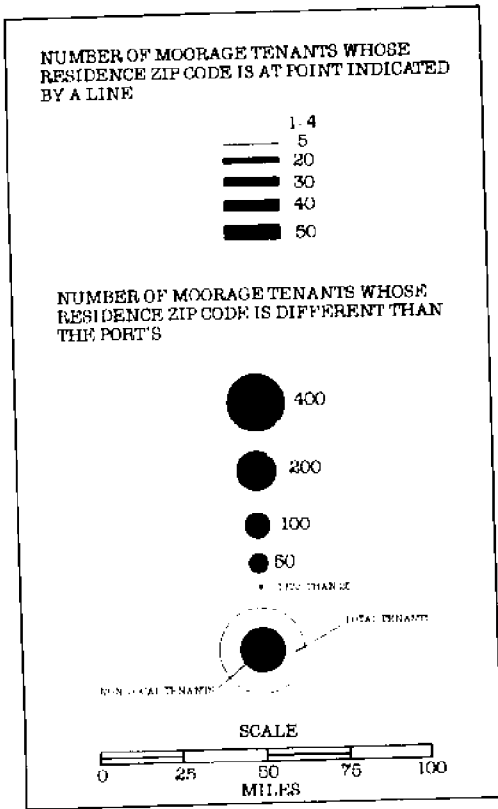


Fig. 1. Tenant origins of selected Public Smallcraft Harbors, 1979-80.

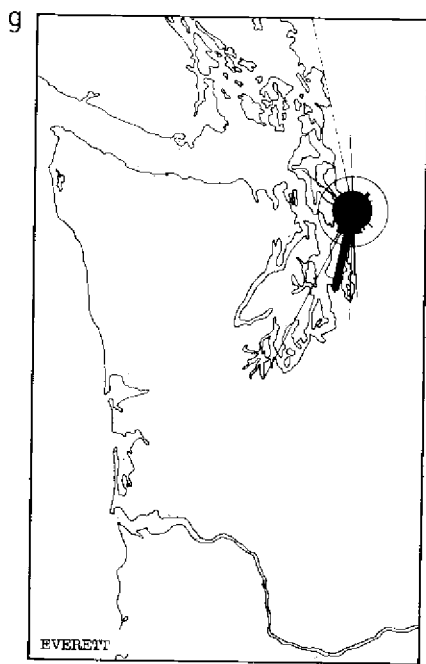
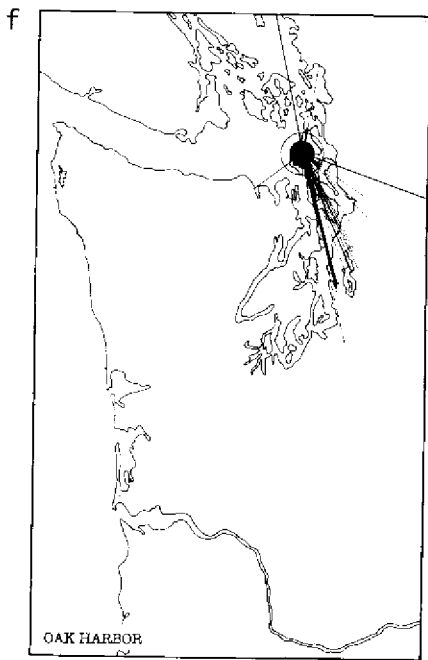
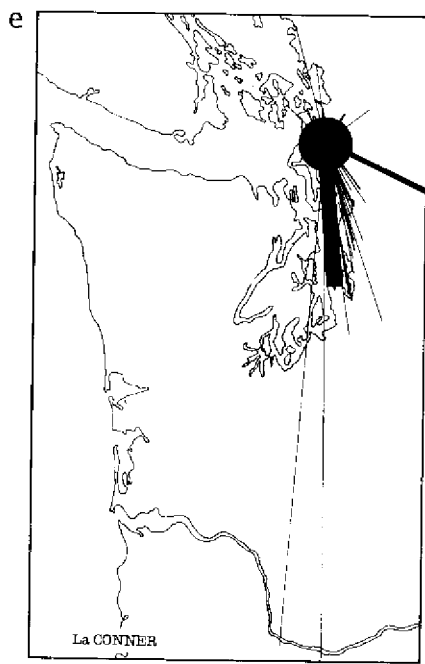
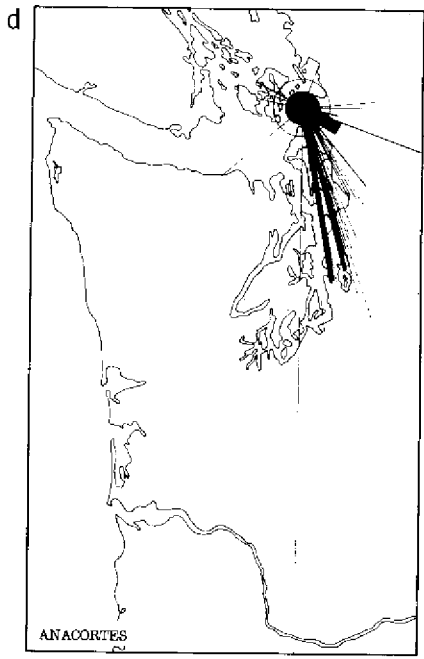


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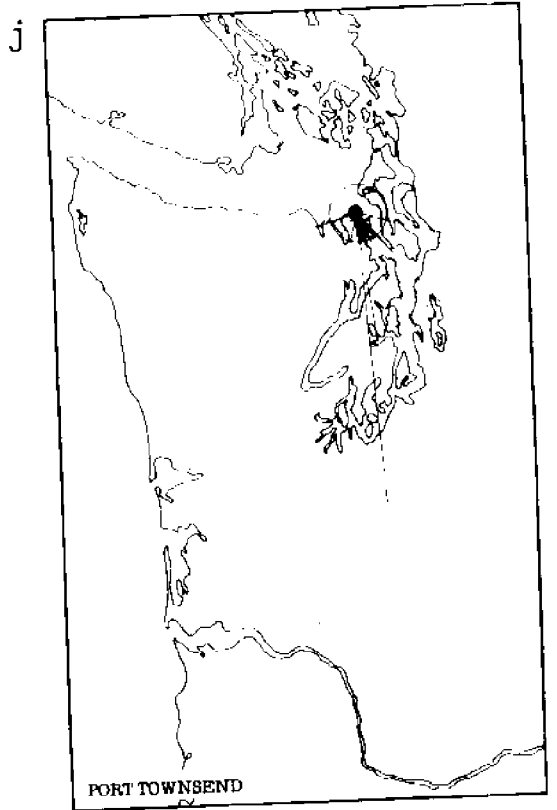
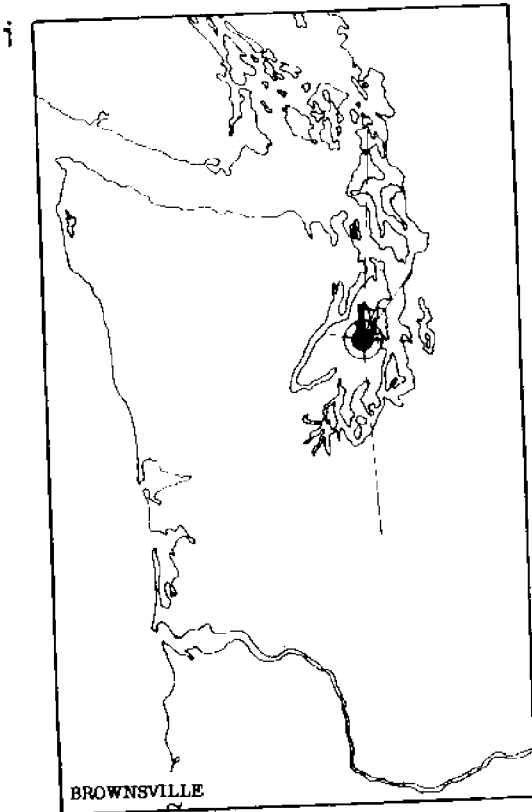
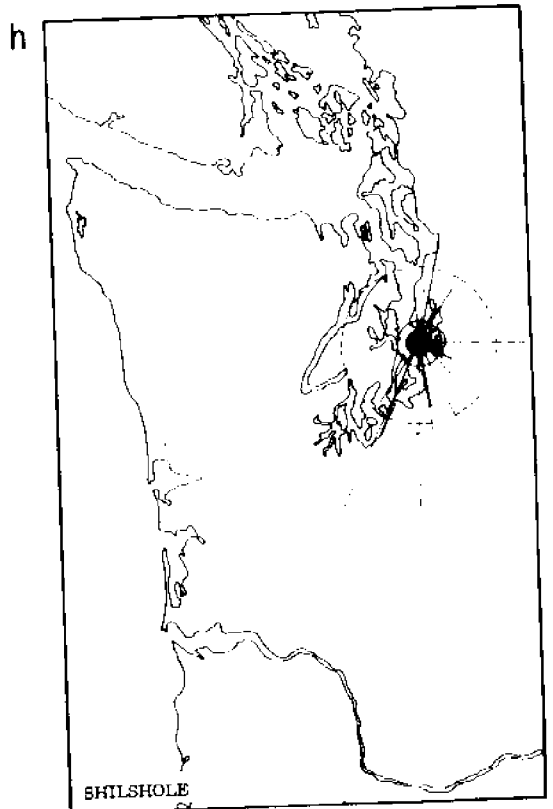
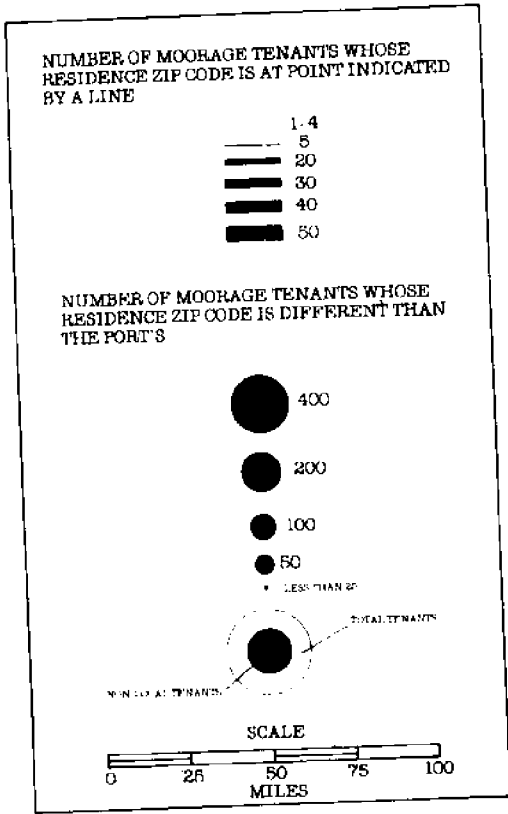


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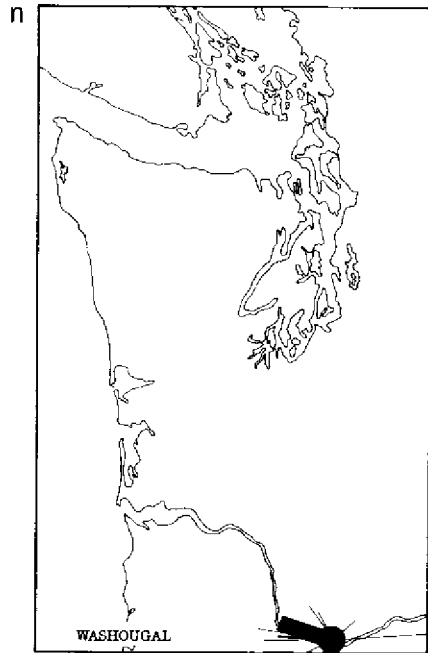
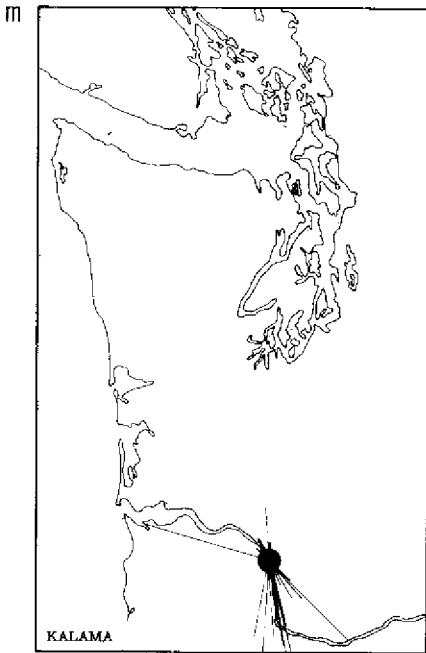
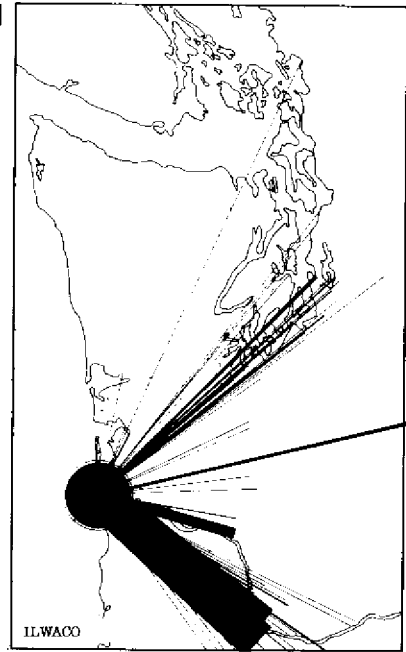
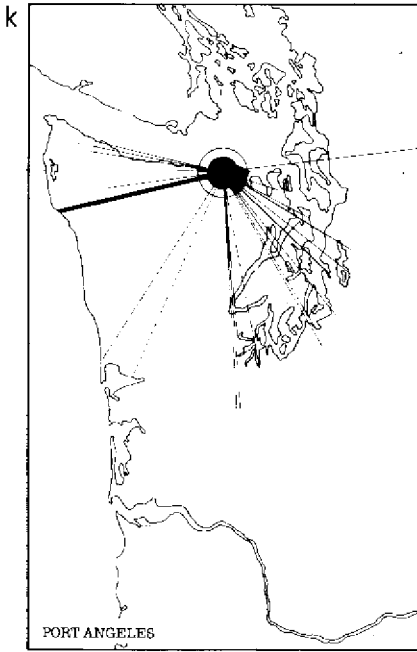


Fig. 1. Continued.

Changes in the Recreational Boating Fleet 1965-1978

In order to assess the likely future demand for moorage in Washington's coastal zone, it is necessary to examine the historical changes in the recreational boating fleet, the causes of these changes, and the future trends in those causes. The data problems cited earlier limit the analysis of historic changes in fleet size, however. Only the trailered component of the fleet could be measured through time. Since 1966, that component of the fleet decreased from 68% of the Puget Sound motorized smallcraft, to 56% in 1978. But at what end of the length class of the fleet this change took place is conjectural: were there more boats in the car-topped category? In the permanently wet moored category? In those being dry-stored? Or some combination of these classes of boats? We simply don't know; nor will we know until a state boat registration bill is passed, or until the USCG dramatically improves its registration program under the Federal Boating Safety Act.³

Variations in the number of trailers registered in the state, substate regions, and individual counties between 1965 and 1980 are explained by variations in either population or average per capita income, or both. The supply of neither moorage slips nor boat launch ramps had any effect on rates of trailer ownership in any of the counties, in 1978. Variations in rates of boat ownership among individual counties in 1978 were explained solely by the population in each county.

A high percentage of the total variation from year to year and across counties in a given year is "explained" by these two factors, population and average real per capita income. Table 1 summarizes the relative contributions made by each variable to changes in the number of trailers statewide, and in substate regions. Table 2 indicates the effects of changing population by 1,000 inhabitants or average per capita income (\$'s, 1967) by \$1.00 in each of the regions.

Table 2. Effects of changes in per capita income (PCI) and population on trailers, Washington State boat and recreational boat fleet, by region, 1965-80.

Region	# New Trailer Registrations		# New Boats in Fleet	
	Due to \$1 Increase in PCI ('67 \$'s)	Due to 1,000 Increase in Population	Due to \$1 Increase in PCI ('67 \$'s)	Due to 1,000 Increase in Population
WA State	47.7*	--	81.1	--
WA Coastal Zone Counties	23.6*	35	40.1	59.5
Puget Sound Counties	36.0	21	61.2	35.7

*In forecasting future fleet size, the natural logarithm of PCI produces the "best fit" equations in some cases. PCI is used here for comparative purposes only.

Forecasting Future Fleet Size

Population and average per capita income forecasts are available for the state as a whole, through 1983, and for the four-county Puget Sound Council of Governments (PSCOG) region (King, Pierce, Snohomish, and Kitsap counties) through year 2000. Using these forecasts and the equations developed above, estimates of future fleet size were made for the trailered boat component of the fleet. On the assumption that the ratio of trailered to non-trailered boats remains constant, projections of the total fleet size are also made. Table 3 displays the results. Extreme caution should accompany the use of these forecasts: even in the short-run (to 1985) per capita income estimates may be unreliable; and in the long-run (to 2000) estimates could be hopelessly error-ridden.

Table 3. Recreational boat and trailer forecasts: Washington State and Puget Sound COG region.

Region	Forecast Year					
	1980	1983	1985	1990	1995	2000
<u>WA State:</u>						
# Boat Trailers	114,527	123,690	--	--	--	--
# Boats	194,696	206,163	--	--	--	--
Annual % Change	--	2.6	--	--	--	--
<u>Puget Sound COG:</u>						
# Boat Trailers	53,851	--	61,906	69,024	74,682	80,075
# Boats	91,547	--	105,240	117,341	126,960	136,128
Annual % Change	--	--	2.8	2.2	1.6	1.4

Sales in Boats and Motors

In the 3 years, 1978 through 1980, sales of boats and motors⁴ fell 42.4%! Based on first and second quarter data for 1981, an additional 13% decline could well occur this year to a level 50% below 1978 sales (\$'s, 1967). While no precise relationship between boat and motor sales and growth or decline in fleet size has been measured, the possible consequence of a 50% decrease in sales is sobering.

The effects of changes in per capita income and the Prime Rate on these sales between 1973 and 1980, statewide, are as follows: A single percentage point increase (decrease) in Prime Rate causes a \$1,000,000 decrease (increase) in sales. A one dollar increase (decrease) in per capita income causes a \$60,000 increase (decrease) in sales.

Review

Up to this point we have identified the gross size and characteristics of the state's recreational boating fleet, where boaters utilize moorage year-round and seasonally, how the fleet has grown in the past, and, finally, likely future growth at broad regional levels. The fin-

al task is to assess the actual moorage market conditions, county-by-county, in Washington's coastal zone. By examining the slips available at various prices in each county and boaters' response to the supply of moorage, a more definitive assessment of demand for future moorage can be made.

Moorage Market Conditions

One-hundred-twenty-five marinas, both public and private, were surveyed to obtain the following information:

- Numbers wet slips and dry storage spaces built since 1978, the year of the last comprehensive survey⁵
- Numbers of slips and spaces under construction or planned for 1, 2, and 5 years in the future
- Seasonal (June 1980, January 1981) occupancy rates, vacancies
- Rental rates and anticipated change in rates
- Number of names on waiting lists, if maintained.

These pieces of information provided the data base for developing a profile of the moorage market in each of Washington's coastal zone counties, or multi-county regions. The market profile provides us with a clearer understanding of the meaning of waiting lists, a phenomenon which has been misinterpreted in the past.

Waiting Lists

Because moorage is supplied by both the public and private sectors in the moorage industry and, in general, public moorage is offered at lower prices, waiting lists predictably are to be found at public marinas, even when vacancies are evident elsewhere in the same market area. These waiting lists revealed the number of people willing to rent moorage at a specific price, were it available. Theoretically, those boaters currently occupying moorage at higher rates would have their names on waiting lists at all facilities offering comparable moorage at a lower price. In addition, people who would not pay higher rates will be found on waiting lists at facilities whose rates they would be willing to pay. The former group already own boats; the latter group would become boat owners were moorage available at a rate they could pay.

In any given county there is a price at which the number of willing renters exactly equals the number of slips supplied at that price. That price is the "market limit" rate. Charging below that rate would produce full occupancy and waiting lists; charging above it would result in the appearance of vacant slips.⁶ (The economic theory underlying this phenomenon is explained in detail in a report in process.)⁷ Different attitudes toward pricing, variations in costs of construction, land and operations and, in some cases, ignorance of prevailing rental rates at competitive facilities combine to produce variations in rates charged by private marina operators in the same market area. The result may be the simultaneous appearance of vacancies and waiting lists among private facilities in the same county.

In several counties, the highest rates currently being charged are below the "market limit" rate: no vacancies are evidenced at the highest-priced private marinas.

Profiles of moorage market conditions among Washington's coastal zone counties are presented in Table 4. They should be interpreted with caution. Attempts to raise rates to the "market limit" could result in significant changes in aggregate demand, causing withdrawal of substantial numbers of households from boating and consequent vacancies in the long run.

Summary Findings

Expansion of moorage supply

Regionwide, the amount of moorage under construction, and planned for construction by 1986, will expand existing supply by 27-37%, or at an annual rate of from 4.9 to 6.5%. But, at the county level, vast disparities in expansion of supply are seen. Pacific Coast and lower Columbia River counties show no planned expansion. However, Puget Sound counties will expand at rates from 3.9% (Snohomish County) to up to almost 300% (Skagit).

Expansion of moorage demand

Even if the whole region's recreational boating fleet expanded at the rate forecast for Puget Sound Council of Governments region--2.8% per year through 1985--by 1986, the total change would be only 14.8%. In only five of the 15 counties or multi-county regions in the study area does planned expansion of moorage supply fall short of 14.8%, and in two of these cases--Pacific and Grays Harbor counties, and Columbia River counties--significant and growing year-round vacancies are evident. Even recognizing that fleet expansion forecasts rely solely on historical boat trailer registration data, the 20% of the fleet which utilizes moorage facilities would have to expand at a rate 5 times faster than the trailered fleet to fill planned moorage by 1986! Put another way, if the the moored fleet grew at the same rate as the trailered fleet, it would take 10 years to fill the new moorage slips planned to be on line within the next 5 years.

Obviously, not all moorage facilities now on the drawing boards will be built, nor, if built, would they necessarily be as large as originally proposed. Furthermore, delays due to permit procedures, or financing difficulties could retard the proposed rate of expansion. Nonetheless, in counties where 5-year expansion plans dramatically exceed forecasted rates of fleet expansion, investor caution is in order. Based on all the information collected and analyzed over the last 3 years, here are my own conclusions, county-by-county, on the investment risks and potentials for moorage facilities construction.

Counties with high year-round vacancies

Pacific and Grays Harbor counties: persistent high, year-round vacancies are found in existing public marinas (Westport and Ilwaco) due to restrictions on the sport and commercial ocean salmon fisheries and fuel cost increases.

Lower Columbia River counties: (Wahkiakum, Cowlitz, and Clark). Persistent year-round and even higher winter seasonal vacancies are evident in these counties in which rental rates are the lowest among all Washington coastal counties.

Table 4. Public and private wet moorage in Washington's coastal zone counties, market profiles. Sources: MSG Moorage Market Survey, April-May 1981

County	Number of slips		Average rate		"Market limit" rate \$/ft/mo	Number of slips		% change no. slips 1981-86
	public	private	public \$/ft/mo	private \$/ft/mo		under construction	planned by 1986	
Whatcom	1,166	1,464	1.08	2.63	2.50-2.99	179	994	44.6
San Juan	123	841	1.34	2.09	3.00-3.49(S) 2.00-2.49(W)	--	502	52.1
Skagit	853	1,325	1.61	2.06	3.30-3.49	167	3,000 to 6,000	145.4 to 283.2
Island	316	173	1.40	N.A.	2.50-2.99	--	80	16.4
Snohomish	2,942	93	2.15	N.A.	2.50-2.99	--	110	3.6
King	3,141	4,775	2.53	3.47	4.50-4.99	136	1,542 ¹	21.2
Pierce	--	3,300	--	2.79	3.50-4.99	--	301	9.1
Thurston	--	1,433	--	2.44	2.50-2.99	800	--	55.8
Mason	96	109	0.56	2.49	3.00-3.49(S) 2.00-2.49(W)	--	95	46.3
Kitsap	1,069	940	1.33	2.27	3.50-3.99	120	431	27.4
E. Clallam/ Jefferson	932	849	1.23	2.28	2.25-2.49	--	422	23.7
W. Clallam/ Jefferson	344	510	1.27	5.00/ day/20'	5.00-5.50/ day/20'	--	100	11.7
Grays Harbor/ Pacific	1,750	131	1.26	N.A.	< 1.00	--	--	--
Columbia River ²	944	70	0.87	N.A.	1.25-1.49(S) < 1.00(W)	--	--	--
Washington coastal zone total	13,676	16,013	--	--	--	1,402	6,577 to 9,577	26.9 to 37.0

¹Bill Mundy Associates, Seacrest Marina Feasibility Study, October 1981.

²Includes Wahkiakum, Cowlitz and Clark Counties.

Counties with excess summer seasonal demand only

San Juan, Mason, and the eastern parts of Clallam and Jefferson counties exhibit winter seasonal vacancies. "Market limit" rates are one dollar per foot per month lower in winter than in summer. The western part of Clallam County (west of Port Angeles) is a special case: Moorage facilities are rented by the day and close during winter months, except for LaPush Boat Haven, leased from the Quileute Tribe by the Port of Port Angeles. Access to the county's shoreline has been reduced by the Hood Canal Bridge disaster. Sequim Bay Marina, if built, would satisfy growth in demand in east Clallam and east Jefferson counties for the next 10 years.

Counties with excess year-round demand

Most Puget Sound counties' marinas are full and waiting lists are evident at the highest priced facilities. Skagit, Island, Snohomish, Pierce, Thurston, and Kitsap have no significant vacancies. King County marinas charging \$4.50 or more per foot per month for open wet moorage have experienced slow fill-up (15 boats per month, between January and September 1981). Whatcom County mainland marinas are full year-round.

However, when the planned additions to the stock of moorage in these counties is taken into account, there are several cases where over-investment by 1986 could occur. In Skagit County, planned moorage could expand the existing supply almost 3-fold, in Whatcom by 45%, Thurston 56%, Kitsap by 27%, and King County by 21%. In each case, the rate of expansion significantly exceeds that forecasted for the Puget Sound Council of Governments' four-county region by 1986: 14.8%. Furthermore, this forecast was made before the Prime Rate soared to its 1981 peak and the consequent 50% drop in sales of boats and motors from the 1978 high (\$'s, 1967) appeared. The forecast may, simply, be overly optimistic.

In conclusion, the market for moorage has changed drastically since the halcyon days of the late seventies when boat dealers, with some justification, claimed moorage shortfalls were retarding boat sales. The reverse now seems likely: downturns in boat sales may well be retarding the growth in the market for moorage.

Footnotes

1. Goodwin, Robert F. and Robert L. Stokes, Washington Sea Grant Technical Report, WSG 80-7, December 1980.
2. Fuel price inflation probably accounts for reductions in seasonal use of Olympia marinas by trailered boats from the Columbia River metropolitan areas.
3. Only 66.2% of the motorized pleasure smallcraft fleet were registered in 1978, and of those registered, 65% were expired registrations. These appalling statistics can be expected to improve now that the USCG has contracted out its registration task to a private data management firm.

4. Standard Industrial Classification (SIC) 555 industry sales, reported by the Washington State Department of Revenue.
5. Oceanographic Institute of Washington, Survey of Marine Boat Launching and Moorage Facilities in Washington, 1978.
6. Because of variations in sizes of slips and their relative mix in marinas, some vacancies can occur below the "market limit" rate and waiting lists above it. Owners of larger (40'+) vessels and liveboards may be unable to find suitable moorage, while smaller slips are vacant.
7. "Recreational Boating in Washington's Coastal Zone: The Demand for Moorage," unpublished report in progress, Coastal Resources Program, Institute for Marine Studies, University of Washington.



SESSION 2

Financing Marinas— Public and Private

PANELISTS

Frank R. Lanou, Jr.
Robert G. Meadows

Financial Feasibility Studies

Frank R. Lanou, Jr.
Robert G. Meadows
CH₂M Hill

Introduction

This paper discusses the various purposes that financial feasibility studies serve. In particular, the benefit of these financial studies as planning tools will be identified. The discussion focuses on public and private marina financing, but is applicable to any investment.

This paper is organized into two sections. The first section discusses the need for financial feasibility studies. This section also discusses when such studies are most needed. The second section describes how investors or public agencies could obtain benefits from these studies.

Need for Financial Feasibility Studies

Basically there are four reasons supporting the need for financial feasibility studies. The studies serve to identify with additional surety:

- o Why a project is needed
- o Why a project is currently needed
- o Why the need is best met by the project
- o How investors can be assured that they will (a) be repaid and (b) be repaid on time

Market analyses that address the first three topics are considered part of financial feasibility studies. The fourth topic, how investors can be assured, is primarily a financial topic. Financial planning serves the fourth purpose by showing investors that financial planning, including contingency planning, for the project was done by the prospective managers. Contingency planning consists of anticipating necessary actions to offset revenue shortfalls or cost overruns should they occur during the life of the project. Additionally, financial studies serve to show investors that long-term financial planning has occurred.

When are Financial Studies Needed

Independent financial studies are needed when the investors are not the managers, such as when the investors are bondholders or banks, and do not have a familiarity with the risks of the investment. A feasibility study serves to put all investments in a common format for evaluation by persons without complete familiarity with the financial aspects of the project. A feasibility study serves to quantify the magnitude of financial risk and express the risk in comparable terms to other investments.

Independent financial studies are needed when the financial exposure of the project is primarily borne by outside investors. In contrast, financial studies are less necessary for a general obligation bond issue where the primary financial risk is borne by county property owners.

Benefits of Financial Feasibility Studies

Financial feasibility studies can be of benefit to investment bankers, investors, and private developers or sponsoring public agencies. For investment bankers the studies aid in marketing and in obtaining favorable ratings. This is particularly true for issues not guaranteed by property tax. Minimum, though variable, quality standards are required for this purpose.

For investors, the studies can provide a guide to the financial risks of the project. It is unclear how important this benefit is for most investors. Generally the rating of an issue serves as an indicator of the technical review for many investors. In other cases, personal knowledge of the developers and their previous investments serves as an indicator of the financial success of new investments.

For developers or managing agencies, financial feasibility studies provide better understanding of three related aspects of a project. First, the study identifies the financial requirements of the project itself. Second, the study identifies the financial effects of the project on overall business or operations, including long-range plans. Third, the study serves as a contingency planning tool in the event that the financial projections do not materialize as anticipated.

Financial Requirements of the Project. A financial study provides answers to two very important questions. First, can you afford the project, or what financial conditions with regard to revenues and costs have to occur for you to be able to afford the project? Second, if you can afford it, can you obtain financial backing? Somewhat restated, what financial conditions have to occur for you to convince others of your ability to afford the project, or what are the equity and DSA service requirements imposed by lenders?

Financial Effects on Overall Operations. A financial study provides answers to questions such as (a) How does the project affect your ability to pursue other investment opportunities that may come along; and (b) How many years does the project have to be subsidized by other profitable operations before it becomes a contributor to overall profits?

Contingency Planning. The third benefit of financial planning is to allow planning for contingencies such as possible increase in future financing rates or decreases in long-term inflation. Specifically, contingency planning should identify the needed changes in project design or phasing to accommodate higher than expected interest rates and still allow financial feasibility. Alternatively, what changes could be made in response to lower future inflation, thus lower annual increases in rental revenues.

The Increased Importance of Financial Planning

Financial feasibility studies that incorporate the three purposes discussed above are more important than 3 years ago due to the wide variance in interest rate and inflation forecasts. During the period from mid-1978 to mid-1979, long-term municipal financing rates varied very little from 6 percent. However, since mid-1979 the rates have varied considerably, and generally upward.

Basically, there are two questions that a financial analysis should answer if it is to be used for contingency management.

- o What is the effect and its significance of a change in estimated costs on project feasibility or rate of return on investment?
- o What is the effect and its significance of a change in estimated revenues on the rate of return on investment?

With regard to estimated costs, there are three important cost categories that could change. They are: (a) the financing or interest cost, (b) the construction cost, and (c) through inflation, the annual operations and maintenance expense. The effects on rate of return should be analyzed for changes in each of these costs. In particular, the uncertainty of interest rates and future inflation can be anticipated through financial planning. By means of financial analyses, the following questions can be answered.

- o How does the rate of return on investment change over a range of interest rates? Is it relatively flat over 2 or 3 percentage points, implying that feasibility is probably not affected by changes in financing rates, or is it very steep over the same range, implying that slight changes in financing rates could result in change of project feasibility.
- o How do projections of debt service coverage change over a range of interest rates? At what interest rate will coverage drop below the required minimum and, importantly, is this interest rate likely to occur during the financing of the project?

Basically, these and related questions attempt to answer what magnitude or change in the variables will change the bottom line answer significantly.

Financial studies should also anticipate changes in revenue flows due to lower moorage fees or higher vacancy rates. Resistance to higher moorage fees should be anticipated through the effect on vacancy. These

subjects are usually discussed in a market analysis. Through sensitivity analyses the following questions can be addressed.

- o What moorage rate must be charged to break even on the project, and how high must moorage rates be raised for each percentage increase in return on investment. Results of a market analysis can then be used to see if such rates are realistic.
- o What is the maximum vacancy rate that the marina can have and still generate sufficient revenue to break even.

The answers to these and other questions become more important when data uncertainty increases, or when a wide range of expert opinion concerning the data exists.

Summary

In summary, financial analyses are part of every business decision. The form of the analysis can range from intuition and prior experience of the managers to formal cash flow analyses. The more formal analyses provide many direct and indirect benefits to investment bankers, investors and developers, and managing agencies. The indirect benefits such as contingency planning are becoming increasingly important due to data uncertainties and conflicting expert opinion.

In closing, the accuracy of a single forecast is no longer very important, since most if not all forecasts are essentially wrong. What is important is the credibility of the forecast, and this credibility is best expressed through the anticipation of and planning for potential financial calamities.



SESSION 3

Coping with Regulation

PANELISTS

**Rolie Montagne
Rex Van Wormer
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Coping with Regulation

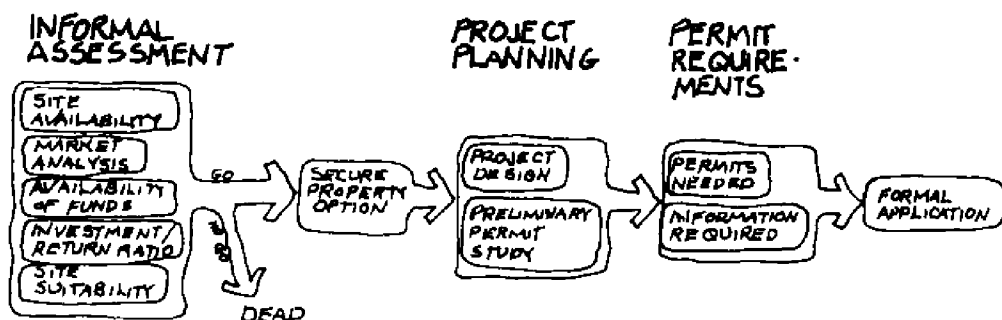
Strategies for Success

Rollie Montagne
Aspen Group, Inc.

The single most important factor in the success of your project is your own personal involvement in the entire process. There are no magic formulas or persons that will guarantee a project's success. If, however, you are highly motivated, personally involved but flexible, have a sound game plan (strategy) and are willing to accept the long hours and frustrations involved, your odds for success can be improved.

Strategies are simply well thought out procedures to deal with problems. Most of my remarks today will be directed toward strategies for coping with regulation, but in the total project development problem, permits and authorization are simply components in the total strategy for project development.

The regulatory process is often singled out by developers and delegated to a second or third party for management rather than incorporating it into their overall project development scheme. I think this is true because most of us find dealing with the regulatory process one of the most frustrating and least predictable parts of our project. Placed in perspective, however, dealing with the regulatory process falls into the overall project development problem as pieces, not an isolated element. As the diagram illustrates, the regulatory process is a part of the project's informal assessment, planning, and permit acquisition phases.



This element should be approached with the same management attitude and personal attention you give the other development components.

For purposes of today's discussion let's define regulatory process as the primary State and Federal permit authorizations for waterway development. Most of us would agree that this system is confusing and complex to the uninitiated but there are steps that can be taken to simplify the problems and make the process more predictable.

Before we talk about these steps let's consider four rules that are basic to successfully coping with the regulatory process.

1. Be willing to accept the governmental process as it is today, or forestall your application until it changes.
2. Be flexible in devising different means of achieving your project goals.
3. Be personally involved in the process.
4. Develop a clear step-by-step strategy for moving your project through the system.

If you are still willing to move forward with the project after considering these rules, let's look at organizing and moving your project through the regulatory process.

In 1980 the Northwest Marine Trade Association published two manuals, one for the State of Washington and one for the State of Oregon, designed to provide information and perspective on marina development and the regulatory process. The handbook deals with overall project development and the two elements which form the base for beginning your step-by-step progress into and through the regulatory system. These elements are:

1. A clear understanding of what you want to do, and what you have to do to make a successful project.
2. A clear understanding of the forum you are entering (the process your application will take and the attitudes of the people reviewing your project).

Building on this base, the handbook outlines the steps necessary to obtain State and Federal permits. The 10 steps to help you deal with the regulatory process are as follows:

STEP 1. DO NOT MAKE A STATE OR FEDERAL PERMIT APPLICATION.

Making a state or federal application triggers a whole host of governmental processes and review procedures. If your original ideas are not possible, the revised application must be recirculated and you will be fighting an uphill battle to overcome the specter of the initial unacceptable project. Permit applications are sufficiently specific that any project with moderate complexity will require you to invest substantial amounts in professional services for design before you can file your application; redesign will be unnecessarily expensive.

STEP 2. DO NOT LEAVE INITIAL PROJECT EVALUATION OR AGENCY CONTACT TO A THIRD PARTY.

Few developers would turn the initial assessment of project funding availability over to a third party. This is partly because the decision on granting funds partially depends on the funding source's evaluation of you and your ability to perform. Major federal and state permits are reviewed and evaluated based upon the reviewer's opinion of the impact of your overall project, not on strict guidelines. Your direct interface with the reviewer will provide critical impressions on your ability to construct the marina. Do not allow a third party to independently represent you or your project to the permitting or review agencies. The success or failure of the project is ultimately your responsibility. Make or attend the initial contacts and hear for yourself what the agencies recommend on your project, then manage the process and review the designs yourself before making permit applications.

STEP 3. APPROACH OBTAINING STATE AND FEDERAL PERMITS AS YOU WOULD OBTAINING A BANK LOAN.

Your banker lends money based upon available funds and your ability to repay the loan. He feels personally responsible for the bank's money. Resource and environmental agencies have similar feelings. They are in charge of public assets (fish, water, wildlife, environmental quality, etc.). They view you as making a draw from that public account by virtue of your impact. Even though you will be providing increased services and tax dollars, their view is that the basic accounts (water, fish, wildlife, etc.) will be decreased. Their judgments will be as subjective as your bankers; approach them in the same manner.

Depending upon the complexity of your project and whether NEPA and/or SEPA statements will be required, processing, review and authorization through the various systems can take from nine months to two years. A general idea of how long your project may take can be made early in the concept stage before funding, design and construction schedules have been established.

STEP 4. DETERMINE WHAT GEOGRAPHIC AND ENVIRONMENTAL SETTING YOU ARE IN.

You should obtain a general idea whether your initial concept for development is acceptable at your proposed location and whether public-owned or sensitive environments may be involved. The Department of Natural Resources, Department of Ecology, and local planning agencies have maps of public land and sensitive areas in the coastal zone. Outside the coastal zone the state Departments of Fisheries and Game have information on environmentally sensitive areas.

STEP 5. CONTACT LOCAL PLANNING/ZONING AUTHORITIES FOR INFORMAL ASSESSMENT ON YOUR DEVELOPMENT CONCEPT.

Local regulations and requirements vary significantly. The specific detailed local requirements are not contained in this manual for this reason. The state-wide locally administered SEPA and Shoreline Management Act programs are explained in the manual. The local zoning/planning authority can give you a preliminary read-out on Shoreline Management Act permits and/or SEPA requirements, as well as local attitudes. The local government is your first point of contact.

STEP 6. VISIT CENTRAL STATE/FEDERAL RESOURCE AGENCY GROUP MEETINGS AND ASK FOR A PREPROJECT REVIEW.

There is currently an informal group of state and federal agencies called the "Musk Oxen". They meet in Olympia once a month and provide an opportunity for individuals to present proposed projects for suggestions and comment. These comments are not pre-project authorization, but are advisory. If this group for some reason is not functioning, the central permit processing agency, the Department of Ecology or Corps of Engineers will generally pull together a conference at your request.

STEP 7. DETERMINE THE SPECIFIC IMPACTS OF YOUR DEVELOPMENT, THEIR SIGNIFICANCE, AND WHO HAS INFORMATION ON THESE IMPACTS.

You may wish to employ professionals at this point. Effective communications with the agencies and public requires you to be fully briefed on the potential positive and negative aspects of your proposal. This question also has a bearing on project design and/or modification. If you choose to use outside professionals, they need to be on-board at this point.

STEP 8. DETERMINE DEVELOPMENT FEASIBILITY - OR WHAT, IF ANY, ALTERATIONS WILL NEED TO BE MADE TO YOUR ORIGINAL IDEA TO MAKE IT ACCEPTABLE.

You or your team are now ready to make some decisions--some political, some practical--on abandoning, modifying or submitting your project as originally planned. At this point you should review the alternatives you have both for layout and construction techniques, and make appropriate modifications. If your marina project is small and involves only simple alterations, you can proceed directly. If your project is complex or involves a "substantial development" have your professional team draft your applications and support information.

STEP 9. DETERMINE WHICH AGENCIES HAVE DIRECT PERMIT ISSUING AUTHORITY, WHICH AGENCIES ISSUE PERMITS THAT REQUIRE REVIEW (DISCRETIONARY PERMITS), WHICH AGENCIES WILL BE REVIEWING YOUR PERMIT.

You must have a thorough briefing on the general systems of permit processing and types of authorization your project will require. The general policies of the agencies that will be reviewing your permit application and what their general concerns are should be a part of your checklist for final design and future permit review management. Remember, under the current system in Washington, any reviewing state agency on a discretionary permit has the ability to hold up the processing of your application until their questions have been answered. In addition, the Corps of Engineers will generally not issue a permit over the objections of a local government.

STEP 10. MAKE SURE THE INFORMATION USED IN YOUR APPLICATION IS ACCURATE.

Processing of applications has been delayed for weeks and serious questions raised about the entire project because of inaccurate data or misinterpreted agency requirements. All agencies have information, but some have key information. Do not accept one agency's view of another agency's requirements or processes without checking; go to the source. The most up-to-date information on your site and regulations controlling your development will be found at the agency office which has direct control over your development. View agencies as sources of key information for development of your application, as well as reviewers.

Each project has its own unique characteristics but the key points to remember in an overall strategy are:

1. Have an overall strategy for project development which includes acquisition of permits.
2. Approach the permit process with an open mind whether or not you agree or disagree with the process.
3. Understand there are no magic formulas or persons that can guarantee success.

If you can follow these general guidelines your odds for obtaining the necessary permits and successful marina development can be improved.

Intergovernmental Coordination

Rex Van Wormer
Independent Ecological Services

Interagency coordination, as it is discussed in this paper, refers to the coordination of those agencies responsible for reviewing development oriented permits such as Section 10/404 under the Corps of Engineers (COE) jurisdiction, State Hydraulics Approval and the Shorelines Management Act.

In Washington there is an organized interagency permits review and planning forum called Muskoxen. It is an informal associationship between those regulatory and resource agencies at the State and Federal level that review these permits on a regular basis. Once each month the group meets in Olympia, Washington to discuss COE public notices that are of concern to one or more of the agencies. This constitutes one half of each monthly meeting. Up until three-four years ago, the agency representatives were the only people in attendance and a project was usually not discussed until it came out on a Corps of Engineers Public Notice. During this period a representative of the U.S. Fish and Wildlife Service chaired the meeting.

In 1978 the group initiated an expanded function and service to potential developers. One half of each monthly meeting is now reserved for prepermit and sometimes pre-EIS discussion with applicants proposing developments or other actions which will require review under various Federal and State regulations and/or agency guidelines. The purpose is to impart information to applicants regarding different agency concerns and assist them in developing projects that will least impact natural resources and satisfy regulations and guidelines. It is the opinion of the Muskoxen attendees that early coordination and interaction between developers and regulators will reduce the time and confusion sometimes related to the permitting process, minimize losses to fish and wildlife resources and generate an understanding and better working relationship between private and government entities.

The agencies represented and the respective permits they regulate are:

A. Washington State agencies

1. Department of Ecology - Shorelines Management and Water Quality Certification
2. Department of Fisheries - Hydraulic Project Approval^{1/}
3. Department of Game - Hydraulic Project Approval^{1/}
4. Department of Natural Resources - State land leases

B. Federal agencies

1. Army Corps of Engineers - Section 10, 404, 10/404 and 103
2. Environmental Protection Agency
3. National Marine Fisheries Service - Marine Mammal Protection Act
4. Office of Coastal Zone Management
5. U.S. Fish and Wildlife Service - Endangered Species Act

Other agencies which have attended on occasion are:

A. Washington State agencies

1. Archeology and Historic Preservation
2. Parks and Recreation
3. Transportation Department

B. Federal agencies

1. Bureau of Indian Affairs
2. Heritage Conservation and Recreation Service
3. National Park Service

C. Indian Tribal representatives

Although the group has achieved some level of consistency and identity, it remains an informal work group with no inherent authorities. The authorities remain with the individual agencies represented.

The representatives of these agencies feel strongly that interaction between them and the developers as early in a project's life as possible is beneficial to both parties. The ideal situation occurs when a project can be presented to Muskoxen before the applicant has developed an EIS and before it is presented to any regulatory authorities for processing. In this manner an open exchange can take place. The resource representatives can get a good understanding of the proposed project and the project proponent can learn what concerns the agencies have, if the project satisfies regulations and meets guidelines, and most important if the project can expect to get the necessary State and Federal permits without project modifications. It allows for discussions relative to changes that might be made to reduce impacts and lessen agency concerns, or mitigation or compensation measures that might be applicable.

^{1/} Jointly issued

Without interacting with agencies at an early stage of the project, you may learn of these concerns through formal channels after you have spent a year or more of drafting an EIS or 90-180 days if applying for a Corps permit.

Two things you must remember: (1) Muskoxen is informal; it does not replace formal scoping procedures for EIS determination with the Corps, and it does replace declarations of significance or non-significance under shorelines; and (2) you are not required to participate. You can pursue all of the permit processes without its involvement.

Interagency Coordination is a good tool for developers, if it is used right. Make sure you or your consultants know the regulations and understand the permit processing procedures. Interface with the resource managers before you cast your plans in concrete.

If you have a project you wish to place on the Muskoxen agenda, call the U.S. Fish and Wildlife Service office in Olympia (206-753-9440) and ask for the Muskoxen Coordinator. It's as simple as that.

DNR Marine Lands Policies

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In preparing for this talk I tried to include those aspects of the Department of Natural Resources aquatic land policies which I thought would be of interest to a group involved in the marina industry. Because the title of the panel is "Coping with Regulations", I felt it was the purpose to identify the various agency hurdles that must be overcome for marina proposals and then offer help in getting over those hurdles. When one discusses regulations that must be complied with in aquatic land development, most of the hurdles that come to mind are the myriad of permits that must be obtained. In the case of the Department of Natural Resources the hurdle is not a permit, for the Department of Natural Resources role is not regulatory but rather proprietary. The requirement that usually must be met when dealing with the Department of Natural Resources is the issuance of a lease for use of the tidelands, shorelands or bedlands.

As manager or trustee of the publicly owned aquatic lands, the Department of Natural Resources gets involved in marina projects because most marinas need deep water that cannot be accommodated on privately owned tidelands or shorelands. Therefore, because public property is involved it is the Department of Natural Resources function to issue a lease for that project.

Before we get into the details of leasing requirements, however, I would like to cover some basic principles that guide the Department of Natural Resources management of the public aquatic lands. The first concept that should be understood is the term "public trust". State-owned tidelands, shorelands, and all beds of navigable waters, are held in trust by the State for all citizens, with each citizen having an equal and undivided interest in the land. For example, a citizen from Walla Walla, Pasco or Spokane, has as much interest in the aquatic lands as a person living beside Puget Sound here in Seattle. Embodied in this concept is the recognition that our natural resources are not

free, and that aquatic lands are as valuable, or more so, than other land. These public aquatic lands are managed by the Department of Natural Resources to maximize the benefit to all citizens of the State. Benefits to the public for the management of these aquatic lands, are realized when:

- a) Navigational needs are met which are of benefit to the general public,
- b) Space is provided for a variety of aquatic, recreational and economic activities,
- c) Environmental standards are met.

Another concept that needs to be understood in order to understand the Department of Natural Resources management philosophy, is that of withdrawal. Any conveyance of public right to private individuals requires compensation to the public for that withdrawal. To allow use of the public's land without adequate compensation is unconstitutional. However, various types of uses have different impacts on the public's ability to use the land. Complete withdrawal of the land for private use would require full compensation to the public owner. Withdrawal of uses which allow some aspects of public access to use of the land require less compensation, depending on the degree of public use.

Another policy that should be understood is proper land allocation and planning. Although the State of Washington is blessed with a Puget Sound and other fine bodies of water, the availability for shoreline uses is not limitless. Department of Natural Resources policy supports the philosophy that development of publicly owned aquatic lands must be orderly. In order to control this growth and to insure that it is planned, the Department has established use classifications for harbor areas, and tideland/shorelands, which prioritize the various uses based on the degree to which they are water-dependent navigation and commerce uses.

In addition, we are making a concerted effort to coordinate our classification and allocation systems with local governments master shoreline management plans, so there is a coordinated planning effort between the State and local governments.

Also, whenever possible, it is the Department of Natural Resources policy to direct marina growth to urban areas, rather than allowing numerous marinas to be widely distributed throughout the Sound. Currently, the Department has embarked on a review of the harbor area system, and adjoining first-class tideland areas. The purpose of this study will be to review the authorities and responsibilities that have been given to the Department for the management of harbor areas, and to identify overlapping authorities that are creating conflicts.

We hope the study will identify some of the outstanding issues, and varying roles that are assumed in the management of harbor areas between the Department, the Washington State Ports, other local governments and agencies.

Once the issues have been identified and the various roles segregated, then the next step in the harbor planning process will be to propose tentative solutions, and give general direction to that plan.

With the preceding public trust concepts as a basis, I would like to cover the subject of leasing requirements. As we have already discussed, the public owner of the aquatic land must be compensated for any private use of its land. The compensation to the public for that withdrawal is in the form of lease rentals. The Washington State statutes require the Department to base lease rentals on the true and fair value of the land in money. The Department uses two methods for determining what that true and fair value is:

- 1) Basing value on comparable non Department of Natural Resources market rents,
- 2) Use various appraisal techniques to determine the true fair market value of the land.

Rent is determined by multiplying the fair market value by a use rate percent. The use rate percentage is likewise determined by using:

- a) non Department of Natural Resources market rental rates, or;
- b) the average rate charged in a local area for long-term mortgages.

In order to determine fair market values the Department uses six appraisal techniques. Three of these techniques are the Income, Cost, and Market Approaches, which are traditional approaches accepted by most appraisal organizations. The other three techniques are the Shore Contribution, Substitution, and Extension, which were developed by the Department in cooperation with a panel of appraisers from five appraisal organizations. These latter techniques were developed for the unique problems that aquatic lands present to the appraiser. These techniques are defined in the Aquatic Land Management Policies which are available at this workshop.

In the first part of this talk, I discussed the concept of withdrawal from public use. In conjunction with this concept, it follows that there should be some provision for rewarding those private uses that do allow some aspects of public use. Contained in the Department's Aquatic Land Policies are criteria for allowing reductions in lease rentals for public use. These criteria allow for rental reductions for those portions of a lease which allow public use on a first-come first-serve basis. In the past, these criteria have been applied very conservatively by the Department. It is our intention in the future to insure that all lessee's understand the options available for reducing their rental burden, by allowing certain public use and access provisions within their leased area. These criteria are contained in the Land Management Policies found under "public use". The criteria are the following:

- 1) Land must be available daily to the public on a first-come first-serve basis and may not be leased to private parties on any more than a day use basis.
- 2) Any fees charged the general public to not exceed the cost of operating the facility.
- 3) Public use must be prominently advertised on the premises.
- 4) Public must be granted free access to the use.

We would encourage all marinas to look at their current operation and/or proposals, to see if there is opportunity to provide public use which would qualify for rental reductions.

A fairly new type of lease has appeared on the marina scene which has caused the Department to look at its leasing procedures and policies. This new development is what we term "condominium marinas". This type of lease basically allows the developer to sell moorage slips within the area leased from the State, rather than the traditional leasing or renting of those slips. This type of a marina has been around for a few years but not to the extent it has been recently occurring. The Department has two concerns with this type of lease. The first concern is to avoid the position of dealing with multiple lessee's once the marina has been developed, and the slips are all sold. The second point is to insure that the purchasers of slips that are located on publicly owned lands, realize that they are not purchasing in fee, but are only buying a partial leasehold right. We have developed lease formats which allow the State to enter into these type of leases. A master lessee may be a moorage association with a lease that allows partial assignment of the master lease. The law allows the State to lease beds for a term of 30 years with a right of renewal.

I have very briefly covered some of the Department's aquatic land management philosophies, and some of the mechanics of its aquatic leasing program. All of the policies and techniques that have been discussed are codified into the Washington Administrative Codes and are contained in the aquatic land management publication. The Department wants to encourage you to feel free to provide input to the Department concerning any aspect of the management of the aquatic lands. We would be particularly interested in receiving income and cost information for marina operations. Hopefully this type of information could be used to evaluate our current method of rental determination. If you have any questions concerning the Department policy procedure, or questions specific to your lease, our Area offices will always be glad to help you.



SESSION 4

Marina Business Management

PANELISTS

Ayse Somersan
Frederick J. Smith
Ronald I. Gibbs
Scott W. Andrews

Dr. Somersan could not attend the session but kindly provided a paper for these Proceedings.

Mr. Gib Carter presented Dr. Smith's paper.

Marina Industry in Wisconsin Lessons for Washington?

Dr. Ayse Somersan
University of Wisconsin, Extension

Public access to the nation's beaches and coastal waters is a critical issue in all coastal states. Coastal planners are faced with large population concentrations within 50 miles of the coastline with growing recreational demands. These increasing numbers of recreationists are facing competition from commercial, industrial and residential activities for space on the coast.

Wisconsin has had a longstanding concern with the need for providing public access to navigable lakes and streams. The pressure to provide public access to the Great Lakes for boating purposes has been increasing faster than other recreational demands due to increased participation rates among urban families, improvements in Great Lakes fishing, and overuse of inland lakes and streams close to population centers.

There is excess demand for marina slips on both the Lake Superior and Lake Michigan coasts of Wisconsin. Further, the existing excess demand will increase over the next decades along with the growth of population, income and leisure time. On the other hand, the development and management of marinas is one of the least scientific and unguided of all enterprises serving the recreation public. While the boat manufacturing community has come of age by feeding the wants of the consumers with boats of improved design which are easier to operate, marinas are virtually the same as when the word was first coined around 1924.

There is a need for additional boating facilities in all areas of the Wisconsin coast, including harbors of refuge, marina slips, transient dockage, boat launch facilities and dry storage alternatives. A few coastal communities are currently considering marina development as a part of efforts to expand their export sectors. Even if the planned

increases in the supply of slips can be realized, which is highly doubtful in view of federal and state aid cutbacks, the additional supply of public slips may end up replacing existing private slips unless the profit picture of private marinas is improved.

The shortness of the boating season coupled with high initial investment requirements, financing difficulties, and stringent environmental controls, make it very difficult to attract private investment into this area. The bleak profit picture of existing marinas constitutes one more discouraging sign to private investors.

Against this backdrop, the Wisconsin Coastal Management Program funded a study of the internal management of the state's Great Lakes Marinas in 1979. The overall objective of the study was to analyze the operations and management of existing Great Lakes Marinas, to identify internal management problem areas and to design educational programs to improve the profitability of these enterprises.

While the size and scope of Washington's marina industry is many times that of Wisconsin, the management problems identified in the Wisconsin report are applicable to the marinas in Washington as well as many other coastal states.

The remainder of this paper will summarize the 1979 survey of Wisconsin's Great Lakes marinas and discuss their management problems.

1979 Survey of Wisconsin's Great Lakes Marinas

A total of 72 facilities were identified as Great Lakes marinas and personal on-site interviews were conducted with owners or managers of 60 (83%) of the facilities during the summer of 1979. The number and size of different facilities surveyed is identified in Table 1.

TABLE 1
Number, Type and Size of Great Lakes Marinas in the Survey

	<u># of Facilities*</u>	<u>Total # of Slips</u>	<u>Average # of Slips</u>
Yacht Clubs	12	636	53
Public Marinas	9	1,121	125
Commercial Marinas	36	1,808	50
TOTAL	<u>57</u>	<u>3,565</u>	

* Three facilities offered only transient docking, with their major business as boat sales, and are not included in Table 1.

In the facilities surveyed, 41% of the seasonal slips were rented to sail boats and 59% to power boats. Sixty-five percent of the Lake Superior region seasonal slips were rented to sail boats while 67% and 60% of the slips were rented to power boats in the Upper and Lower Lake Michigan regions, respectively.

Statewide, yacht clubs showed the highest percentage of slips rented to sail boats (55%). Public marinas had 61% power boats and commercial marinas had 63% power boats.

Occupancy and Waiting Lists

Virtually all facilities surveyed were operating at or near capacity. Vacancies were found only at those facilities experiencing a transition in management or where slips had recently been added. On a regional basis, the percentage of seasonal slips rented was relatively uniform, ranging from 95% to 97%.

In the Lake Superior region, the five facilities with a count of people on waiting lists indicated a total of 285 waiting for a seasonal slip. A total of 327 people were on waiting lists at the 14 facilities in Upper Lake Michigan where a count was known. The Lower Lake Michigan facilities showed 597 people on waiting lists.

Slip Rental Fees

The majority of marina slips were rented by the season. Some marinas only quoted annual rates, while others had monthly and daily rates in addition to the seasonal rate. Slip rental fee schedules varied from place to place due to differences in minimum and maximum rates for different size boats. In order to ensure comparability, all rates were converted to per-foot basis. In reality, a straight per-foot basis was rarely used in quoting slip rental rates.

Commercial marinas had the highest seasonal rates, averaging \$14.80 per foot statewide, with the highest rates (\$19.77 per foot) in the Lower Lake Michigan region (Milwaukee, Racine, Kenosha). Yacht club rates varied widely from club to club but averaged \$7.22 per foot, while public marinas averaged \$11.56 per foot.

General Management Policies

Commercial marinas made up the majority of facilities surveyed. Because of large differences between marinas with and without boat sales, the following four-category breakdown of the 39 commercial marinas was used in tabulating the data:

- Fourteen marinas with boat sales
- Nine marinas without boat sales and less than 21 slips
- Ten marinas without boat sales and 21-60 slips
- Six marinas without boat sales and more than 60 slips

Table 2 shows general management policies of commercial marinas. All 14 of the marinas with boat sales advertised to some extent, while only 15 of the 25 marinas without boat sales advertised. Half of the marinas with boat sales advertised outside the local area.

Marinas with boat sales had the highest average number of employees with an average of 10.7 full-time summer employees and 6.6 employees for the remainder of the year. Marinas without boat sales and fewer than 60 slips averaged one employee in the summer while marinas with more than 60 slips averaged 6.6 full-time summer employees.

The predominant form of ownership was corporate, with 29 of the 39 marinas surveyed operating under corporate management.

TABLE 2
General Management Policies of Commercial Marinas

	Marinas With Boat Sales N=14	Marinas Without Boat Sales			Total N=39
		Less Than 21 Slips N=9	21-60 Slips N=10	Greater Than 60 Slips N=6	
Marketing:					
Marinas advertising	14	5	4	6	29
Marinas advertising outside local area	7	1	1	3	12
Personnel:					
Average number of full-time summer employees	10.7	1.0	1.0	6.6	5.3
Average number part-time summer employees	2.0	0.1	0.0	1.0	0.9
Average number full-time non-summer employees	6.6	0.0	0.0	1.5	2.6
Average number part-time non-summer employees	0.4	0.0	0.0	0.0	0.1
Ownership:					
Sole proprietorship	2	2	3	2	9
Partnership	1	0	0	0	1
Corporation	11	7	7	4	29
Accounting:					
Marinas with formal chart of accounts	7	1	1	2	11
Marinas preplanning financial statements:					
Monthly	7	4	3	4	18
Quarterly	2	2	2	1	7
Annually	5	3	5	1	14
Marinas preparing budgets	2	0	0	1	3
Marinas with CPA review of records	9	6	6	4	25
Marinas with accounting system:					
Checkbook	0	1	2	0	3
One-write	1	0	0	0	1
Manual journals & ledgers	12	7	8	6	33
Computer	1	1	0	0	2
Miscellaneous:					
Marinas open year-round	12	3	2	3	20
Percent of business done with:					
Cash	45%	75%	80%	42%	60%
Credit cards	5	12	10	3	7
Accounts receivable	50%	13%	10%	55%	33%

The sophistication of the accounting system employed varied by type of marina. Half of the marinas with boat sales had a formal chart of accounts and prepared financial statements on a monthly basis. Only four of the 25 marinas without boat sales had a formal chart of accounts and 11 prepared monthly financial statements.

Budget forecasting was not widely employed by the marinas surveyed. Only three of the 39 marinas employed a budgeting process.

Nine of the 14 marinas with boat sales and 16 of the 25 without boat sales had an outside accountant review their financial records. The predominant accounting system employed by the marinas was a manual system of journals and ledgers.

Twelve of the 14 marinas with boat sales stayed open all year while only 8 of the 25 without boat sales stayed open year-round.

The percentage of business done with cash, credit cards, and through accounts receivable varied by type of marina. Marinas with boat sales and marinas without boat sales and greater than 60 slips did 50% and 55%, respectively, of their business through accounts receivable. Marinas without boat sales and less than 60 slips did between 75% and 80% of their business with cash.

Pro Forma Income Statements

Table 3 shows pro forma income statements for the different groups of marinas. The percentages are based on total gross revenues and show the contributions of the various profit centers, cost of sales, and operating expenses for each of the marina groups.

Fifty percent of the total revenues of commercial marinas with boat sales was from boat and motor sales and brokerage. The second major profit center was repairs and maintenance (22.6%). Gas and oil sales (2.6%) and slip rentals (2.1%) were insignificant profit centers. Cost of sales was the largest expense for marinas with boat sales with purchases of boats and motors (39.7%), accessories (10.7%) and parts (9.1%) leading the way. Labor was the largest operating expense at 13.1%.

The major revenue sources for the two commercial marina categories with no boat sales and less than 60 slips were slip rentals and gas and oil sales. Gas and oil purchases were the largest cost items, and debt service, maintenance, and labor were the largest operating expenses.

The major profit centers in marinas without boat sales and more than 60 slips were slip rentals, repairs and maintenance and storage. Labor costs (36%) were the highest expense item, followed by gas, oil and part purchases.

Statewide, marinas without boat sales had a higher overall net operating income before income taxes (6.4%) than those marinas with boat sales (5.1%). The highest operating results were achieved by those marinas without boat sales and with 21 to 60 slips. Facilities with 21 to 60 slips probably performed better than those with less than 21 slips because of scale economies. These marinas also did better than the enterprises with more than 60 slips because it appeared that at 60 slips a threshold was reached requiring additional profit centers and

Table 3. Pro Forma Income Statements for Commercial Marinas, Public Marinas, and Yacht Clubs

	Commercial				Yacht Clubs		Public Marinas
	Marinas With Boat Sales N=14	Marinas Without Boat Sales N=25	Marinas Without Boat Sales		With Restaurant N=6	Without Restaurant N=6	
			Less Than 21 Slips N=9	21-60 Slips N=10			
Revenues:							
Slip rental.....	2.1%	46.4%	42.7%	52.7%	42.4%	3.6%	83.8%
Boat rental.....	0.0	1.5	3.3	0.6	0.0	---	---
Charter services.....	0.5	1.3	0.7	0.0	4.4	---	---
Hauling.....	0.6	1.8	0.2	3.7	1.4	0.2	---
Membership fees.....	---	---	---	---	---	18.6	---
Launch fees.....	0.0	0.1	0.2	0.0	0.0	---	---
Storage.....	8.8	5.8	6.3	0.0	14.2	0.2	10.5
Restaurant/bar.....	---	---	---	---	---	75.2	---
Sales/brokerage.....	50.0	0.0	0.0	0.0	0.0	---	---
Repairs/maintenance.....	22.6	11.0	8.2	7.5	21.0	---	---
Accessories.....	12.8	7.1	13.2	1.4	6.8	---	---
Gas/oil.....	2.6	25.0	25.2	34.1	9.8	2.2	5.7
TOTAL REVENUES	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of Sales:							
Gas/oil.....	1.7%	21.0%	22.3%	32.1%	8.6%	1.6%	3.5%
Parts.....	9.1	5.7	4.2	3.1	10.0	---	---
Accessories.....	10.7	6.5	12.1	1.0	6.3	---	---
Boats/motors.....	39.7	0.0	0.0	0.0	0.0	---	---
Food/beverage.....	---	---	---	---	---	45.8	---
TOTAL COST OF SALES	61.2%	33.2%	38.6%	36.2%	24.9%	47.4%	3.5%
GROSS MARGIN	38.8%	66.8%	61.4%	63.8%	75.1%	52.6%	96.5%

TABLE 3 (cont). Pro Forma Income Statements for Commercial Marinas, Public Marinas, and Yacht Clubs

	Commercial					Yacht Clubs		Public Marinas
	Marinas With Boat Sales N=14	Marinas Without Boat Sales N=25	Marinas Without Boat Sales		With Restaurant N=6	Without Restaurant N=6		
			Less Than 21 Slips N=9	21-60 Slips N=10				
<u>Operating Expenses:</u>								
Labor	13.1%	17.2%	8.7%	7.1%	36.0%	27.4%	15.5%	27.0%
Insurance	1.8	3.5	3.6	1.5	5.3	2.5	3.0	0.2
Maintenance	1.4	8.9	10.0	11.2	5.6	6.5	22.2	15.7
Real estate taxes	1.0	3.5	4.3	4.1	2.3	2.5	13.0	0.0
Utilities	1.5	3.7	4.0	3.6	3.6	2.7	7.7	3.6
Supplies	0.8	1.2	1.6	1.0	1.0	1.2	6.0	0.5
Rent	4.1	2.8	0.0	2.3	6.3	0.0	3.0	0.5
Debt service	5.5	14.3	22.6	16.3	4.0	8.0	0.0	8.5
Advertising	2.2	2.1	2.3	2.3	1.6	---	---	---
Depreciation	0.8	1.9	0.0	2.1	2.0	---	---	---
Other	1.5	1.3	0.0	1.8	2.0	0.0	8.7	---
TOTAL OPERATING EXPENSE	33.7%	60.4%	57.1%	53.3%	69.7%	51.6%	79.1%	56.0%
NET OPERATING INCOME	5.1%	6.4%	4.3%	10.5%	5.4%	1.0%	0.0%	40.5%

associated increases in fixed expenses and labor; these costs more than offset the increases in revenues.

Table 3 also shows the proforma income statements for yacht clubs with and without restaurants and for public marinas. For yacht clubs with a restaurant, 75.2% of total gross revenue came from the restaurant and bar. Food and beverage purchases (45.8%) and labor (27.4%) were the major expenses.

Revenues of those yacht clubs without a restaurant were fairly evenly distributed between slip rentals (30.5%), membership fees (24.8%), and bar sales (27.6%). Major expenses were food and beverage purchases (15.8%), labor (15.5%), maintenance (22.2%), and real estate taxes (13.0%).

By far the largest profit center in public marinas was slip rental fees, accounting for 83.8% of total gross revenue. The other profit centers were launch fees and gas and oil sales. The major expenses were labor (27%), maintenance (15.7%), and debt service (8.5%). The high overall net operating income of public marinas can be the outside services (maintenance, etc.) received from other local government agencies which are not specifically charged to the marina.

Internal Management Problems and Recommendations

The 1979 survey of Wisconsin's Great Lakes Marinas does not allow for conclusions regarding optimum facility size, the correct number of employees, or the best point at which to add profit centers. It does, however, point to some common problems in management which may be contributing to low profitability.

Pricing

The pricing of marina services was generally found to be the least scientific aspect of management. The majority of the operators were unaware of slip rental fees charged by competitors in the area. In many cases, slips were rented on the least profitable basis, such as charging a set slip fee for larger boats when a fee based on boat size would generate higher revenues, or charging small boats on a per-foot basis when a fee based on slip size would yield greater revenue.

Commercial marinas need an annual review of their pricing policies. They need to investigate prevailing rates in the area, the size and type of boats moored at their facility, and the sizes of the slips they offer to determine the pricing scheme which will maximize slip rental revenues.

Waiting lists and expansion plans

Waiting lists are an excellent source of information for pricing decisions and in formulating expansion plans, provided they are comprehensive and reliable. The waiting lists kept by marina operators were found to be lacking the most relevant information such as boat size and type and, in many cases, the address of the potential patron. Furthermore, the extent of duplication of names among marinas in an area is not known.

For waiting lists to be a useful planning and management tool, the marina operators need to maintain complete information on each boater. They also need to consider charging a deposit for placing a name on their waiting lists to cut down on possible duplication among regional marinas.

Accounting

A large percentage of marinas without boat sales lacked essential financial management tools such as a chart of accounts, timely financial statements, and budget forecasting.

A formal chart of accounts assures profit center reporting and provides for understanding the relative contribution of different profit centers. Further, there is a need to prepare a cash budget at the beginning of the season and compare monthly financial statements to this cash budget to identify and explain variances.

Very few marina operators know the current market value of their facility or their total investment in the marina. The total marina facility should be appraised every two to three years to provide information essential to critical analysis of the performance of an operation.

Repairs and maintenance

Two major problems in maintaining a profitable repairs and maintenance operation were poor estimating on repair jobs and low parts turnover. Facilities with substantial repairs operations need to employ an experienced mechanic to provide estimates and institute a job cost system for accurate accounting of profit or loss on each repair job. Further, inventory turnover needs to be monitored to make necessary adjustments in purchasing policies.

Personnel

The greatest difficulty faced by the marinas surveyed related to personnel. The problem stems from the seasonality of the marina business and the low quality of seasonal help. The most profitable facilities were those able to keep a fairly constant year-round labor force and hire a minimum of part-time help. Although each facility has unique labor needs, it is worthwhile to consider hiring fewer full-time people in place of many part-time employees and to retain the same workers from year to year.

Marketing

Marinas with boat sales generally had the most sophisticated marketing plans and appeared to have a good understanding of their target market groups. The smaller facilities without boat sales generally did not have formal marketing budgets or well-defined target markets. Although advertising is not needed to market slips, a strong marketing program to sell the supporting profit centers could make significant impact on overall profitability, especially for operations with dry storage and repairs and maintenance profit centers.

Close to 100 percent occupancy of slips does not ensure an adequate net operating income for many marinas. The key to increasing profitability, in many cases, lies in the target marketing of the other profit centers.

Commercial marinas in the Great Lakes and in most other coastal areas have an uphill battle in maintaining adequate profitability. Many of the owner/operators are in the business mainly for life-style considerations. It is, however, possible to introduce better management practices into commercial marina operations without dramatically changing the face of the industry. Many would agree that the same life-style with improved profit opportunity would be superior to just life-style.

Status of the Oregon Boating Service Industry

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The Oregon boating service industry includes approximately 600 firms that provide services and products to recreational boaters.

A 1981 survey of these Oregon boating service firms provides estimates of economic condition and identification of the impacts of government regulation. This report summarizes the survey findings. A future report will present the results of further analysis.

The Survey

By using the yellow pages of Oregon telephone books it was possible to identify 652 boating service firms. Inquiries were sent to these firms to correct errors in name, address and services. The corrected list was then used as the population from which a random sample of 230 was drawn. Sampling results were as follows:

Number of questionnaires sent	230
Firms out of business	57
Firms receiving questionnaires	173
Firms responding to questionnaires	63
Firms responding to telephone followup	51
Total responding	114
Responding as percent of firms receiving	65.9

Characteristics

Boating service firms are large and small, new and old, specialized and diversified. The following tables illustrate some of their characteristics.

Table 1. Average annual employment of sample boating service firms.

<u>Average annual number of employees</u>	<u>Number of firms reporting</u>	<u>Percent of all firms reporting</u>
0 - 5	73	67.6
5 - 9	18	16.7
10 - 14	6	5.6
15 - 19	0	0
20 - 24	1	.9
25 - 29	2	1.9
30 - 39	2	1.9
40 - 49	3	2.8
50 - 74	2	1.9
74 - 90	1	.9
	108	100.2

Table 2. Legal organization of sample boating service firms.

<u>Legal organization</u>	<u>Number of firms reporting</u>	<u>Percent of all firms reporting</u>
Corporation	43	39.8
Single proprietorship	42	38.9
Partnership	18	16.7
Limited partnership	2	1.8
Other	4	3.7
	108	100.9

The sample boating service firms had been in business an average of 14.21 years, a minimum of one year and a maximum of 75 years.

Table 3. Assets of sample boating service firms.

<u>Assets in thousands of dollars</u>	<u>Number of firms reporting</u>	<u>Percent of all firms reporting</u>
0 - 100	28	35.9
100 - 249	29	37.2
250 - 499	6	7.7
500 - 749	2	2.6
750 - 999	2	2.6
1000 - 1999	5	6.4
Over 2000	6	7.7
	78	100.1

Table 4. Total revenue of sample boating service firms.

<u>Total revenue in thousands of dollars</u>	<u>Number of firms reporting</u>	<u>Percent of all firms reporting</u>
0 - 100	30	33.3
100 - 249	17	18.9
250 - 499	16	17.8
500 - 749	10	11.1
750 - 999	6	6.7
1000 - 1999	8	8.9
Over 2000	3	3.3
	90	100.0

Table 5. Services provided by sample boating service firms.

<u>Services offered</u>	<u>Number of times reported</u>	<u>Percent of all times reported</u>	<u>Percent of firms reporting the service</u>
Boating equipment and supplies	69	18.7	60.5
Boat repairs	62	16.8	54.4
Marine engines and repairs	47	12.7	41.2
Marina	37	10.0	32.5
Boat sales	30	8.1	26.3
Boat rental and charter	29	7.9	25.4
Marine radio and electronics	24	6.5	21.1
Boat moorage and landing	23	6.2	20.1
Boat construction	19	5.2	16.7
Boat cleaning	9	2.4	7.9
Boat storage	8	2.2	7.0
Marine surveys	5	1.4	4.4
Marine ways	4	1.1	3.5
Boat transport	2	.5	1.8
Marine contractor	1	.3	.9
	369	100.0	

Financial Situation

Financial information for firms which receive most of their revenue from a marina are reported separately from other sample boating service firms (referred to as dealers). Marinas generally have a different financial structure than the dealers, with dealers having a larger cash flow relative to long-term investment.

Profit, loss, and balance sheet information are reported in Tables 6 and 7. All figures are in percentages. The median total revenues for the eight marinas and 26 dealers reporting were \$250,000 and \$240,000 respectively. The median assets for the six marinas and 26 dealers reporting were \$260,000 and \$154,000, respectively.

Table 6. Profit and loss statement for sample marinas and dealers.

	Marinas	Dealers
	%	%
Total Revenue	100.0	100.0
Expenses		
Labor	3.9	26.6
Supplies and materials	44.4	31.9
Utilities	16.3	5.8
Cost of financing	7.3	6.2
All other	<u>16.4</u>	<u>16.1</u>
TOTAL	88.3	86.6
Profit Before Taxes	11.7	13.4

Table 7. Assets and liabilities of sample marinas and dealers.

	Marinas	Dealers
	%	%
Cash	5.5	13.5
Accounts and notes receivable	4.7	11.7
Inventory	23.2	31.5
Other	<u>10.3</u>	<u>9.8</u>
Total Current	43.7	66.5
Fixed assets	55.2	25.6
Intangible assets	.7	3.5
Other assets	<u>.5</u>	<u>4.3</u>
Total Non-current	56.4	33.4
TOTAL ALL ASSETS	100.0	100.0
Short term notes payable	8.2	13.8
Long term debt maturing in 1981	17.5	4.2
Accounts and notes payable	4.7	10.6
Accrued expenses	.2	6.4
Other	<u>.2</u>	<u>11.4</u>
Total Current	30.8	46.5
Long term debt maturing after 1981	28.5	10.8
All other non-current liabilities	<u>.5</u>	<u>10.1</u>
Total Non-current	29.0	20.9
Net worth	40.3	32.7
TOTAL LIABILITIES AND NET WORTH	100.0	100.0

Economic Conditions for the Future

Boating service firms must cope with changing economic conditions and with new regulations. Table 8 shows how the profitability of firms has been affected by changing costs, customer demand, and other factors. Table 9 indicates adjustments due to federal, state and local government regulations. Table 10 reports business expansion during the past five years and plans for the future.

Table 8. Relationship between the profitability of sample boating service firms and costs, customer demand, and other factors during the past five years.

Economic condition	Number of times reported				
	Depressed profits			Raised profits	
	Signifi- cantly	Moder- ately	No effect on profit	Signifi- cantly	Moder- ately
Cost of materials	21	24	4	1	0
Labor costs	12	30	17	1	0
Cost of financing	29	10	19	0	0
Cost of utilities	19	28	11	1	0
Cost of complying with government regulations	16	22	19	1	0
Customer demand	6	16	26	10	1
New competition	5	12	39	3	0
Ability to raise prices	9	15	20	14	0
Other	12	3	0	2	2

Table 9. Adjustments made by sample boating service firms to federal, state and local government regulations during past five years.

Possible adjustments	Number of times reported	
	Adjustment made	Adjustment not made
Fired employees	8	48
Retrained employees	8	48
Hired new employees	7	49
Retained consultants	11	45
Replaced equipment	21	36
Added new equipment	21	36
Temporarily ceased operation	3	53
Developed innovation	10	45
Changed product or service	21	35
Other	1	3

Table 10. Expansion of sample boating service firms during past five years, and future plans.

	Number of times reported	
	Yes	No
Has your firm expanded during past five years?	39	22
Do you plan to add new services, refurbish or replace old facilities?	15	44
Are there constraints on your potential expansion?	37	22

Thirty three firms identified specific constraints on the expansion of their business. The high cost of financing and the difficulties in obtaining it were mentioned most frequently. Government regulations such as local zoning ordinances, landfill permits, and government reporting requirements were the next most frequently noted constraint. The third ranking constraint was increased cost of materials, labor, insurance, land and buildings. High property taxes, inflation, recession and poor commercial fishing were also identified as constraints.

Eighteen federal, state and local agencies were identified as being beneficial to the sample boating service firms, while 36 were identified as being adverse. The sample firms indicated that the Oregon Department of Fish and Wildlife and the U.S. Coast Guard were more beneficial than the other 16 agencies. The U.S. Army Corps of Engineers and the State Marine Board were the next most frequently mentioned beneficial agencies. Other beneficial agencies mentioned were the local ports, the Department of Environmental Quality, State Accident Insurance Fund, local Fishermen's Wives Association, National Oceanic and Atmospheric Association, Federal Reserve Board, the U.S. Department of Commerce, the Small Business Administration and the U.S. Forest Service.

All of the agencies identified as being beneficial were also identified as being adverse. The most frequently mentioned adverse agencies were the counties, Environmental Protection Agency, Department of Environmental Quality and the Division of State Lands. The next most frequently mentioned were the United States Forest Service, the State of Oregon, Land Conservation and Development Commission, Oregon Department of Fisheries and Wildlife, U.S. Department of Energy, Internal Revenue Service, the State Marine Board, Occupation Safety and Health Act, State Employment Division and State Accident Insurance Fund. Also mentioned at least once in the adverse category were the U.S. Department of Commerce, State Health Division, U.S. Army Corps of Engineers, Organization of Petroleum Export Countries, Pacific Fishery Management Council, Federal Courts, Bureau of Land Management, U.S. Department of Transportation, Tri Met, Social Security Administration, Port of Portland, State Division of Motor Vehicles, U.S. Coast Guard, Federal Reserve Board and the State Department of Commerce.

Summary

The majority of sample boating service firms employ less than ten people (84.3 percent), have less than \$250,000 in assets (73.1 percent) and less than \$500,000 in total revenues (70 percent). The majority of boating service firms are organized as corporations or single proprietorships (78.7 percent).

Profit as a percent of total revenue was higher for sample dealers than for sample marinas. Current assets as a percent of all assets were higher for dealers than for marinas. The same relationship also existed for current liabilities.

Cost of financing and cost of materials were clearly identified as significantly depressing profits, while the ability to raise prices and increased customer demands were factors that significantly raised profits. The cost of financing was identified as the most important constraint on business expansion.

While the costs of complying with government regulations were noted quite often as a factor in depressing profits, it was mentioned less frequently as a factor constraining expansion. The most frequently mentioned adjustments to regulations were the replacement and addition of equipment and changes in products and services offered. While the list of agencies adversely effecting the sample boating service firms was long, many of the same agencies were also identified as beneficial.

Further analysis of the survey results will provide comparisons with other industries and an improved understanding of the economic and regulatory environments within which boating service firms operate.

Marketing and Advertising

Ronald I. Gibbs

Sound Marketing Services Incorporated

What is marketing? Aren't marketing and advertising the same thing?
"What does marketing have to do with my marina, I'm sold out of spaces and could fill-up a hundred more if I could build them?"

Marketing is a relatively new concept for running a business. For most of our history, companies produced a product and then sold it. The amount that could be produced determined the sales goals. Production was the driving force within in a company. As time progressed, some of the companies began to recognize the need for customer input and the Sales Department became more involved and in some cases actually began to provide direction to the companies operations. Marketing has taken this customer perspective one step further. Marketing means everything in the company comes from the consumer's needs. Marketing means you identify customer needs, develop a product or service to meet those needs and then communicate the benefits of your product or service to those identified customers.

One example of marketing success is light beer. Beer manufacturers can clearly identify their "target market". Changes within the target market indicated a growing concern for health, weight, over-drinking, etc. One way to meet these customer concerns (needs) was to develop a beer with less calories and less alcoholic content; but keeping in mind that most beer drinkers have a real concern for taste. The rest is history. Light beers are a significant factor in the market place today. They fulfill a customer need and in so doing have increased total consumption.

A very poor example of marketing was the Edsel car. Ford Motor Company developed the Edsel entirely from a customer perspective. They heavily researched customer needs and wants. They had the customer's approve the design. The customers had a chance to have input into the advertising. If a camel is an invention of a committee, then the Edsel car was a camel. We now know it was in fact a lemon.

Marketing for the boating and moorage industry involves the same principles as for The Coca-Cola Company. The "marketing mix", part of the marketing discipline, includes an understanding of what is called "the 4 P's". The 4 P's are: Product, Price, Place and Promotion.

The product is of course what you have to offer customers. Your Product can in fact be a service. Price is the value assigned to this product or service. Place is where you offer the product or service. Promotion includes all of those things used to communicate with customers.

In the boating and moorage industry, the first three P's are very critical. My understanding is that "if only I had the product (more slips) I could price it almost anyway I wanted and build them anyplace I want and still be successful. Of course, I wouldn't need to advertise". I most assuredly can state that this attitude is contrary to good marketing practice and will cause failure for your business.

First, let's talk about Product. What is your product? From my viewpoint, your product is not a slip, your product is a "place where I keep my boat". It is my perception as your customer that I see your product as a benefit to me. Included in this benefit is the price you charge and how conveniently located the place is to my home or my water destination.

The market potential can be viewed in a total concept as anyone having a boat that is not trailerable. This total market can be segmented by size of boat, type of boat, active or inactive boater, convenience-oriented versus destination-oriented, etc. One of the marketing principles is "segmentation". Identifying the segment you wish to market to and then adopting the 4 P's to meet those particular customer needs.

Obviously, the approach to market to commercial vessels will be and is completely different that the approach to private vessel owners. These differences will affect where you locate, what you charge and what is included in additional services with your product offering.

How a private marina markets its product against a public facility is also completely different. Because Price is an important element in the decision to purchase, customers will be more attracted to lower priced locations assuming availability, convenience and service factors are identical. Even if there weren't waiting lists, private marinas could very successfully market themselves against lower priced public facilities.

Your market (persons in need of your product or service) continues to change and to change in dramatic ways. Cars are getting smaller. Fewer boats will be trailerable if boat sizes remain the same. Perhaps, if no new marinas are developed to meet customer needs, boats will shrink in size to continue to be trailerable behind smaller cars. It is very

important that you understand the trends in your business and react accordingly. Is dry storage the answer to customer needs?

We talked a little about Product, Place and Price, but what about Promotion. What about advertising? What role does that play in the boating and moorage industry? Well, going back to our beer example, promotion (advertising) is the key to success. Every beer looks about the same, tastes about the same if it is a light beer, is sold in very similar packages and at about the same price. What people are buying is their perception of the beer as gained through advertising. Is it Miller Time, or Taste the High Country or This Bud's for You in your household. What is it that makes your beer special? It is the advertising and the images created in your mind about the product. So, at least for beer, advertising (promotion) plays a vital and critical part in the marketing mix.

Promotion for the boating and moorage industry has an insignificant role at the moment. You don't need a newspaper ad or radio commercial to sell your product. Waiting lists and "word-of-mouth" are sufficient to communicate with your potential customers. This will change over time. If enough space is made available, promotion will become a more vital tool in your marketing bag. You may have to run "grand opening" promotions, you may have to use direct mail to sell condominium slips, you may have to reduce price to fill-up slips, you may even use television commercials to express the benefits of keeping a boat in your marina. But, that's the future. For now, promotion is pretty much restricted to a few news releases to gain free editorial in local papers or appropriate trade journals.

Before I go on to a quick description of how to prepare a Marketing/Business Plan, I would like to address what may be a very real mistake in the thinking process within the industry. I am referring to the belief of pent-up demand as expressed in those long waiting lists. Allocation is a term used in the package goods industry and refers to distributing scarce product. Premium wines are sold on allocation. Coors beer was sold on allocation for many years. In both of these cases, the manufacturers believed "we could sell a million of 'em if only we could produce more product". Well, you know what happened when they could produce more product, they couldn't sell it. In fact, they couldn't sell any more at all. Scarcity made the product move. There are other examples where people didn't know the size of their market and failed to understand customer psychology. Is this also true in your industry? Are you fooling yourselves about the demand that exists? Of course, I don't have the answer. I'm just asking the question and alerting you to a potential danger in your planning for the future.

Let's turn our attention to putting marketing to work in your business. What follows is a quick summary on how to prepare a Marketing/Business Plan. A plan should be written and formalized for every one of your businesses. How will you know where you are going or how to get there unless you set the course through the preparation of a plan? Our planning process involves 8 steps beginning with a Statement of Facts.

Statement of Facts

A frank appraisal of your services, your customers, the market in which you operate, your competitors, and your progress to date. It is an internal document, and should be written with candor and directness. It should review where you are and what you've tried to do on an objective impartial basis.

Start with an objective appraisal of the services you offer, the advantages and disadvantages. Include anything you know about client attitudes, what they like and what they don't like.

Identify who your principal customers are. Do they represent any special age, income, geographic group, socio-economic or educational level? Why does your program appeal to them?

In any summary of this kind, you will also want to deal with government influence and pressure on your business.

Keep in mind that the Statement of Facts, or situation review, is the longest and hardest part of the planning process because it contains all of the information needed for the rest of the plan.

Problems and Opportunities

Go back through the Statement of Facts, and list in the order in which they are discussed all the Problems and/or Opportunities listed.

List Problems and/or Opportunities whether they can be solved or not. Recognition of the problem is the first step in solving it.

Identification of Objectives

Take the Problems and Opportunities list and identify those you can do something about. Rank them in order of importance.

State objectives in a specific fashion, with results to be desired stated so that there can be an accurate measurement. State objectives in terms of end results, not vague or intermediate result.

This section is the core of your Marketing/Business Plan.

Action Plans

Look at your list of Objectives, and decide what and how you are going to meet them. Put together programs aimed at pointing the whole organization toward reaching the objectives you have classified and assigned priorities.

Develop as many Action Plans as needed to cover all the Objectives. One Action Plan, however, may cover several Objectives.

Develop Your Calendar

No organization can do everything at once. Besides, your organization already has a planned beat to it, with regular activities traditionally scheduled for different parts of the year.

Take your Action Plans, each of which should have a time-frame built into it, and schedule them out on a 12-month Calendar. Adjust as necessary to fit.

Share Information

Make sure everyone is operating under the same Calendar or Marketing/Business Plan. The Action Plans should be reviewed with all who will be involved in executing them. All staff members should be given a sense of the year's total program so that they can participate as needed, and provide support at all times.

Check Progress and Modify

At least Quarterly, take a few minutes to review the Marketing/Business Plan to see what has been accomplished. A good plan will incorporate places to mark progress and record results.

Your plan should be a "living document." To have it accomplish this purpose, you have to keep it current, but the effort will pay off in more productivity, more order to what you do, and a clearer vision for the whole organization.

In Time, Delegate

The first plan will probably be a one-person document, with all of the work done by the originator. In subsequent years, you will want each department or each group in your organization to do their own planning, along these guidelines. Then, your job will be to consolidate their plans to form a master Marketing/Business plan for your organization.

Of course, preparation of an annual Marketing/Business Plan is very time consuming. That's why most companies never get around to doing it. But, that is also the proof of why you need a good plan. Any company that is so busy with today's problems that you can't plan for tomorrow is obviously in need of planning to get out of the cycle of never having time to plan.

Thank you for your attention. I'd be glad to answer any questions you have about marketing, advertising or annual planning.

Marina Insurance

Common Problems and Solutions

Scott W. Andrews
Fred S. James & Co. of Washington

At this workshop today we are addressing current and projected areas of concern for owners and operators of businesses related to marina facilities. As a major national brokerage firm and the largest insurer of public port business, as well as having a major involvement in watercraft and marine exposures, we have found three major areas of interest that pose unique insurance problems to your type of business.

However, before we get into these three areas, let's take a brief look at insurance market conditions over the past half-dozen years as well as a brief analysis of today's market so you can better understand what you are up against and why this is an ideal time to review your insurance program so you will be in a good position for the next few years.

Brief Historical Outline and Current Insurance Environment

Four or five years ago, there was a real crisis in the insurance business. Insurance was simply too expensive and too hard to get. What were some of the conditions that brought on this crisis?

First, inflation was (and still is) producing a constant pressure on losses and, subsequently, on premiums. Too often statistics or losses lagged behind, triggering an over-reaction that boosted premiums in the hope of recovering deficits.

Second, the losses of the years 1974 and 1975 were astronomical, reducing insurance companies' surpluses alarmingly. At the same time, the stock market was depressed and exerted further pressure on surpluses. Since surplus is the basis of the insurance market, and permissible premium writings are a factor of surplus (usually ranging

from one and a half to three or four times surplus), a reduction in surplus forces a company to curtail writings.

We had, therefore, on the one hand a greater demand for insurance based on inflation and rising losses yet, on the other hand, a reduction in available coverage capacity. As premiums rise, if the total premium capacity is restricted, the total number of risks insured must be reduced, or the premiums per risk must increase, to maintain the balance of premium to surplus. The result is a tightening market.

Where are we today? Well, in the past year or so we have experienced a very loose market condition as previously increased rates have produced a profit for the insurance companies and induced new capital which has been invested at attractive rates of interest. The market has therefore become very competitive, but I believe has hit close to bottom and will, once again, go into an upswing within the next year or so. Right now, while companies are cutting premiums substantially, losses are once again on the rise. In fact, the only reason many companies are not experiencing red ink conditions is due to their investment portfolio. With inflation, recession, prime rate factors, stock market fluctuations and regulatory restrictions, these loose market conditions are not likely to continue much longer.

For you, the businessman, that makes this an ideal time to take advantage of the competitive market to reduce your insurance costs and improve coverages before the market turns.

What are the insurance areas to be concerned about? Our experience in the marine-related industries has shown the following three areas to be either the most misunderstood or the most difficult (and that means expensive) insurance areas:

1. Care, custody or control of other people's property.
2. Property insurance for piers, wharves and floats.
3. Workers' Compensation coverage under the United States Longshoremen's and Harbor Workers' Compensation Act.

Insurance Problems and Solutions

1. Care, custody and control

Your standard General Liability Insurance Policy has an exclusion which reads as follows: "This insurance does not apply to property damage to property in the care, custody or control of the insured or as to which the insured is for any purpose exercising physical control."

This means that a boat dealer selling a boat on consignment, a repair facility repairing somebody else's boat or engine, a hoist operator, a fuel dock facility fueling other people's boats, or even simply a marina where somebody else's boat is tied to your dock, all create a condition where you have the care, custody or control of other people's property. Therefore, your General Liability Policy would not adequately protect you.

This problem can be easily solved by obtaining a Property Damage Legal Liability Policy that protects you for your legal liability to property of others that is in your care, custody or control. These policies have several different names depending upon your particular operation, such as: Marinakeepers Legal Liability, Wharfingers Legal Liability, Ship Repairers Legal Liability, Boat Dealers Legal Liability, etc. These policies are normally priced on the basis of your gross revenues received from the particular operation, and a deductible is usually applied to any loss. It is equally important, where you have a primary policy such as Marinakeepers Legal Liability, to also ensure that your Umbrella Excess Liability Policy is appropriately endorsed to provide the excess coverage for this exposure as well.

Remember, these endorsements and coverage for these items are not automatic. It is important that you communicate your needs and desires effectively with your broker, and that your broker is experienced and well-versed in your type of business. Only then can you be confident that you won't have gaps in your insurance program or that you aren't paying too much for the coverage.

2. Property insurance on piers, wharves, and floats

The standard Property Insurance Policy contains the following exclusion: "This policy does not cover piers, wharves and docks ...pilings, piers, pipes, flues and drains which are underground, pilings which are below the low water mark."

The simple solution to this problem is that you can very easily endorse your policy to insure the dock, pilings below water, etc., as your needs may be. However, it seems like there is always a catch to these sorts of things and the standard policy form is no exception. If you do take the trouble to endorse your policy to properly insure the piers, docks, etc., a further exclusion about half a page down on that standard form states: "Piers, wharves or docks, when covered under this policy, are not covered against loss caused by impact of watercraft, or by the pressure or weight of ice or water whether driven by wind or not." This simply means that if you do insure your marina floats, you also have to take the next step to endorse your policy further to make sure those floats or docks are covered for damage by vessel collision or wave action. We recommend this quite simply because the two major sources of loss to marina facilities are from collision or wave action.

Of course many times we hear the question "Why insure pilings below water, surely they can't burn, and if it is struck by a boat, couldn't we collect from the boat owner?" Of course the piling isn't going to burn below the water line, but we've found that the average dock has one-third of its value below water in the cost of pile driving and the piling itself. After a major fire, you can rarely reuse old pilings, and the cost of pulling them out and re-driving is expensive. Since the risk of loss for the pilings below water is considerably reduced, the rate charged by the insurance company should also be appropriately less. If your broker does a good job of negotiating an appropriate rate to balance the risk, then you should be able to easily justify insuring those pilings.

As for the question of collecting from the boat owner, I am sure you will all recall that the Spokane Street Bridge was rammed several years ago by a freighter and stuck in the upright position. It took the attorneys for the City of Seattle over two years to collect \$2,000,000 from the boat owner for damages. In the meantime, the City has contracted to spend \$184,000,000 to replace the bridge. The loss of investment income alone for a period of two years on \$2,000,000 is substantial, to say nothing of the attorney's fees involved. The fact that the money collected is negligible compared to the replacement cost confirms the need to insure all of these properties. If you insure your properties your insurance company will reimburse you for the loss and then they will shoulder the burden of spending two years' worth of legal fees to get some of the money back. Meanwhile, you won't have the problem and your property will be back in operation with minimal interruption.

Our recommendation here is that you should insure all assets that have a possibility of loss, and let the rating mechanism price the coverage at the appropriate level to reflect the probability.

3. United States Longshoremen's and Harbor Workers' Act

Coverage under the various state Workers' Compensation Acts does not extend to classes of employment that essentially are not under state jurisdiction. Such classes of employment would include employees working on federal government property, and employees working on or adjacent to navigable waters of the United States. Coverage for such employees is provided for under the United States Longshoremen's and Harbor Workers' Compensation Act (USL&H Act).

A major revision of the USL&H Act was enacted by Congress in 1972. This 1972 Amendment to the Act extensively altered the benefit level by providing broader benefits to employees covered by the Act. In addition to the benefit changes, two changes of significant importance were made to the coverage provided. These changes were extension of the Act to shoreside areas, and elimination of the remedy of unseaworthiness to longshoremen engaged in stevedoring operations.

A. Extension of Coverage to Shoreside Areas:

The previous Act, insofar as longshoremen, ship builders and ship repairmen were concerned, covered only injuries which occurred on the navigable waters of the United States. Thus, coverage stopped at the waters edge; injuries occurring on land were covered by State Workers' Compensation Laws.

It was the intent of the 1972 Amendment to preclude having the level of compensation payable to a longshoreman, ship builder or ship repairman dependent upon luck as to whether or not they injury occurred over land or water. Accordingly, the Bill amended the Act to provide coverage to longshoremen, harbor workers, ship repairmen, ship builders and other employees engaged in maritime employment - excluding masters and members of the crew of the vessel (these are covered under the Federal Jones Act). If the injury occurs either upon the navigable waters of the United States or any adjoining pier,

wharf, dry dock, terminal, building way, or other area adjoining such navigable waters customarily used by an employer in loading, unloading, repairing or building a vessel, the employee is entitled to benefits under the USL&H Act.

B. Elimination of the Unseaworthiness Remedy:

The most beneficial change in the Act, as respects Workers' Compensation insurance, was the elimination of the doctrine of unseaworthiness as respects third party actions by injured longshoremen by providing that such actions may be brought against vessels only on the basis of negligence. The Act previously permitted the vessel to recover damages for which it was liable to an injured worker, where it could be shown that the stevedore breached an expressed or implied warranty of workmanlike performance. The Amendment has therefore not only established the Act as the exclusive remedy to the longshoremen, it has also specifically prohibited an indemnity action against stevedoring companies.

The net result of the Act Amendments was to substantially increase benefits and broaden the scope of the Act to all classes of maritime employment.

Insurance to cover the provisions of the United States Longshoremen's and Harbor Workers' Act can be purchased as an independent policy; through a Maritime Endorsement to a Workers' Compensation Policy (for those states such as Oregon or others where coverage is not exclusively handled by the State); or by endorsement to a Boat Policy for facilities such as tugboat operators, fishermen, etc.

It should be noted that political subdivisions, such as public ports, are specifically exempted from the provisions of the USL&H Act, and therefore they do not have this direct exposure. However, they have a contingent exposure in the event that they hire a subcontractor to perform duties where the subcontractor's employees are entitled to USL&H benefits. In this case it is possible that the port could be responsible for injuries to the employees of the subcontractor.

However, whether you are a political subdivision or not, it is still good practice to insist upon certificates of insurance from your subcontractors, and require that subcontractors provide evidence of USL&H coverage in performing duties involving loading or unloading, pile driving, dredging or repairing of vessels under contract to you. By the use of appropriate Hold Harmless or Indemnity Agreements in your contracts, and by your insistence upon receiving certificates of insurance verifying USL&H coverage, you can go a long way toward convincing an underwriter that you have a contingent exposure and obtain the reduced prices accordingly.

Thank you for your attention, and I would welcome your comments or questions either here today or at a later date if you would care to contact me independently. Thank you very much.



SESSION 5

Marina Design, Construction, and Evaluation

PANELISTS

**John O. Olsen
Sherman Burd
Rick D. Cardwell**

Dry Storage Systems in the '80s

John O. Olsen
Reid, Middleton & Associates, Inc.

Introduction

Several types of dry storage have been considered as alternates for wet moorage, such as open dry, semi-open stacked (roof only), stacked covered (inside building), and single level covered dry. Each type can, under varying circumstances, provide a viable alternate for a portion of the wet moorage needs and demands.

Major factors that must be considered in selecting the most appropriate type of dry storage are both physical and financial, and include such items as: availability of uplands adjacent to navigable water, density of land coverage obtainable, size of boats to be stored, and how size relates to launching or retrieval, boat traffic generated to and from the water, capital costs of the facility, land values, cost of operating the dry storage facility, the marketability of the selected facility and the revenue that can be earned from moorage fees to pay for operational and capital construction costs. Each of the above factors are so interrelated that each facility must be considered individually to determine the most suitable type of storage for the site and circumstances.

Market Considerations

When considering dry storage as an alternate for wet moorage, the selection of size and type of boats that are presently being stored in the Puget Sound Region seems to be fairly common.

Generally, these are power boats from 18 to 26 feet. The question has been asked--why not store larger boats as well, thereby relieving some of the high demand for wet moorage?

I believe that one of the major considerations in determining limiting sizes is the present technology and standard available means of transferring boats between the water and the storage facility and the rate that the transfers can be made.

The more common types of transfer methods and their special features and limitations are as follows:

1. Overhead Marine Rail (Utilizing Traveling Hoist and Slings)
 - o Requires secondary transport to and from storage
 - o Will not handle sailboats
 - o Capacity 4 tons (boats up to 27 feet)
 - o Launch rate, average 6 minutes/boat
2. Travel Hoist and Pier
 - o Capacity 25 tons to 100 tons
 - o Requires special operator
 - o Requires secondary handling at storage facility (except open yard storage)
 - o Launch rate, 20 to 30 minutes/boat
3. Stiff Leg Boom Hoist
 - o Requires secondary transport to and from storage
 - o Requires special operator
 - o Capacity 25 tons (boats 28 to 50 feet)
 - o Launch rate, 20 minutes/boat
4. Marine Rail or Elevator and Pier
 - o Requires secondary transport to and from storage
 - o Requires special operator
 - o Capacity 25 tons
 - o Launch rate, 10 to 60 minutes/boat (depending on boat size)
5. Sea-Wall Mounted Fork Lift Mast
 - o Requires secondary transport to and from storage
 - o Restricted negative mast reach
 - o Capacity 1-1/2 tons
 - o Launch rate, 5 to 60 minutes/boat
6. Lift Truck With Negative Lift Mast
 - o Restricted negative lift (not acceptable in tidal waters)
 - o Capacity variable (see notes under Item 7)
 - o Launch rate dependent on distance from storage

7. Inverted Gantry

- o Restricted negative lift (for cost reasons)
- o Capacity 2 to 7 tons
- o Launch rate 3 to 5 min.

8. Lift Truck for Stacking and/or Secondary Transport To and From Storage

- o Capacity - Lift truck capacities are normally rated for load centers at 24 inches from the mast. These capacity ratings must be reduced as the load center moves out for the various size boats to be handled, i.e.,:

Rated Capacity	Boat Size	Approx Wt Empty
4,000 pounds	12 foot	(1,000 pounds)
5,000 "	15 "	(2,000 ")
8,000 "	18 "	(3,000 ")
10,000 "	21 "	(4,000 ")
15,000 "	24 "	(5,000 ")
20,000 "	27 "	(5,000 ")
32,000 "	30 "	(8,000 ")

- o Secondary transport rate must match launcher capacity

In selecting a launching system, consideration must also be given to the rate of launching that will be required from the facility.

For example, based on boat trip generation studies in the Puget Sound Region, on a summer weekend day, 27 launches and 27 retrievals could be expected for each 100 boats in the dry storage facility. If boat sizes are under 8000 pounds, there are several launching systems available that can average about six minutes per launch or retrieval. Assuming that the launches occur over a four-hour period, say 6:00 a.m. through 10:00 a.m., then one launch system unit would be required for every 150 boats in storage. If boat sizes were larger than 8,000 pounds, then the launching system required is larger, more costly and much slower. For instance, at an average launch rate of 15 to 20 minutes per boat, over the same time period, the storage facility would require one launch system for every 50 boats in storage.

A recent survey of boat yards in the Puget Sound area utilizing this type of launching indicates that the average charge to launch and retrieve boats over 28 feet in length is about \$1.50/foot. For a 28-foot boat, this would be \$40.00/trip and \$60.00/trip for a 40-foot boat. (For comparative purposes, it should be noted that these are charges, not direct costs, and include overhead and profit for the operator.)

From the preceding example, it appears that at least for the next decade, the major market for dry storage will be for trailerable size boats in the range of 18 to 26 feet. Considering that from 70 to 80% of the boats in the Puget Sound area fall in this category, there is a substantial market if it can be economically captured.

In considering the financial feasibility of a dry storage system and the revenues required to cover operational costs and capital recovery costs, one must give serious consideration as to what is offered to the boat owner for his moorage fee, since unless the boat owner lives in a high density area where it is difficult to find a parking space for a car, let alone a boat and trailer, he always has the option of storing the boat on a trailer away from the marina. In most cases, the enticement to the boater for his moorage fee is free and convenient launching whenever he desires. This may entail having some supporting protected wet moorage adjacent to the dry storage so that boats can be pre-launched or retrieved later by the marina operator, thereby providing better service as well as expanding the capacity of the launching system.

Alternative Dry Storage Systems

Basically the types of dry storage are open yard, covered warehouse type buildings, individual garage-type covered and stacked storage racks, both inside buildings, and open with a cover over the upper tier. Comparing the various types of dry storage is difficult in that each type may be better suited for a particular site or application than the other. The large open dry marina such as Dagnars Landing is an ideal application at that site where a large tract of relatively inexpensive level land was available adjacent to navigable water. The advantages that this marina and its innovative launcher and ramp combination has is that the boat needs to be handled only one time from its stall to the water and quick launch and recovery time.

The disadvantage to this system is the high capital and maintenance cost of the large Terex-type loaders required to launch and retrieve directly from the boat launch lane, and the space requirement needed for operation. Obviously, with the proper circumstances, this type of operation can be very successful.

Stacked dry storage has proved immensely successful in areas like Florida and California where there is not a restricted boating season, and on inland waters where tidal fluctuations are not a factor. Another factor relating to climate is the mix of types of boats generally in the stack. A typical trailerable Puget Sound pleasure boat will have some kind of cabin or cover requiring a larger space in the stack. Generally, there are not as many low profile boats as there are in fairer climates, thereby reducing the density in a typical Puget Sound area stack.

Typically, stacking storage racks are available as pre-engineered components that can be assembled to specific needs to store boats 2, 3, 4 or 5 high, with modules designed to fit various sizes. Most modules, however, are designed such that the maximum sized boats to be stored have an 8-foot beam and lengths up to 26 feet, with the majority of the boats in the stack smaller. Also, this size restriction utilizes the optimum fork lift rated capacity of about 18,000 pounds, and is tuned to meet launching requirements previously discussed.

The major advantage of stacked storage systems is the maximizing of the number of boats that can be stored in a given area. This, in most cases, will be the overriding reason for providing this type of storage. The disadvantage to stacked storage is that it is labor intensive.

Stacked storage systems normally experience two-thirds of their operating expenses being for labor, and of course, operating expenses have a major impact on rates that must be passed on to the user. There are several very successful stacked storage systems of this type now operating in the Puget Sound Area.

I have been particularly intrigued by a stacking system designed and patented by Andrew Filak which is now being marketed by Meeco Marina. This system is built on or partly over water and utilizes an inverted gantry crane with fork lifts. In this operation, one man riding in a bucket adjacent to the fork lift can launch or retrieve boats directly from stacks on either side of the crane, to or from the water. The large negative lift and capacity that is required in the Puget Sound Region, has to date proven not to be economically feasible when compared to other methods.

The third type of dry storage that has been successfully utilized in the Puget Sound area is the individual garage-type single level storage units which are constructed adjacent to a sling type overhead marine rail launcher. The major advantage in this systems is the low operation cost. This is accomplished by the tenant moving his own boat to and from the storage shed and personally operating the sling hoist which is key operated thereby controlling the use of the facility to shed tenants only.

Operation in this manner nearly eliminates marina labor costs. Disadvantages to this system are that it does not maximize boat density on a given piece of land nor does it provide the same level of service to the boater. This, however, is usually reflected in a lower moorage rate. A secondary benefit to shed-type storage is a reduced risk on the capital investment in that if the market demand has been overestimated, the sheds can be leased for other purposes such as mini storage.

Trends for the '80s

Presently, I do not feel that we have the same pent-up demand for dry storage that is evident for wet moorage. I say this because at most of the dry storage facilities in the area, there is available space for rent.

I do believe, however, that we will see a steadily increasing demand for dry storage for the following reasons:

- a. Environmental considerations are making it more and more difficult to construct wet moorage, and those that are built will be restricted to larger boats and/or boats that do not have a dry storage alternative.

- b. The unavailability of wet moorage space will cause many boat buyers to buy boats in the trailerable size that do have an option for dry storage.
- c. Fuel conservation programs and the cost of fuel is reducing the size of our automobile fleet to the point where soon most cars will not have the capability required to pull or launch many of the larger trailerable boats.
- d. The cost per stall to develop dry storage is about 1/2 that of a comparable wet moorage stall which will be reflected in moorage rates.
- e. Costs of single family housing is forcing more condominium and apartment-type housing creating higher density living areas with less available space for secondary parking uses.

It is our belief that the best opportunity for dry storage in the 80's will be in expansion of existing marinas, where labor and overhead costs can be jointly assigned.

Lastly, we may see dry storage developed as condominium units just as we are now seeing that trend occurring in wet moorage facilities.

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Marina Utilities and Codes

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Introduction

During the past two decades, the moorage industry has experienced substantial growth in both the demand for, and the number of moorage facilities provided. During that period, existing code requirements have been upgraded and many new rules have been added. Considering the environmental impacts of new marina construction, it appears prudent to expand existing facilities to the fullest extent possible prior to constructing new facilities. This condition will often lead to conflict with code requirements in that adding to, or changing portions of existing facilities, often will require the upgrading of the entire facility thereby creating physical and economic conditions which may not be feasibly satisfied.

This paper will attempt to identify the utilities required in a moorage facility and the changing trends that have taken place in the past and those that might be anticipated in the future.

Water Supply

Some of the changes in marina water supply requirements that have taken place during the past several years that have a major impact on marina water systems are:

- a. User demand for improved facilities.
- b. Cross connection control guidelines and enforcement.
- c. Passage of the Federal Safe Drinking Water Act.
- d. Increased demand and necessity for fire protection.

As in the case of all water distribution systems, development plans must be reviewed and approved by the local Health Agency or the Department of Social Health Services district engineer. If the marina is served by an existing municipal or public water system, most of the water quality requirements will be the responsibility of that purveyor. If, however, the marina has or is developing its own source of supply by means of a well or surface water, then that system becomes a public water supply and must be maintained and operated within the rules and regulations of the State Board of Health.

If a well or surface water is to be developed or used, an additional water rights permit must be obtained from the Department of Ecology, and of course, the source and water quality must be approved by the local Health Agency.

If you are now operating or plan to operate a marina water system, it is recommended that you obtain and study the following manuals:

- a. Rules and Regulations of the State Board of Health Regarding Public Water Systems.
- b. A Guide for Securing approval of Small Public Water Supplies.

These are both available through the Health Service Division of the Department of Social and Health Service.

Requirements for fire protection will vary depending on locations, availability of water, and the capabilities of the local Fire Department. In each case, this determination should be made by the local Fire Marshal.

With regard to system demands or how much water will the marina require for design purposes or cost analysis, our research has indicated that during the peak two-month boating season, a basic marina, which would include an office,, restrooms, showers, and berthing facilities for approximately 300 boats, the average domestic usage will be about 11 gallons/berth/day. This estimate should be increased for other uses such as restaurants, stores, or other uses on the site.. Additional considerations should be given if a high percentage of live-aboards are permitted. Of course, the system design should provide for peak and instantaneous flows. Fire flow requirements may range from 50 to 250 gpm, for specified periods of time. This may dictate on site storage capability.

For the '80's, we would expect to see an increased awareness with regard to maintaining water quality and a continued upgrading of fire control requirements.

Sewage Disposal

During the past decade, Federal regulations requiring on-board treatment or sewage holding tanks on boats have been implemented necessitating the need for installation of sewage pump-out facilities at marinas.

Environmental Health Guidelines for Marina Development and Operation have been established by the Department of Social and Health Services setting forth requirements for sewage pump-out facilities, and restroom fixture requirements for various size marinas.

Jurisdiction for approval of a sewage disposal system lies with the local health officer, for estimated flows of less than 3500 gallons per day and with the Department of Social and Health Services for estimated flows over 3500 gallons per day.

If a public sewer system is available, then such system should be used for disposal. If, however, a septic tank and drainfield, or in some instances holding tanks, are to be utilized, they must be constructed in accordance with the requirements of the local health officer. For disposals in this manner, fairly accurate estimates of sewage flow rates from the facility are required.

Several methods are available to estimate flows. The method that we prefer is a comparison to measured flows of a comparable facility. Our experience has indicated that sewage flow will be slightly less than 1/2 of water consumption at the marina, or about five gallons/berth/day during the peak two-month boating season. Another method would be to estimate the number of people utilizing the facility, and based on the Manual of Septic Tank Practice, select a flow of 10 gal/per/day which would be equivalent to the use at picnic parks with bathhouses, showers and flush toilets. This method has given comparable sewage flow rates when an accurate estimate of people using the facility can be made, either from traffic studies, or head counts.

Typical examples of sewer installations or planned sewer installations at locations where public sewers were not or are not available, which we have designed are: a.) The Eagle Harbor Marina, where a holding tank complex, together with a contractual agreement for hauling sewage to an approved waste site, has been approved and constructed, and b.) The proposed Sequim Bay Marina where a septic tank and drainfield complex has been approved.

We would expect that in the '80's, it will be increasingly difficult to obtain approvals for the utilization of holding tanks for anything other than a short term temporary solution. We would also expect to see in addition to the sewage pump-out stations, a requirement to provide dump stations for portable toilets.

Solid Waste and Waste Oil

These are not utilities as such, but we would briefly like to mention these items because we have found that unless you are an experienced marina operator, the collection and disposal of garbage and waste oil is often not given sufficient consideration in preliminary planning and design, but will become a major cost factor in the operation of the marina. Again, during the peak boating season, you should expect from 1 to 1-1/2 cubic yards of uncompacted garbage per day for every 100 boats in the marina.

Waste oil is not generated so quickly but if some facility is not provided, it will be dumped with the garbage after making a mess and a fire hazard.

Distribution of Utilities on Floats

With the exception of the Nation Fire Protection Association Bulletin No. 303, which has to do with fire protection in marinas and boat yards and the National Electrical Code, existing codes do not specifically address installation of the utilities on floating docks. This means that it is up to the system designer to a) assure that the work as installed is done in a reasonable and acceptable manner, b) to interpret existing codes as they may be applicable, and c) be designed in a manner satisfactory to the approving agencies.

Over the past twenty years, there has been a marked change in both the number and size of utility conduits that must be furnished from the shoreline to the floating dock structures. This change has come about from increased fire protection and sewer pump-out requirements, and from user demand for increased electrical service. For example, in 1962 when the Port of Edmonds was designed, two 1-1/2" conduits provided both water and electrical service to a float with 60-70 berths. For the most recent marina that we designed at Eagle Harbor which includes approximately 100 berths, there were eight conduits ranging in size from 2" to 1-1/4", six of which were for electrical service. This did not include additional conduits anticipated for telephone or intercom service. Eight conduits does not seem like a large number until you consider the distribution junction points required and the methods of mounting these conduits in or on the float system.

Each system has a solution, i.e., under the deck, under the waters, cast in place conduits, center trenches, side trenches or whatever. Notwithstanding all of these solutions, of all the marinas we have designed, and we have probably designed more marinas than any other consulting firm in the state, we have yet to design one that did not require special consideration in the location and mounting of the utilities on the float system.

Electrical

National Electrical Code (NEC) Article 555 covers marinas and boatyards. This includes fixed or floating piers, wharfs, docks and other areas in marinas, boatyards, boat basins, etc., used for repair, berthing, storage, launching, or fueling of small craft and the moorage of floating dwelling units.

This code section is short--it covers only three pages. Typically, however, it refers to other sections and other documents. Section 210-19(a) and 215-2(e) covers voltage drop requirements. NFPA 302-1972 (ANSI) covers disconnection of power from boats.

Receptacles to supply power to boats must be rated 20 amperes or more, must be of the locking grounding type and must each be protected by an individual overcurrent device (generally a breaker).

Other outlets (not for power to boats) can be 15 or 20 ampere 120V receptacles but these must be protected by ground-fault circuit interrupters.

Feeder and service conductor sizes must be calculated as specified in NEC Section 555-5. This diversity table has some very peculiar steps. As a result, there are certain numbers of outlets for which we do not design--we increase the count to the next quantity break and indicate future expansion. This results in a lower requirement for the feeder and service than designing for the lesser quantity of outlets.

We have checked this procedure with the state electrical inspector. Also we have never had voltage drop or overload problems when using this design approach.

Wiring Methods are broad, most common wiring methods are permitted. These include:

- Rigid non-metallic conduit or PVC
- Mineral-insulated metal sheathed cable or MI
- Non-metallic cable type NM or NMC. However, NM is permitted only in dry locations while NMC is permitted in moist or damp but not wet locations. These could be used in buildings on the piers or floats.
- Corrosion resistant rigid metal conduit. This could be galvanized or PVC coated galvanized. We do not use galvanized conduit under, or along the floats.
- Underground wiring per NEC. This could be Type UF in duct or conduit.
- Type MC. We have not used metal-clad cable, but believe that if the proper metallic sheath were used, it could be very satisfactory.
- Open wiring. That is, knob and tube--is permitted by code if acceptable to the inspector. This can be a very satisfactory wiring method for covered moorage feeders.
- For additional wiring methods, we are referred to NFPA 303-1975. This is the source that allows Type S and/or Type G cable where flexibility is required.

Grounding is a problem covered by NEC. A green or green with yellow stripe insulated copper grounding conductor must be run with the circuit conductors (and in the same cable or raceway) throughout the system. It must be connected to all boxes, cabinets or other metal enclosures (electrical), to the frames of all utilization equipment and to the grounding terminals of grounding type receptacles. The grounding conductor or conductors must extend from the grounding terminal in the service equipment to each receptacle or piece of utilization equipment.

The sizes of the grounding conductors are based on NEC 250-95 but cannot be smaller than No. 12.

Wiring Over and Under Navigable Water must be approved by the authority having jurisdiction. This means that in addition to the electrical inspector someone else may have jurisdiction. We start with the Coast Guard.

Clearance or Navigation Lights. While talking to the Coast Guard, check to see if clearance or navigation aid lights will be required.

Gasoline Dispensing Stations are now covered by NEC Section 555-9. Wiring and devices must meet the requirements of other sections for hazardous locations. 555-9 defines the hazardous areas around gasoline dispensers.

Floating Dwelling Units (or what we call house boats) are included in the 1981 NEC. Wiring of the units must meet other code section requirements. Services must have sufficient flexibility while maintaining clearances. Ground continuity must be assured between an earth ground on shore, the incoming electrical system and the floating dwelling unit.

State of Washington Electrical Rules impose one additional requirement. A disconnect device must be provided at the shore end for (500 volt or less) electrical services to floating facilities. These disconnects must meet service entrance requirements and must be at the shoreline street side of the first point of construction.

Application Problems

Voltage drop is generally a major design factor. The usual methods--high feeder voltage, multi-wire circuits, oversize conductors are used to minimize voltage drop. Generally, we use 277/480V 3 dia. 4W shore to float feeders but have used most other "standard" voltages both 3 phase and single phase.

On Float Sub Feeders. We step the 480V shore to float voltage down at one or more locations on the floats. Transformer secondary voltage is generally 120/240V 1 dia. 3-wire because this permits supplying both 120V and 240V outlets from the same feeder. 120/208V, 3-phase, 4-wire may also be used. We find no demand for 3-phase power on pleasure craft.

Power Outlets for Boats. Many of our designs are for metered outlets and where possible, we group these into pairs. We find that a thru or loop feed works well and allows the greatest use of the code diversity table. Meters grouped at a common point are sometimes used but generally must be justified on the basis of meter reader time savings. Larger conduits and more conductors are generally required with grouped meters.

Float lighting is often included in the outlet assembly package. With metered receptacle assemblies on a loop feed, it is simple to take a tap through a photo electric control to a light. Lights are generally mounted low--about 3 feet or less in height when integrated with outlets. We have also used fluorescent, mercury vapor and HPS luminaire on poles with 12- to 15-foot mounting height. However, the low lights seem to be more acceptable from an aesthetic standpoint and we have not had the expected complaints of inadequate or poor lighting. The use of incandescent lamps for these fixtures is not desirable from the

standpoint of efficiency and lamp life is poor. A recent installation at Eagle Harbor makes use of fluorescent lamps mounted at low level.

Corrosion is an ever present problem. We pay particular attention to devices and boxes, conduit threads, liquid tight flexible metallic conduit and fittings, all conductors connections and all supports as well as box and outlets assembly mounting areas.

Development of a Power Outlet Assembly. Early marina power outlet assemblies were mobile home park units or were adapted from such units. Corrosion resistance was poor and non-locking receptacles were often used. Modern marina power outlet assemblies are much improved but we still find rusting of screws, hinge pins, and of mounting posts where they bolt to the float. Many mounting posts and brackets are inadequate.

Many years ago, Reid, Middleton used assemblies of individual components such as meter bases, junction boxes, enclosed breakers and receptacles all mounted on wood or meter bracket structures. A "Pagoda" style garden light fixture was mounted above the assembly where desired.

When metered marina approved outlets became available, we incorporated them into the assembly. Finally dual assemblies became available and we used these both with our own mounting brackets and with factory "posts." The factory posts were high (to satisfy NFPA 303) and we found them mechanically weak, especially in torsion.

Combining various suggestions, we went to a galvanized sheet steel wrap-around support with drip cap. This was strong but rusted in the bolt down area. The idea seemed sound, so we discussed it with various outlet assembly suppliers.

As a result, a new outlet assembly was designed and first used at the Port of Everett. However, there were still deficiencies such as rusting of hinge pins and bolt down areas and the light was still a short life incandescent bulb in a "Pagoda" fixture.

A second generation design has been developed. It includes stainless steel hinge pins and exposed screws, hot dip galvanizing of mounting flanges and a built-in fluorescent light which may have its own circuit breaker and photo electric control if desired. The unit is normally provided with loop feed lugs for three wire 120/240 volt use, ground bees, meter bases, breakers and receptacles as specified. A barriered space for communication terminals can also be provided.

The first installation of these units has recently been completed at Eagle Harbor.

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Water Quality

Biological Implications

In Pacific Northwest Marinas

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Abstract

Water quality in Pacific Northwest marinas was reviewed with respect to pollutant sources, response to flushing, and biological effects. Dissolved oxygen (D.O.) declines and water temperature increases appear to be the two most important water quality changes in marinas. From especially August through October, D.O. declines to hypoxic and even anoxic levels occur periodically in waters at and just above the bottom. The declines, apparently due to enhanced sediment oxygen demand, appear to become especially severe with the onset of cloudy, colder weather in the autumn and at night. Effects on some species of sessile benthos seem certain, but impacts to mobile organisms and the benthic community need to be assessed. Though marina water temperatures can climb to at least 4°C above those of the source waters, the degree of increase as well as the highest temperatures attained probably do not exert major adverse effects. Although a variety of toxic, oxygen-demanding, and nutritive materials are introduced into marinas, quantities introduced probably have a minor influence on the abundance and composition of marine life. Currently, water quality changes in marinas cannot be reliably predicted on the basis of the amount of flushing of marina with source waters.

Introduction

Marinas are designed to protect boats from the energy that causes waters to mix and flow, and in so doing create conditions enhancing their water quality variability and ability to accumulate pollutants. To the natural resource agencies this behavior would be less noteworthy were it not for aquatic life's propensity to colonize, rear, or migrate through marinas. This increases the

probability of their being exposed to potentially adverse water quality, which increases in proportion to residence time. Resource agencies usually try to minimize the occurrence of water quality detrimental to aquatic organisms because society values marine waters for their multiple uses rather than dedicating their use solely to navigation and vessel storage. Mitigating potential water quality problems of marinas usually is directed at increasing hydraulic energy, and this usually involves modifying marina design to enhance circulation and, in salt water and estuarine marinas, tidal flushing. This paper examines the relationship between flushing and water quality within marinas and then addresses the sources, extent, and biological implications of documented water quality changes.

What are the Sources of Water Quality Change in Marinas?

The prominent sources of pollutants and water quality change in marinas and small craft harbors, summarized in Table 1, basically derive from land-based, man-made inputs (e.g., parking lot runoff) and those of natural origin. With the exception of human sewage and the threat it conveys to public health, concern mainly has focused on potential effects on aquatic life because most pollutants probably are not released in sufficient quantities to imperil human health.

Table 1. Sources of Pollutants and Water Quality Change in Marinas

Petroleum Hydrocarbons (e.g., oil, grease)

- o Runoff from parking lots and nearby urban areas.
- o Spillages via gas docks.
- o Boat motor operation, including exhaust.

Heavy Metals

- o Boat anti-fouling paint and sacrificial cathodes.
- o Runoff from parking lots and roads.

Oxygen-Demanding Wastes

- o Sewage from boats; fish and shellfish carcasses.
- o Respiration of plants, animals, and bottom sediments.

Organic Chemicals

- o Polychlorinated biphenyls from hydraulic fluids.
- o Pesticides in runoff from adjacent urban areas.
- o Sewage from boats (e.g., detergents).

Coliform and Pathogenic Microbes

- o Sewage from boats.
- o Feces from warm-blooded animals (e.g., sea gulls).

Water Temperature

- o Sun (solar radiation).

Freshwater (in estuarine or salt water marinas)

- o Runoff from streams, lakes, and parking lots.
-

What are the Biological Implications of Water Quality Changes?

Relationship to flushing

Water quality changes reflect a balance between pollutant inputs and removal rates. Pollutant inputs are more of a problem in freshwater marinas because removal is mainly a function of diffusion, wind-generated currents, and freshwater inputs, which usually are not consistently strong. In saltwater marinas the rise and fall of the tides not only augments these other dispersal mechanisms, but is the preeminent force removing pollutants. This process is called tidal exchange or tidal flushing, defined as the percentage of marina water replaced with new water after the tide has risen and fallen one time (i.e., one tidal cycle).

In theory, water quality change and tidal flushing of marinas are directly related, such that higher water temperatures and pollutant concentrations are expected in marinas having lesser flushing, such as illustrated in Figure 1. In reality, however, the relationship is less than straightforward because marinas rarely possess steady state conditions where a constant quantity of chemical is being introduced and flushed out. Actual conditions are much more dynamic, with pollutants entering and being removed at variable rates, not only by tidal flushing, but also by such processes as sedimentation and diffusion. One sees that the relationship between tidal flushing and changes for at least some water quality parameters appears to be too weak to set minimum flushing levels for salt water and estuarine-based marinas (Cardwell et al., 1980b). Evidently, more water quality parameters need to be measured. Nevertheless, the available data for several Puget Sound marinas suggests that when 25 to 30% of a marina's water is flushed out each tidal cycle, water quality appears to remain fairly close to that of the source water. What lower limit of flushing would still permit acceptable water quality awaits further research. It may be below 25 to 30% and fall on a point along a parabola, where there are rapid increases in water quality change when low, perhaps less than 10%, tidal flushing percentages are reached (Figure 1).

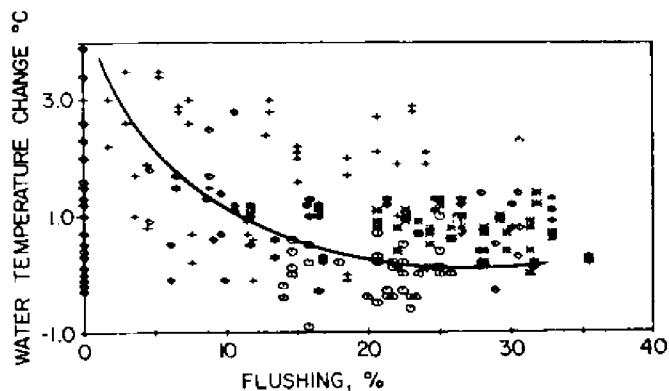


Figure 1. When marina tidal flushing is related to changes in a water quality parameter like water temperature increase, the predictive relationship is low. The postulated shape of the curve is shown by the solid black line. The different symbols represent different marinas (see Cardwell et al., 1980b).

Changes in water quality parameters

In west coast marinas it has proven difficult to document water quality changes that are of sufficient magnitude to kill aquatic life, and this probably accounts for the relative rarity of fish kills. This is not to say there are no adverse effects; rather they are subtle instead of catastrophic. Some species do not colonize marina habitats, but whether this is due to different water quality, an unsuitable bottom type, lack of circulation, or a combination of the three remains a puzzle (Straughan, 1980).

The major water quality changes in marinas appear to be (1) increases in water temperature, (2) decreases in dissolved oxygen concentration, and (3) increases in the concentrations of other pollutants.

Water temperature. Marinas become warmer than their ambient source waters because heat from solar radiation is being added faster than it can be removed by advective forces (i.e., tidal flushing) and diffusion. Based upon measurements made during the day, which are overestimates because heat losses at night are not considered, water temperature increases in a variety of Puget Sound marinas appear to be 4°C above those of source waters (Cardwell et al., 1980b) (Figure 2). This generalization appears to be true for marinas and harbors in southern California (Soule and Oguri, 1980; Straughan, 1980), Texas (Croliss and Trent, 1971), and Florida (Lindall et al., 1973). An animal encountering the elevated marina temperatures likely would be unaffected materially because the increases are much less than those known to be harmful to aquatic life (Brungs and Jones, 1977), including most embryonic and larval stages that usually are the most temperature sensitive (Andronikov, 1975). For example, newly-hatched (6 to 7 mm) herring (Clupea harengus harengus) larvae can survive 60-minute exposures to 25°C water when acclimated to 8°C (Barker et al., 1981), and 24-hour exposure to 22°C when acclimated to temperatures between 7.5 and 15°C (Blaxter, 1960). These temperature increases, on the other hand, will be enough to change the composition and abundance of species permanently inhabiting the marina because a species' ability to colonize a habitat depends upon a variety of factors (e.g., food supply and predation rate) affected by temperature in ways inimical to some species and favorable to others. This is one of the reasons zooplankton populations in embayments, for example, differ from those of the source water (Barlow, 1955; Cardwell et al., 1980a).

During July, August, and sometimes into September, diurnal water temperatures of some Puget Sound marinas may reach levels depressing the growth rate of some species, as exemplified in Figure 2 for juvenile salmon and trout. This occurrence is not unique, for there are many areas in Puget Sound, particularly in the southern part and in natural embayments, where summertime temperatures regularly exceed optimal levels for salmonid growth (Cardwell et al., 1980b). However, one should not judge the relationship between marina water temperatures and temperature tolerances of aquatic life without considering when species occur in the marina. For example, when water temperatures of Puget Sound marinas are warmest, usually in August, most juvenile salmon and trout have already left the inshore

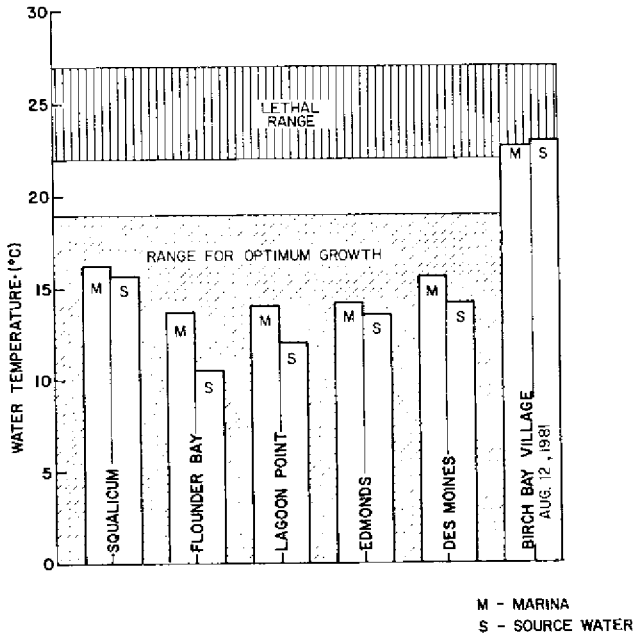


Figure 2. Maximum water temperatures observed in six Puget Sound marinas (M) compared to ambient source (S) water temperatures and those that are acutely lethal and optimum for growth of salmon and trout.

waters in search of better food supplies present in the offshore waters and the ocean (Healey, 1978). Likewise, larvae of many economically important species like Dungeness crab (Cancer magister), Pacific herring (Clupea harengus pallasii), and geoduck clam (Panope generosa), are spawned in the spring, and therefore will not encounter water temperatures that may retard growth rates. Species at risk would be those permanently inhabiting the marina (e.g., bay mussels [Mytilus edulis], barnacles, flatfish) and those spawning in the summer and autumn (e.g., surf smelt [Hypomesus pretiosus], manila littleneck clam [Venerupis japonica]).

Dissolved oxygen. In marinas the slowing of currents and turbulent mixing are conducive to proliferation of the drifting microscopic plants, the phytoplankton, and sedimentation of suspended inorganic and organic material. These events affect marina dissolved oxygen (D.O.), which is probably the major water quality problem in small craft harbors and analogous embayments. In Puget Sound and elsewhere, phytoplankton populations are more abundant in marinas and other protected embayments than in higher energy source waters, and during the day their net photosynthesis

can add substantial quantities of oxygen to the water (Croliss and Trent, 1971; Cardwell et al., 1980a; Winter et al., 1975). At night the process reverses, with plants becoming net oxygen users. Late at night the combined oxygen demands of the marina's plants, animals, and microbes may have reduced the marina's dissolved oxygen concentration, in some cases to biologically harmful levels. This is especially true for waters close to the bottom, where bacteria and other plants and benthic animals exert a substantial oxygen demand (Polak and Haffner, 1978; Boyd et al., 1978). The quieter waters of marinas serve as a site for sedimentation of particulate matter, and the organic fraction (detritus) supplies the carbon on which bacteria and other microbes feed while concomitantly consuming oxygen. Allochthonous sources of carbon, in the form of sewage or other organic matter, enhance sediment oxygen demand. Benthic plants (periphyton) may further alter the sediment oxygen budget where marina water depths are sufficiently shallow. This includes most marinas because their water depths usually average less than 3 to 4 meters (10 to 12 feet) in depth.

Generally during cloudy, warm weather in the summer and consequent to the collapse of phytoplankton and periphyton populations in the autumn, low D.O. in bottom waters occurs occasionally in small craft harbors and analagous embayments, (Cardwell, et al., 1980b; Croliss and Trent, 1971; Lindall et al., 1973; and Romaine and Boyd, 1979). In the Pacific Northwest, reduced and, in some cases, dangerously low dissolved oxygen appears to occur in most marinas (Cardwell et al., 1978; Cardwell et al., 1980b; Nece and Knoll, 1974) during late August, September, October, and possibly into November. The lowest D.O. would be expected near the bottom when (1) phytoplankton populations are high, (2) ambient source water D.O. is "low" (e.g., 5 mg/l), (3) the weather has turned cloudy and colder, and (4) it is at night.

Dissolved oxygen concentrations in marinas and embayments can descend to levels causing "fish" (actually both fish and invertebrates are involved) kills (e.g., Croliss and Trent, 1971; Reish, 1961) or changes in the species composition or occurrence of fish and invertebrates populations (Lindall et al., 1973). In most cases effects may be almost exclusively limited to bottom-dwelling organisms. Cardwell et al. (1978, 1980a) and Penttila and Aguero (1977) have observed apparently healthy populations of oxygen-sensitive species in Puget Sound marinas. In addition, Lindall et al. (1973) observed monthly changes in the number and abundance of fish and invertebrates species that appeared to change depending upon whether the D.O. at the bottom was low.

Dissolved oxygen profiles at and just above the bottom of marinas and the viability of benthic-epibenthic plants and animals needs further study to determine whether the ephemeral occurrence of low D.O.'s in certain sectors of marinas are having long-lasting impacts. For example, most sessile, benthic invertebrates seem particularly vulnerable, but species like clams and polychaetes have special tolerance to D.O. (Davis, 1975), and some clam species can close their valves to avoid transiently adverse environmental conditions. Although fish and mobile invertebrates like crabs and shrimp may be unable to consciously avoid low dissolved oxygen

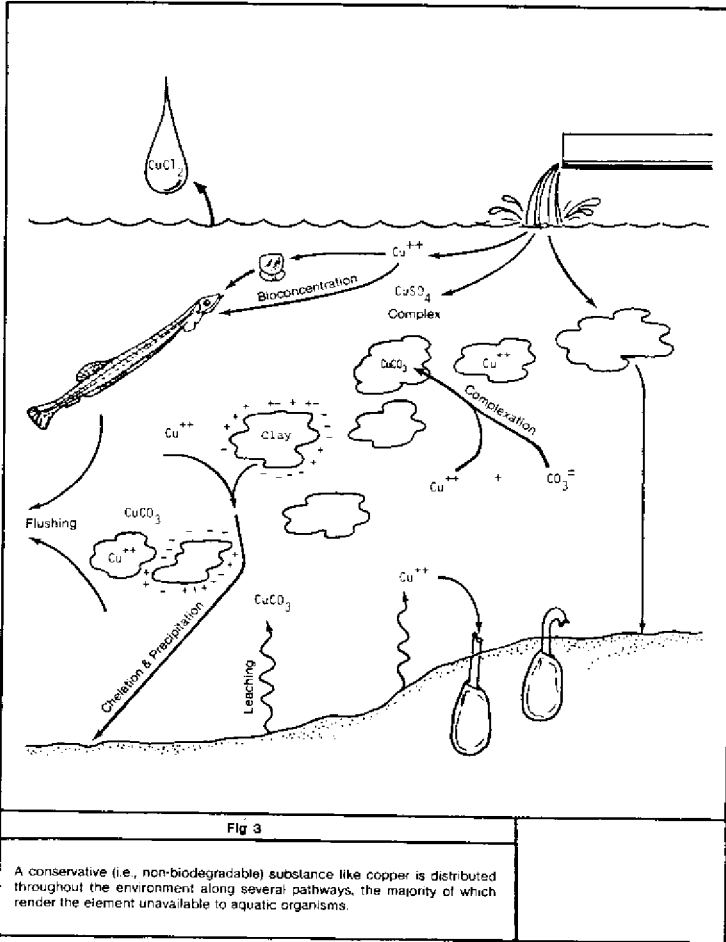
(Davis, 1975), they may be able to migrate to the areas (e.g., the upper water column) where oxygen concentrations usually are well above life-threatening levels.

Other pollutants. The remaining pollutant sources appear to be mainly of speculative or scientific importance because the concentrations appear to be generally below those known to be lethal or chronically toxic to marine organisms. There are several reasons for this. If a marina is distant from pollutant sources like sewage treatment plant outfalls and is receiving negligible quantities of chemicals via storm drains, biologically significant concentrations of toxic substances would be unexpected because the concentrations of chemicals being introduced by spillage or leaching, which appear to be very low, would be reduced further by the marina's flushing and other physical, chemical and biological fates.

Once chemicals like copper (a heavy metal especially abundant in boat bottom paints), pentachlorophenol (a wood preservative), and naphthalene (a constituent of gasoline and oil) enter marine waters, only small fractions remain in forms available to organisms. Often it is incorrectly assumed that all of the substance is biologically available and remains so. Figure 3 illustrates some of the fates that heavy metals undergo in marine waters. For instance, only the ionic form of copper (Cu^{++}) is available. Organic substances like pentachlorophenol and naphthalene experience similar fates (e.g., sorption to particulates). The compounds are also susceptible to degradation by bacteria and other microbes, decomposition by light, and evaporation.

In Pacific Northwest marinas the absence of fish kills or signs of diseased or stressed organisms unassociated with low dissolved oxygen may be ipso facto evidence that toxic chemicals do not approach or reach acutely stressful levels. Cardwell et al. (1980a) found that the waters of Flounder Bay, Washington were not acutely toxic to Pacific oyster larvae. They did observe significant elevations of copper and zinc in oysters held in the marina, findings mirroring those of Young et al. (1979), but these concentrations posed no threat to live oysters or man (e.g., their potential predators) (Environmental Protection Agency, 1980). Outboard motors and petroleum spillages are sources of petroleum hydrocarbons in marinas, but their importance seems more problematic than real based upon the low incidence of oil spills in marinas (Cardwell et al., 1980b), the low solubility of petroleum, especially in quiet waters, and the relatively low acute toxicity of petroleum hydrocarbons to many species of marine organisms (Anderson, 1979).

Many of the potential sources of toxic, oxygen-demanding, and nutritive substances listed in Table 1 can be eliminated from consideration with a few simple measures. For example, runoff from parking lots and urban-industrial uplands can be shunted to the source water rather than to the marina if it is significantly contaminated or is expected to be in the future. This measure will reduce loadings of pesticides, nutrients, petroleum hydrocarbons, and oxygen-demanding materials. Conversely, good quality water should be introduced into marinas, for it promotes exchange.



Through the use of vessel sanitation devices and regulations barring disposal of fish and shellfish offal, significant sources of oxygen demand can be removed.

Chemical contamination of sediments and its effects on bottom-dwelling organisms is a frequently voiced concern, but most chemicals in the sediment appear to be bound inextricably to particulate matter in forms and phases that apparently are nontoxic to aquatic life. These generalizations apply to petroleum hydrocarbons (Anderson et al., 1979), heavy metals (Callahan et al., 1979), and pesticides (Nathans and Bechtel, 1977).

In conclusion, the primary pollution problem in marinas appears to be low dissolved oxygen; other changes in marina water quality appear to be either biologically insignificant or can be mitigated by environmentally conscientious design and operation. There is need for a better understanding of the character and biological implications of D.O. declines in marinas. We need to determine more precisely when they occur, their areal extent, how significantly they affect bottom-dwelling organisms, and whether they are specific to marinas or bays and inlets generally. One intriguing question is whether D.O. declines -- or changes in other water quality features -- can be controlled with a given level of flushing or circulation. At this juncture much more study is required before this question can be answered.

Acknowledgement

I wish to thank Kurt L. Fresh for his review of the manuscript.

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SESSION 6

Legislative Issues Affecting Boating in the '80s

PANELISTS

**Roger Stubbs
Thomas F. Kincaid
Duncan C. Smith, III
Robert C. Petersen**

Boating Registration Interclub's Position

Roger Stubbs
Interclub Boating Association of Washington

The Interclub Boating Assn. of Washington, a parent organization consisting of some 70 yacht and boating clubs with over 20,000 members, was originally organized by former Seattle City Official Ev Henry and others for the purpose of acquiring Sucia Island in the San Juans and donating it to the State for use as a marine park. That done, the members looked for other ways to help their constituents. The organization has accomplished a wide variety of things over the years from helping to pass Initiative 215 which authorized the sale of bonds to finance a wide variety of recreational projects, and the bonds' repayment from the boaters fuel taxes, to building picnic shelters at several of the state marine parks.

But Interclub is best known both by the public at large and by its own members for standing up for the interests of boat owners in the political arena. In this arena, we have frequently but not always, taken a stand against state boating laws with a wide variety of aims the boating public felt were inimical to their interests. On occasion we have supported such legislation, but more often than not we oppose measures drawn up by those who do not understand our interests.

Understand in the beginning that boating, unlike many other forms of recreation, becomes an obsession with many of us. We consider it a way of life, a last bastion of freedom from the pressures we endure in other facets of our lives, and very important to our peace of mind and sanity. If you threaten boating, you hit us where we live - and we'll hit back with everything we've got to avoid any degradation of our lifestyle.

One of the key elements in our boating lifestyle is the sense of freedom it gives us. If you propose to regulate us, to tell us when and where we can go, or add a lot of waterborne cops to keep us in line - we will fight you tooth and nail.

Another element is the cost of boating. Very few of us can actually afford the boats we own by any normal standard of what is affordable. We probably acquired our present boat only after trading up from something smaller, and by sacrificing other pleasures on the altar of boating for many many years. If you propose to make boating any more expensive than it is already, we will fight you tooth and nail - because we simply can't afford to sacrifice any more to maintain our boats - and we won't give up our boats.

So now we come to the question of Interclub's opposition to boating laws, which are in place in 47 of the 50 states. Each boating bill we've seen so far has contained elements that would either add regulations or cost us more money and usually both. They would guarantee that a portion of the money collected from us would be used by law enforcement organizations to keep us in line. They would guarantee that our names and addresses together with a description of our boats would be inscribed forever in a government computer, available to any government agency bent on mischief. We know from the experience of boaters in other states, that there is little likelihood that our money would, in fact, be used for our benefit. It is much more likely that it would be used to harass us as is now being done in most of the states with boating laws.

Except in the one instance when we, under strong urging from influential members of the Legislature, drafted and lobbied S.B. 2048 on our own initiative, all other boating bills have been proposed and pushed by government agencies. These agencies would no doubt benefit from the passage of such a bill, but we have seen nothing in any of them that would benefit us. Thus we have opposed them.

Our experience with S.B. 2048 is instructive and is another reason we oppose boating bills. After sweating blood for more than a year drafting this measure so that it would minimize the objections of the majority of boat owners, and after going to considerable pains to gain its approval by major members of the Legislature and by the Governor, S.B. 2048 was amended in the eleventh hour of the last day of the session into a form we could not accept - a form that would have added several hundred dollars a year to our cost of boat ownership without in any way giving us any benefit.

We came away from that legislative session convinced that the legislature cannot be trusted to actually pass a boating bill without including punitive measures before it could go to the governor for signature. Further, once a boating law is in effect, and the state has us in its computer, we do not trust the legislature not to alter it in subsequent sessions to make it still more costly and more restrictive. The past history of such measures indicates the first bill passed is simply an opening wedge, and that much worse is yet to come.

So far the boating public in this state has managed to defeat every attempt to saddle us with a state boating law. We are not so naive as to believe we can escape forever, since there are many powerful forces at the national, state and local levels of government that insist that we must bend to their yoke. We are neither rich nor powerful, rather we are poor and relatively disorganized. But we have our convictions, and we will continue to fight the good fight with whatever resources we possess for just as long as we are able.

That said, let me reiterate some of the key points in S.B. 2048, the bill we supported, which we consider absolutely minimum safeguards in any bill we could live with. First, there must be a logically derived excise tax, the money from which would reside in a dedicated fund, to be used for the benefit of boating only. Second, this fund must be administered by an independent board or commission whose members have demonstrated sympathy with the needs and desires of boat owners. Third, the excise tax must be in lieu of personal property taxes on boats. Fourth, the bill should provide a way to establish a clear title for boats.

It would be our hope that a law constructed with the above mentioned safeguards could operate without doing us much damage. We would hope that the funds would be used for such things as construction and operation of boating facilities, for aid to established organizations working in the field of boater education, perhaps for some degree of search and rescue as the Coast Guard retreats from its responsibility in this field. These funds would not be turned over to County Sheriffs to hire cops to harass us, would not be used to support a new costly bureaucracy. If our hopes were to be realized, it is absolutely necessary that the board or commission administering the act be made up of boating people - not government officials.

Several of these minimum requirements are apparently inimical to the interests of government. For example, we are told the State is strongly opposed to dedicated funds, preferring to appropriate funds on the whim of the Legislature. We are also told it is unlikely we can gain approval of another independent board or commission. In fact, the Legislature and the Governor would like to eliminate some such organizations already in place. Further, Governors generally don't like restrictions placed on their ability to name members of boards and commissions such as we propose.

Thus the likelihood that we could actually get a bill containing our minimum requirements through the legislative process, and that we could keep it livable through subsequent legislative sessions, seems to us to be minimal. Since we probably can't get what we want, and we can't live with what the government wants, we oppose boating bills. We are at a standoff. A standoff that will remain until either government agrees to our terms, or sticks us with something that will damage boating in this state forever.

Interclub, exercising its mandate to protect the best interests of boating in this state and recognizing that being negative on this issue is not politically advantageous, must still stand up and fight for its members so long as their interests are under attack.

User Fees for Coast Guard Activities

Thomas F. Kincaid
Nor'Westing Magazine

I have been asked to comment specifically on the Reagan Administration's proposal to impose a user tax on all of this country's pleasure boats to raise money for such Coast Guard activities as search and rescue, aids to navigation, regatta patrol, and the development of equipment regulations. The proposed fees are designed to generate \$60 million in fiscal 1982, and graduate upward to \$200 million in fiscal 1986.

Capt. J.B. Lynn, speaking for the Coast Guard during an October 10 meeting of the National Boating Federation, said the beginning fees would be \$25 for boats under 16 ft., \$45 for boats 16 ft. to 26 ft., \$90 for boats 27 ft. to 40 ft., \$150 for boats 41 ft. to 65 ft., and \$250 for boats over 65 ft. These are "going in" figures to raise the \$60 million for fiscal '82, and would be more than tripled in later years. Capt. Lynn also offered, as an alternative, raising the federal fuel tax on boats by 24 cents per gallon.

Let me make one point at the outset. What is proposed is not a user fee, levied against the users of services in proportion to their use of those services. It is a new tax on boat ownership, imposed whether or not the owner uses Coast Guard services. It failed dismally when it was proposed in the last Congress, at least in part because it would levy this tax against boat owners who have never seen the Coast Guard, and likely never will. The Coast Guard has no presence on state waters, where the majority of boating is done, and which makes up the majority of the waters in the United States. Congressmen from states with little or no Coast Guard presence are not apt to saddle their constituents with a tax to support activities of no possible benefit to those constituents.

A further point. All but three of this country's states tax their boat owners specifically to support most of the services the Coast Guard

provides in navigable waters, i.e., search and rescue, aids to navigation, and regatta patrol. Boat owners in these states are very reluctant to pay again for these same services.

Even in this state, taxes now paid by boat owners into the general funds of cities, counties, the state and other taxing bodies, amount to many millions of dollars, and we also object to paying still more taxes for an already overtaxed recreation. Consider the case of just one, quite typical boat owner, who took the trouble to break down the cost of his boat to separate out those amounts which went into the treasuries of various public bodies, and which those bodies would not have gotten if he was not a boat owner.

Leasehold tax on moorage	\$216.00
Road tax on fuel	120.00
Sales tax on fuel	46.80
Personal property tax	35.00
Registration (boat & dinghy)	4.00
	<u>\$421.80</u>

Even this rather substantial amount ignores the sales tax he paid on everything he bought for his boat during the year, and the increment of his moorage that represents lease payments to the Department of Natural Resources.

Those who insist boat owners are getting a "free ride," or are not paying their way, simply do not know the facts.

Now let's consider the specific services the Coast Guard proposes to fund through this user tax.

Search and rescue is the most obvious. Today, the Coast Guard is involved in about 15 percent of all search and rescue missions in this country. The other 85 percent are rescued by other nearby boat operators, the Coast Guard Auxiliary, or by state or county patrolmen. This heavy tax to support only 15 percent of the problem seems excessive to say the least.

Aids to navigation, also an obvious benefit. Those aids, as the Coast Guard itself insists, are established to support the waterborne commerce of the United States. Although they peripherally benefit pleasure boaters and the owners of commercial vessels, it is possible to argue they also benefit everyone in the United States: the Kansas wheat farmer and the Omaha manufacturer, as well as all foreign nations. To single out recreational boatmen to pay for aids to navigation is patently unfair. These are part of a system benefiting every citizen in this country, and should continue to be funded through general tax revenue.

Regatta patrol. This is a function the Coast Guard took on itself, and is of questionable value to boat owners. Rather than be taxed for this "service" boat owners would, I think, ask that the service be eliminated.

Development of rules and regulations. I hardly need comment on the organization that brought us natural ventilation systems designed to add oxygen to the explosive fuel mixtures in our bilges; that brought

us MSDs; and that now approves for our use pyrotechnic devices that are patently dangerous.

Further, Congress passed the Biaggi Bill, which removes \$60 million of our federal fuel tax dollars from the Land and Water Conservation Fund, and dedicates it to support state and federal boating safety programs. Congress, under pressure from the Administration, has chosen not to budget any of this money for its intended use. Surely the Feds could at least use some of the money we already send them before coming to us for more.

As other speakers during this conference have indicated, the boating industry in this country is in deep trouble. Right here at home we have seen bankruptcies and severe layoffs in an industry that was once vital and growing. Proposals to double moorage fees without any economic justification; to tax boat owners one percent of their boat's value each year; to tax them to support the Coast Guard; to levy a new 3 percent tax on all boats under 25 ft. and a 10 percent tax on all boat equipment to support fishing enhancement programs, are simply more than this spavined camel can carry. Its back already bent, any of these proposals are sufficient to break it completely.

Federal Maritime User Charges

Legislative Issues

Duncan C. Smith, III
Coast Guard and Navigation Subcommittee of the
Merchant Marine and Fisheries Committee,
U.S. House of Representatives

Background and Introduction

Colonial governments, and, virtually since its existence, the Federal Government have been involved with financing waterway improvements. Until this century, however, the government has not levied waterway user charges.

But, beginning with Franklin Roosevelt's Administration, every Administration has recommended user charges. These charges are common outside of the United States such as in the Port of Rotterdam. Further, General Accounting Office and Office of Management and Budget documents explore the possibility of user charges in the United States.

Not until the 94th and 95th Congresses have these recommendations been the subject of Congressional interest. Today there are a number of user charge laws already enacted by the Federal Government applicable in the maritime area:

- The Inland Waterways Revenue Act of 1978 (P.L. 95-502) levies a tax on barge fuel;
- The Vessel Documentation Act of 1978 (P.L. 96-594) imposes a yacht fee for documentation;
- The motorboat fuel tax paid by recreational boaters (see the "Biaggi bill", P.L. 96-451); and
- The 1952 Independent Offices Appropriation Act which is a general user charge law for all agencies and implemented by OMB Circular No. A-25. With this law in place, it may be that additional user charge legislation is not necessary, except for legislation to remove certain prohibitions on the imposition of

user charges in specific areas, such as in the case of Section 331 of Title 46, U.S. Code. Thus, the possibility exists that user charges could be administratively imposed without comprehensive action by Congress.

Why are user fees being considered at all?

First, there is a tremendous increase in water or maritime activity of importance to various private and public interests. That is, more demands are being made on our waterways and for attendant improvements for services regarding their use. The proposals being considered fall into three general categories that relate to these demands:

1. Ports - development and dredging;
2. Inland Waterways - locks and dams, dredging; and
3. Coast Guard - safety and environmental services.

Second, the Reagan Administration is committed to implementing a cost recovery policy for the government. This cost recovery policy is based on the following general principles:

- Equity - what is just and fair;
- Economic efficiency - supply and demand allocation of government services; and
- Administrative simplicity - monetary and nonmonetary considerations.

In the February 18, 1981 economic proposals of the Reagan Administration, user fees in the area of transportation were included. Specifically, maritime fees included a "yacht fee" for Coast Guard services and increased taxes on barge fuel. Indeed, during the March 1981 budget activity, Coast Guard user fees, projected to raise \$100 million, became part of the reconciliation legislation. Finally, on September 24, 1981, the Reagan Administration reiterated its desire for user charges for Coast Guard services; dredging, construction, and maintenance for waterways; and licensing, inspection, and documentation functions.

As further background it should be noted that a user charge study was mandated by the Inland Waterway Revenue Act of 1978 noted above. This study is to evaluate the effect of user charges generally among transportation modes.

Pros and Cons

Many advantages and disadvantages regarding user charges have been advanced. The following is a general summary.

Arguments against levying a maritime user charge are as follows:

- The amount of cargo shipped by water transportation would be reduced;

- A substantial rise in the price of goods would occur particularly at an early stage of production such as with primary raw materials and fertilizers;
- The most energy efficient, safest, and environmentally clean mode of transportation would be discouraged;
- Incidental benefits to transportation development such as flood control, hurricane protection, recreation, reservoir water supply, agricultural irrigation, and electricity generation, would be affected;
- Distortions in private investment decisions result: the cost and risk of investments in equipment and facilities increase and the use of those in existence discouraged;
- We risk the possibility that foreign governments might retaliate with additional charges on American vessels;
- Maritime related jobs would be reduced or eliminated; and
- The maritime modes of transportation are being treated in isolation from other transportation modes, particularly truck and rail.

The following arguments favor the imposition of user charges:

- The settlement and economic development of our frontier through public investment in waterway facilities is no longer valid;
- Providing free facilities to the water industry by the public is unfair, while levying taxes on other transportation modes;
- The levels of traffic forecast for new waterways have overestimated potential traffic;
- Coast Guard services such as icebreaking, safety inspections, search and rescue, and aids to navigation are done largely to assist commercial use of the waterways;
- An inequitable distribution of income results when one transportation mode is given an advantage over another;
- Other modes of transportation must recoup their investments;
- The low cost of waterway transportation is an artificial advantage created by unequal treatment of transportation modes by the Federal Government;
- The benefits of low cost water transportation to the consumer would not be destroyed by the imposition of user charges;
- Publicly provided waterway facilities and services are in effect a windfall gain and distort intermodal equity among various classes of transportation.

Types of User Charges

The feasibility of a user charge is contingent upon the ability to employ an efficient collection mechanism. Thus, implementation will have an impact on the outcome of the user charge debate.

User charge mechanisms fall into two general categories:

1. A system-wide basis - everyone pays the same; and
2. A segment-based charge - everyone pays according to use.

In a very simplistic way this can be another way of saying that user fees are either indirect or direct charges.

The different types of charges or mechanisms are as follows:

1. Direct fees - Assessment for a service or facility each time it is received or used;
2. Annual fees - Uniform fee imposed on vessels such as recreational boats, fishing vessels, and vessels in domestic trade. This is probably lower for recreational vessels and in general may result in some cross-subsidy effects;
3. Fuel Taxes - Assessment for fuel purchased by barges, fishing vessels, and recreational boats directly. This arrangement rewards fuel efficient vessels but may result in the cross-subsidization within the industry;
4. Segment Tolls - Tax based on the distance that a vessel travels or the portion of a waterway facility used. Although this would reflect the true cost of individual waterways, it may cause congestion on those most frequently used because the charge would be lower due to the volume of traffic. Some waterways would be caused to close because of lack of use;
5. Tonnage fee - Fee assessed primarily on vessels in foreign trade;
6. Lockage fees - Variation on a direct fee which would result in discouraging the use of locks by smaller or pleasure craft;
7. Congestion tolls - Fee for the privilege of sailing through a lock. The fee might exceed the cost of the facility to be recovered if the demand is high for

the use of that particular waterway. Therefore, the fee would determine for some vessels not only how soon they would use the facility, but whether they would use it at all. Commercial and recreational vessels would be in direct competition.

All of these mechanisms would be relatively easy to administer with the exception of congestion tolls.

Current Initiatives

The Reagan Administration philosophy is that there should be 100-percent cost recovery for government programs that have specific beneficiaries. This recovery should be developed and based upon the dual principles of equity and economic efficiency. In the Legislative Branch, user charges are being addressed in three areas: port development (deep-draft); inland waterway development (shallow-draft); and Coast Guard services.

The port development initiatives on user fees have originated with Congress itself. Both the Senate and the House of Representatives have bills currently under consideration. The impetus behind these bills is inadequate port capacity to handle coal. The various bills are for operation and maintenance expenses as well as construction.

Port development bills are all pending in both Houses. The Senate Water Resources Committee is taking action on S. 1692 which deals with user fees to fully fund drafts over 14 feet. The Merchant Marine and Fisheries Committee of the House of Representatives reported H.R. 4627, which proposes a uniform system of tonnage duties on vessels in the foreign trade.

All the bills differ in their concept of "deep draft". Some start at 14 feet or greater, while others begin at the 45 foot or 13.5 meter depth. Different cost sharing arrangements are based on the depth in the bill. There is a fee for some port development while other bills incorporate various percentages of Federal and state-local appropriations for others. The fees are based on tonnage. Some are commodity specific and others are for the general tonnage of a vessel. An alternative being considered is an ad valorem duty. Differing percentages are based on the concept that ports, harbors, and other waterways are national resources particularly with regard to national defense and the general economy. Therefore, the Federal Government should share in the cost to a certain extent. The fuel tax enacted in Public Law 95-502 is generally being retained in addition to a port development fee.

The inland waterway user charges for shallow draft development originate in Administration bills. These bills were sent to Congress early in the first session of the 97th Congress, but have been revised over the year. A revised

bill, H.R. 4846, represents the current Administration thinking. It calls for 100-percent cost recovery for inland waterway projects. The basic mechanism is to increase the tax on barge fuel imposed by Public Law 95-502 to 15 cents a gallon from 6 cents. The mechanism has been simplified by not exempting certain waterways as is currently done. Therefore, all the money is collected at the "pump" rather than through a complicated system of reports. In addition, license fees, tonnage fees, lock fees, and cargo carrying charges are being contemplated. One problem area to be eliminated is the prohibition of assessing tolls on public waterways contained in Section 5 of title 33, U.S. Code.

Certain problems have arisen regarding the cost allocation or what percentage to be paid by the Federal Government. The Administration bills reflect a 10-percent share for the Federal Government because of the other uses for inland waterways. This leaves a 90-percent allocation for general navigation which is to be paid by industry. Studies show, however, that as much as 25 percent of the use of inland waterways is for noncommercial navigation purposes.

The effect of a sudden increase may be blunted by phasing in the user charge over a five-year period. As with port development fees the P.L. 95-502 tax on fuel is generally retained where inland fees are imposed.

The first proposal for Coast Guard user fees was transmitted to Congress by the Reagan Administration at the beginning of the 97th Congress. The proposal would have recovered costs to the Coast Guard on a five-year phased in period. During that time \$100 million would be collected in the first year gradually rising to \$500 million during the fifth year. The proposal would have given the Secretary of Transportation the authority to establish fees for Coast Guard services such as search and rescue, aids to navigation, merchant marine safety, marine environment protection, and ice-breaking. No fees would have been authorized for law enforcement or military readiness functions. Fees charged to civilian users were divided into three types:

- Direct fees - licence or document;
- Annual fee - waterway user fee for recreational and fishing vessels; and
- A tonnage fee - for commercial vessels.

This proposal was seriously flawed and raised several concerns amongst the Members of the Merchant Marine and Fisheries Committee. These concerns were:

- That it would give the Executive Branch unlimited authority to charge for a public benefit;
- That it gives the Executive Branch authority to charge where no benefit is received;
- That fees would be authorized for discretionary functions of the Coast Guard such as search and rescue and aids to navigation;

- That the proposal's jurisdiction and scope would cause undue Administrative burdens and distortions in the burden of paying the fee;
- That certain inequities would result such as favored treatment for foreign fishing vessels;
- That the fees would go to the General Treasury with no guarantee that they would be used for Coast Guard functions;
- That future fees in the five-year phase-in were speculative; and
- That no provision was made to transfer proprietary functions to the private sector where appropriate, thus alleviating the need for a fee.

The Administration subsequently withdrew this initial proposal and has started to work on a second recommendation for Coast Guard user fees. They are developing the second proposal through a series of meetings held in September 1981. Separate sessions were held on the general concept of user fees, indirect fees, direct fees, and recreational boating fees. In addition several "one-on-one" sessions were held when requested by particular or individual groups affected by the proposal. Examples of the indirect fees are as follows: \$1,350 for the smallest fishing vessel (less than 100 gross tons); \$1,600 for inland uninspected tow boats (less than 1,000 horsepower); \$600 for the smallest barge (less than 1,000 gross tons); \$11,000 for four round-trips by an ice-breaker on the Great Lakes; and \$25 for recreational vessels under 16 feet to \$250 for recreational vessels of 65 feet or more. As an alternative, increases in fuel taxes have been proposed for some of these indirect fees.

Direct fees have been proposed primarily for services performed in the commercial vessel safety program of the Coast Guard. Examples of direct fees are as follows: \$300 to issue a vessel document; \$7,200 for the initial inspection of a small passenger vessel and up to \$100,000 for a mobile offshore drilling unit; subsequent inspections for the same vessels would be \$900 and \$3,900; \$120 for the initial licensing of a merchant seaman; and \$12,000 for the periodic inspection of offshore facilities and oil terminals.

The content of the final proposal still remains to be seen as it is currently being developed for transmission early in the Second Session of the 97th Congress.

Issues to be Resolved

Some user fees will be enacted in the future, possibly in the 97th Congress. The type and extent of these fees will largely be determined by the resolution of both legal and policy issues.

The legal issues are founded in Constitutional concerns. The first one is regarding the Commerce Clause; user charges should not interfere with interstate commerce. The second constitutional issue arises out of Article 1, Section 9,

which states that there will be no preference for the port of one state over the port of another. Fees must be constructed to avoid this conflict.

Another legal issue arises over the construction of a user charge as a fee or a tax. This concern centers on the broader issue of whether user charges are being proposed as a revenue-raising measure or for cost recovery. A tax is a charge by the government for general governmental services, whereas a fee is a charge assessed for particular services rendered to a specific beneficiary and based upon the benefit derived by that individual. If the charge is considered in the character of a tax, then the charge would be unconstitutional under the Commerce Clause and by the limitation on tonnage fees. However, a tax is distinguished from a fee by examining the relationship between the amount charged and services rendered to the particular beneficiary paying the fee. Thus, the charge in the form of a toll for passage through a lock is considered compensation for the use of artificial facilities constructed and not as a tax upon the navigation of the stream itself.

Finally, several policy issues need to be resolved. The obvious policy issues are those which are the basis of the user charge proposals themselves. These issues are the principles of equity, economic efficiency, and administrative simplicity. The equity issue will not only be resolved by determining that those who obtain valuable services from the government, or who use government-funded facilities, pay for them, but also that the size of the fee with regard to fishing vessels, intermodal transportation impacts, predictability, and geographic impacts is appropriate. The economic efficiency issue will be resolved based on whether the mechanism proposed will truly be an efficient allocator of the government's resources. Finally administrative simplicity will be resolved by determining not only the ease of collection and payment, but also the cost of the system needed to administer the user charge.

Other policy issues, however, are also important. For instance, does the government have enough information to decide on user fees? Public Law 95-502 mandated a study of the effects of user charges. As of this date this study is not complete. In addition, the Administration is conducting a thorough examination of all of the Coast Guard roles and missions. Through this study several functions may be eliminated or modified. Thus, until these studies are completed the government will lack the information necessary to determine what functions should be charged for and the amount of those fees.

Another issue is that of determining what is a national benefit. Government functions such as national defense, regional development, water resource functions other than commercial navigation, and law enforcement should not be paid for through user charges. However, more complex questions have to be resolved when examining government functions such as search and rescue, aids to navigation, and

marine environment protection. If these are truly governmental functions for the general benefit, then user fees should not be charged.

The issue of inflation must also be considered. The imposition of a user fee may result in the increase in the price of a product. It is argued, however, that since the cost will always be there, a user fee merely shifts the burden from the general taxpayer to the primary beneficiary. Therefore, the user fee may end up to be more equitable.

Finally, the compatibility with other statutes must be addressed. For example, the so-called "Biaggi bill," which takes part of the motor boat fuel tax and puts it into a fund to be spent on recreational boating, seems to duplicate some of the user fee proposals. Each of the statutes which deal with navigation in some way and impose either a tax or a fee must be examined together with any user charge proposal.

The Coast Guard and Navigation Subcommittee has developed a list of principles which they will adhere to when examining Coast Guard user fee proposals. These principles which embody some of the policy issues listed above are as follows:

- 1) It must be clear that the Coast Guard services involved provide a direct, quantifiable benefit to those receiving such services;
- 2) The amount of the fees assessed must not exceed the value or true cost of the benefit received;
- 3) The fee assessments should be equitable; various groups using Coast Guard services ought to be treated equally, and those groups receiving comparable services from other federal agencies ought also to be assessed user fees;
- 4) As Transportation Secretary Drew Lewis wrote to the Subcommittee, services associated with "traditional government functions" should not generally be included in a user fee proposal. Traditional functions performed by the Coast Guard include search and rescue, aids to navigation, and military readiness;
- 5) Coast Guard services which benefit the public generally, rather than very specific groups, ought not to be included. For example, the basic Coast Guard marine environmental protection program should not be included in a user fee plan, although an effort should be made -- through comprehensive oil pollution liability legislation -- to recover all governmental oil pollution cleanup and damage costs;
- 6) A user fee plan should be devised with administrative simplicity and enforceability in mind. It should be recognized that all additional administrative costs associated with a user fee law will represent a net economic loss either to government, or to industry;

- 7) Those paying user fees should be consulted to the government with respect to how the funds recovered will be used;
- 8) A user fee scheme should not create an additional administrative or law enforcement burden on the Coast Guard, nor should it raise unrealistic expectations about the ability of the Coast Guard to provide services which have "been bought and paid for;"
- 9) The assessment of user fees for services presently provided by the Coast Guard should not be allowed to detract from an examination of the wisdom of delegating appropriate responsibilities to private industry, or to other agencies of government at either the state or federal level;
- 10) User fees should be assessed to the extent equitable and appropriate, and not meet particular revenue-raising targets;
- 11) Collection of revenues derived from user fees ought to contribute to the Coast Guard's ability to adequately perform the services for which assessments are made.

Federal Waterway User Charges

Effects on Smaller Ports

Robert C. Petersen, Manager
Port of Ilwaco

While the concept of direct users of waterways paying a fee for the use of navigation projects is relatively new, there has been a joint venture between public and private interests in the development of waterways since 1824. In that year the Federal government assumed responsibility for keeping waterways navigable. Since that time there has been a sort of unofficial joint venture, in that every dollar the Federal government has invested in waterway maintenance and construction has been matched many times over by construction of harbor facilities by local port districts and related waterfront facilities built by private capital. For instance, in the case of the Port of Ilwaco the Corps has made capital improvements over the years totaling about \$1 million. As a result of the Federal investment the Port has spent about \$3½ million on facilities. Private investors have spent about \$4½ million on plants etc., plus some \$10 to \$15 million in fishing vessels. I'm sure most ports could quote similar statistics.

The beneficiaries of this joint venture have not been just the direct users, but, due to the far flung waterways system, the benefits contribute to the wealth and economic progress of every section of the nation.

Funding for the Corps of Engineers to carry out the Federal share of this joint venture comes by way of appropriations approved by Congress. The argument has been made that part of the revenue generated by import duties assessed against cargoes that were able to be imported due to the improved waterways, was the money that was subsequently appropriated to the Corps. This was apparently never clearly earmarked though, and now that Mr. Stockman is engaged in the very laudable process of bringing Federal spending under control, the Corps budget appears to be fair game.

Actually the direct waterway user fees precede the present administration. A few years ago there was a great push to get lock and dam #26 on the Mississippi River built. As a trade off for this authorization, all inland towboat operators were required to pay a fuel tax. This started out at a few cents a gallon and has been increased at regular intervals since then.

The Administration's goal is to have the direct users pay 100% of the costs of all operations, maintenance and new construction of waterway projects. In order to carry this out they introduced two bills. S.810 covers inland waterways and would recover Federal costs by a combination of the following five methods: charges based on ton-miles over a given segment; lockage fees; congestion fees; and charges based on capacity of cargo vessels over various segments of the inland waterway system.

"Inland waterways" are defined to include all inland and intracoastal waterways of the U.S. with an authorized depth of 14 feet or less, and used for commercial transportation.

The fees would be paid directly to the Federal government by any vessel; in the business of transporting persons or property for compensation or hire; or in transporting property in the business of the owner lessee or operator of the vessel.

At the same time a companion bill, S.809 covering deep draft waterways, was introduced. Deep draft waterways are defined to mean channels of an authorized depth of more than 14 feet. Federal costs would be recovered on a port - by - port basis with an appropriate share of entrance and connecting channel costs allocated to each port. Each port would be authorized to collect fees from the vessels using the channels allocated to it.

In my estimation the administration's definition of "Inland waterways" should not apply to our coastal and Puget Sound channels of 14 feet or less. They are not, "Inland waterways" in the sense that Mississippi and upper Columbia Rivers, are. Our shallow - draft channels carry ocean going vessels, not inland tugs and barges, but in answer to an inquiry directed to the office of Management and Budget their intention is to include all waterways in one category or another.

My job today is to explain what the impact of waterway user fees would be on smaller ports. Actually, the implications are mind boggling and due to the vagueness in the bills it is impossible to forecast very precisely what the impacts would be. Simply stated though, if your port happens to be located on a waterway with greater than 14 feet authorized depth it would be obligated to pay all of the operation and maintenance costs to the Corps and would have to set up a system of tolls or fees that it would then collect from the users. You all know how hard it is to collect transient moorage fees, so you can imagine the effort it would take, and how much the administrative costs would be, if you had to collect a toll from each vessel that used your segment of the waterway.

If your waterway happens to be 14 feet or less you would not be obligated to collect the fee yourself, but any commercial users would have to pay to the Federal government one or more of the five possible fees

outlined previously. Probably the most common commercial users of the shallow - draft coastal and Puget Sound ports are fishing vessels. If the condition of the fishing industry in your ports is anything like it is at my port, they just cannot stand the additional costs that the user fees would impose. The fees would result in an increase in the cost of the fish landed.

These costs would have to be passed along to the consumers. The effects would be to make American caught fish less competitive with imported fish on the domestic market, and make it tougher for American fish to compete in world markets.

If the fees were imposed on a segment by segment basis, as the administration proposes, ports that happen to be located on channels that require periodic maintenance dredging would find themselves at a competitive disadvantage with those located on deep water. The boats would naturally gravitate towards the ports with the lower fees and would overtax the facilities there. There would be a demand for additional capital investment in facilities at these ports, while at the same time facilities would go underutilized at the ports with the higher user fees. As the boats gradually move away from the high fee ports there would get to be fewer and fewer boats to split the costs among so the cost per boat would get higher and higher until the point is reached that whole port areas would have to be abandoned. This would result in bankruptcies of private processors and support businesses, default on port revenue bonds, local unemployment and greater demands on welfare services.

Not a pleasant prospect, and not what the Administration really wants.

Many of the coastal ports at strategic locations were improved by the Corps of Engineers to serve as harbors of refuge. Subsequently, fish processing plants and other industries built up at these harbors. It hardly seems justifiable to close them down if they don't develop enough revenue to support the whole navigation project.

Each port has its own unique situation and with a little bit of thought you will be able to see what problems this legislation would create for you.

Since the Administration introduced their proposals last spring there have been at least eight additional bills considered which are intended to generate some revenue to offset maintenance and construction costs.

A concept that has received a lot of support is the one proposed by Senator Hatfield of Oregon. His bill S.1586 combines deep draft and inland waterways into one interconnected system. Revenue would be generated by assessing a tonnage charge on all cargo that enters and leaves the United States. This money would go into a Waterways Trust Fund and the Corps would draw on that fund for construction and maintenance. There is some question of the legality of the tonnage assessments, but if it is found to be an appropriate method it would accomplish the desired generation of new revenue and avoid the economic dislocations that the Administrations proposal would likely bring about.

The only flaw in this bill as far as the smaller ports are concerned, is that even though its definitions do not include the shallow draft coastal ports in with the inland waterways, the definition of ocean channels still includes only those with authorized depths of more than 14 feet. That means coastal ports with channels of 14 feet or less would not be eligible to draw on monies in the Waterways Trust Fund for construction and maintenance. Theoretically the status - quo would exist and the Corps would continue to do the work as presently authorized. The Corps is dependent upon Congress for appropriation of funds though, and when the bulk of their money is coming from the Waterways Trust Fund I can foresee great difficulties in getting a separate appropriation through Congress just for the coastal ports with channels of 14 feet or less. The simple answer is to remove the 14 foot delineation from the bill and let the Trust Fund cover all the waterways of the U.S. If you agree with me, letters to Senator Hatfield expressing this concern would be very much appreciated.

I must say though that the Hatfield bill is not universally supported by all of the ports in the nation. Fourteen of the major ports that either are on deep water, or have a volume of shipping sufficient to absorb the local user fees, have gone on record as being opposed to any universally applied user fee. Fifty - one other ports have adopted a position of being opposed to any user fees that are keyed to each port.

There does seem to be an increasing awareness amongst the legislators that the user - charge principle was put forward almost entirely as a budget -slashing device, with little or no real thought given to the disruptive impact it could have on the nation's port system and the businesses that have grown up around those ports.

The administration's original goal was to have the inland user fees in place as of the first of October, 1981. They obviously have not achieved that target date. The word I get from Washington is that it is unlikely that any such legislation will pass this year. There is no reason for complacency though because the Administration has not given up on it, and they have gotten just about everything they have asked for so far.

What can you do about it? Contact your legislators. Express your concerns. The wider range of people they hear from the more they will be obligated to make sure that some reasonable legislation is finally passed.

In the interests of time I have not gone into much detail on the various bills. I do have the complete texts here with me though and I will be happy to answer any questions.



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