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Greater Portland
Council of Governments

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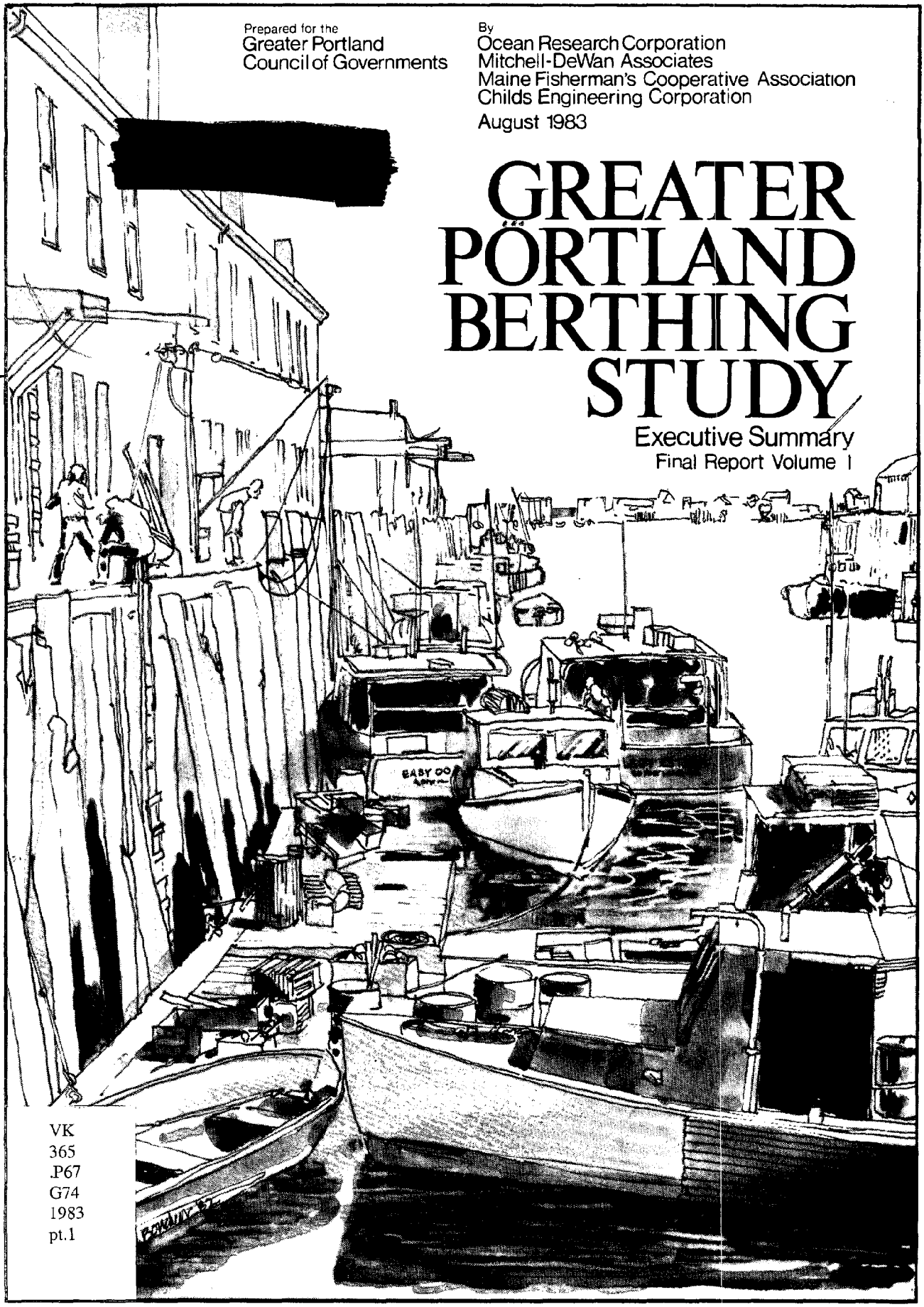
August 1983

GREATER PORTLAND BERTHING STUDY

Executive Summary

Final Report Volume I



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GREATER PORTLAND BERTHING STUDY

FINAL REPORT, VOLUME I

FOR GREATER PORTLAND COUNCIL OF GOVERNMENTS

SEPTEMBER, 1983

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GREATER PORTLAND BERTHING STUDY

VOLUME I

EXECUTIVE SUMMARY

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This is Volume I, Executive Summary, of the Final Report for the Greater Portland Berthing Study prepared for the Greater Portland Council of Governments. A companion, Volume II, Appendices, presents the detailed findings, inventory results and explanations of the various analyses used in the study.

STUDY PURPOSE

This study was undertaken because numerous fishermen had expressed concern that changes in the Portland Waterfront were eliminating the available locations where vessels could berth (tie up while in port). The questions of the study were:

- How much berthing space is actually available?
- What will be the demand for berthing from now through the end of the decade?
- Geographically, where will this demand be?
- What are the physical alternatives to meet any projected deficits (demand in excess of supply)?
- What are the costs associated with meeting those deficits?

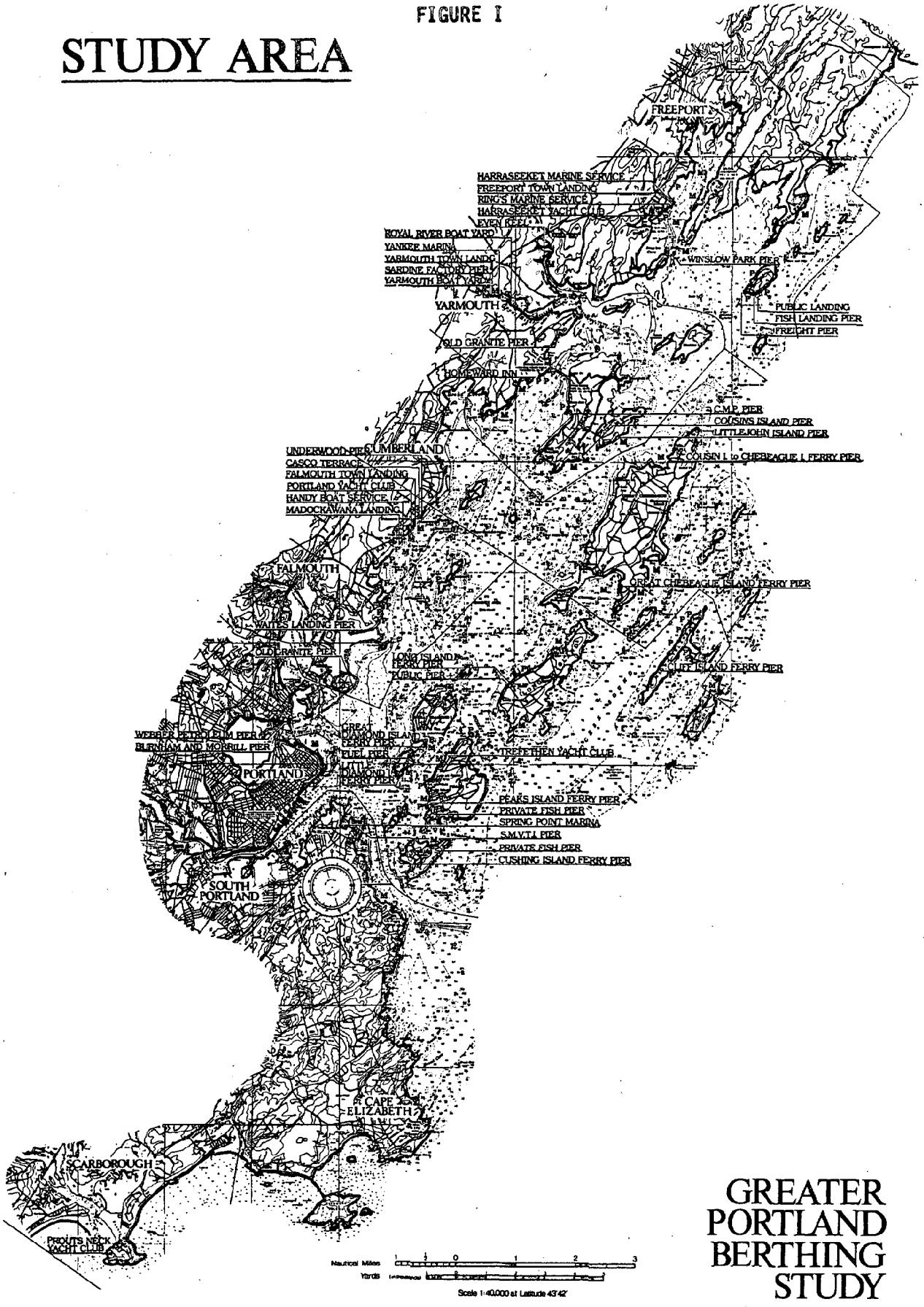
Fishing boat berthing is not an isolated issue to be studied only by itself. It is part of a complex combination of several factors which include recreational boating activity, other commercial vessels, and waterfront development. To properly address this issue a region-wide study approach was taken encompassing the coast from Scarborough to Freeport. (See Figure 1.)

The Federal Government, State, Region and City of Portland have invested a great deal in the recently inaugurated Portland Fish Pier Complex. To be successful this facility will influence both the demand

for berthing and the way that the rest of the waterfront is used and developed. This study addresses the question: "Can enough fishing vessel berthing space be provided so that the Fish Pier can develop fully and operate smoothly?"

FIGURE I

STUDY AREA



GREATER PORTLAND BERTHING STUDY

KEY FINDINGS

- Finding berthing space for vessels in Portland/South Portland Harbor is already a problem.

- The recreational fleet and offshore fishing fleet are likely to grow substantially in the rest of this decade.

- Fishing vessels and other commercial vessels will continue to focus their demand for berthing in Portland/South Portland Harbor, close to the support facilities and business activities they require. Demand for this general (non - recreational) berthing is likely to grow by 30% to 70% by 1989.

- The greatest growth in demand for berthing will be from increases in the recreational fleet. It is likely that this demand can be met by the many mooring areas outside Portland/South Portland Harbor. This demand has no strong reason to concentrate within the harbor. Waterfront access and parking will be the key obstacles to the increase of recreational berthing supply.

- If no actions are taken there will be a substantial deficit in general berthing supply (in Portland/South Portland Harbor) compared to the future demand. This would threaten the successful development of the Fish Pier.

- Rehabilitation and dredging of existing pier facilities in the harbor would contribute substantially to alleviating these deficits.

- Even with rehabilitation and dredging, additional general berthing facilities will still be needed. This will amount to between 3,000 and 8,000 linear feet of new facilities for peak demand, depending on the amount of vessel rafting utilized.

- Portland/South Portland Harbor has the physical potential to provide for the development of the needed new facilities in a series of moderate facility expansions. These expansions would be of appropriate physical scale with the existing structures.

- Present market rates for berthing ($30 -

$40/ft/yr) are not adequate to pay for new berthing facilities. The least expensive new facilities would require rates of about $70/ft/yr if they are to be carried entirely by berthing fees.

- Historically, wharf top uses (cargo storage, fish processing, etc.) supported the piers and berthing occurred as a side benefit. Changes in the business operations have altered this relationship.

- Present market rates for berthing will not pay for long term maintenance and dredging of the present wharves. Thus wharves may be converted to other uses not compatible with berthing. As siltation makes piers too shallow for berthing they may not be redredged, for economic reasons.

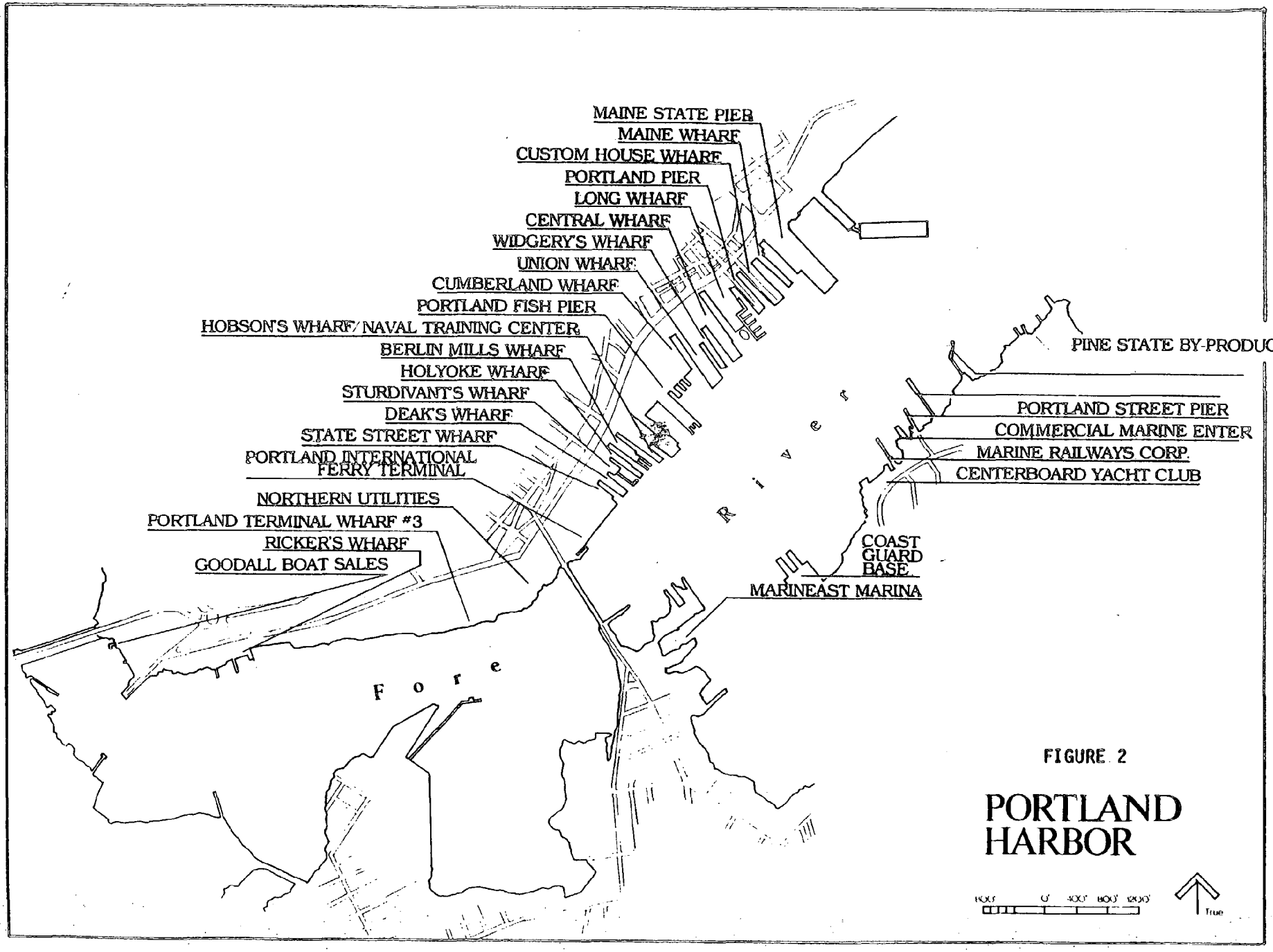


FIGURE 2

PORTLAND HARBOR

COMMITTEE PROCESS

To provide an appropriately broad perspective of the study issue Greater Portland Council of Governments assembled a Berthing Task Force made up of representatives of the various municipalities involved, plus representatives of interested institutions such as fishing groups, Chambers of Commerce, Harbor Commissioners, etc. This Task Force refined the questions to be investigated, and hired a consultant team to assist in the study. The consultants have undertaken the research and analysis for this study under the continuing supervision of the Task Force, responding to additional questions and issues as raised by the Task Force.

METHODOLOGY

The study examined the coordination of:

Fleets of vessels desiring berthing in the Greater Portland region, including:

- recreational vessels
- commercial (non-fishing) vessels
- lobster boats
- finfish vessels

Berthing facilities in the area, including:

- moorings
- private and public wharves and piers

Inventories

The existing conditions were determined through various inventory steps.

Wharves and piers in Portland/South Portland Harbor were inventoried by compiling lists of all wharves from property maps, etc., as well as physical inspection of the waterfront from both the water and the land sides. Detailed information was obtained by sending a questionnaire to each pier owner. Eighty-seven percent response was obtained from this questionnaire. The consultants gathered questionnaire information for the balance of the facilities by site inspections so that a complete inventory was established.

Marinas and yacht clubs in the area were inventoried by a separate but similar survey.

Private piers and mooring areas along the coast were visited by boat and the number of moorings was estimated visually. In many cases local harbor authorities were able to confirm the numbers of moorings, breakdown of recreational and fishing usage and seasonal variations (inspections were carried out in March).

The recreational fleet inventory was compiled from a combination of the marina and yacht club survey information with the inventory of mooring areas.

The commercial (non-fishing) fleet was inventoried by visiting the piers and interviewing the pier owners and boat operators to establish the vessels berthed at each facility.

The fishing fleet was inventoried by the Maine Fishermen's Cooperative Association, Inc. The results of this survey were compared with data from the National Marine Fisheries Service which confirmed the data on the fishing fleet based in Portland and provided additional information on transient fishing vessels using the harbor. Information on lobster boats using the harbor and area was refined by additional contact with lobstermen.

Projections

Projections for each component of the analysis (wharves, fleets, etc.) were made for 1985 and 1989. Projections for wharves, marinas and commercial vessels were made by asking the owners of these facilities about plans for expansion and their estimates on future growth. Projections of the potential growth of the recreational fleet were made using historic growth rates of vessel registration and population changes.

Projections for fishing fleet growth were done two ways. The first method analyzed the marine resources available to New England under the "200 mile limit". Portland's potential share of this resource was estimated under scenarios of increasingly aggressive efforts by Portland to share in this resource. This analysis gave high, medium and low projections of future fleet activity. At the request of fishermen a second analysis was done which concentrated less on the resources landed and more on the likely shift of existing landings from other ports to Portland's new Fish Pier and auction facility. These two methodologies were used together to give fishing fleet projections.

SUMMARY OF FINDINGS

Key findings are enumerated in an earlier section. Detailed findings, inventory results and an explanation of the various analyses used is included in Volume II, Appendices.

Briefly there are four major kinds of berthing usage that have been identified. Each is treated differently in the analysis.

1. The first type is dedicated berthing where a pier is owned by some special purpose company and all berthing is dedicated to the use of that company. This includes such facilities as shipyards, marine contractors' piers, etc. Berthing at these facilities is not anticipated to be an issue.

2. Recreational boat berthing is the second type. This is already the largest element of berthing demand and it will experience the largest growth in demand. Most of this demand (primarily moorings) can be met outside Portland/South Portland Harbor if obstacles of waterfront access and parking can be overcome.

3. "General berthing" is the main issue as it includes most of the fishing vessel berthing, plus berthing for other commercial vessels that are not located at the dedicated piers but rent space at piers generally open to the public. These "tenant" vessels are in the most competitive market for berthing. This market is located entirely in Portland/South Portland Harbor. The continued availability of this kind of berthing is essential to the success of the fishing industry in Portland.

4. Lobster boats moored outside of Portland / South Portland Harbor represent the fourth type of berthing identified. Lobster vessels that berth within the harbor are included in the "General Berthing" category (3), above.

Figure 3 shows the projected growth of "Demand for Berthing" broken down by demand type. The shaded areas cover regions between high and low projections.

Figures 4 and 5 show the details of the breakdown of "General Berthing Supply and Demand," now and in 1989. General Berthing Supply is shown by treating the

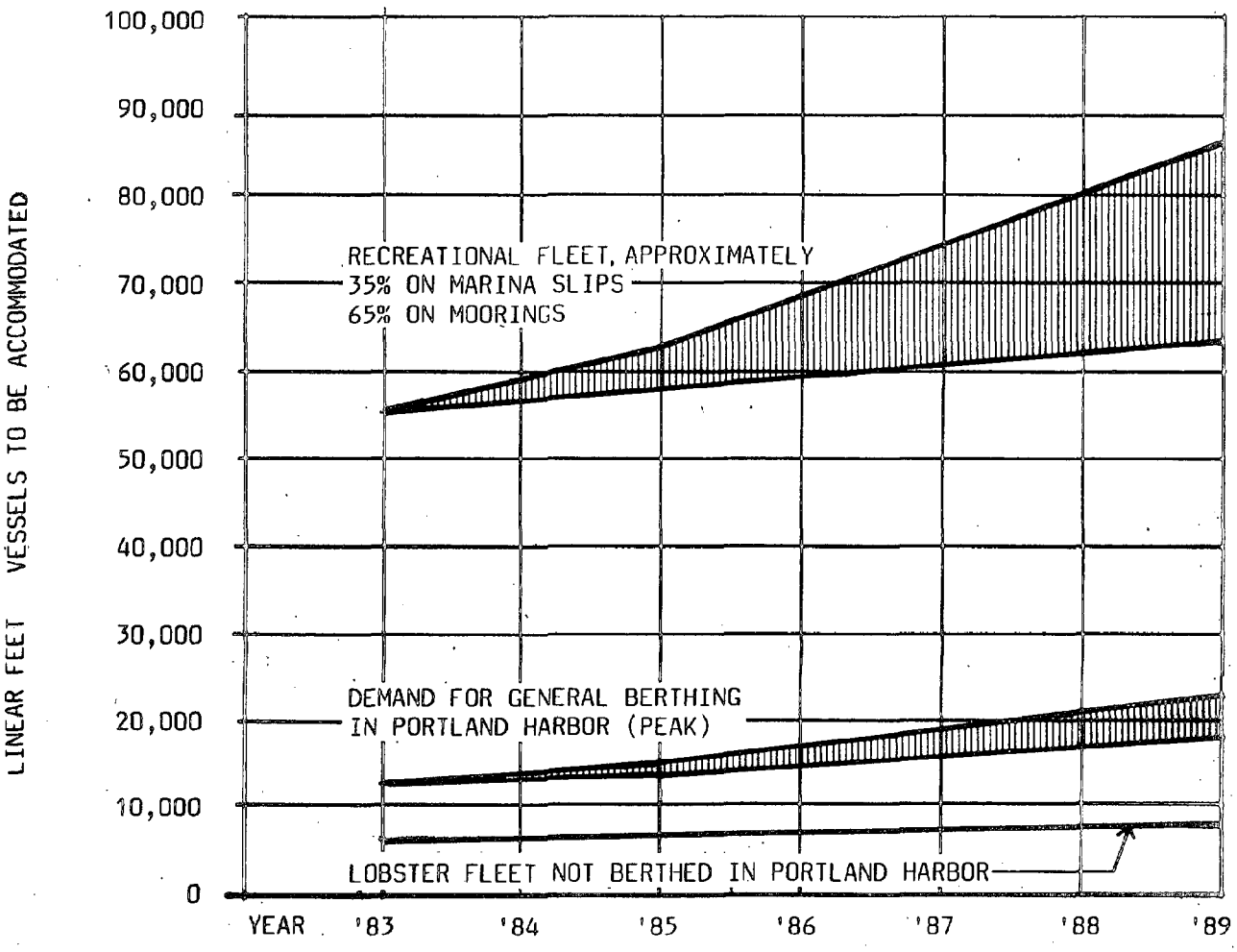
entire supply as being at one long wharf, the profile of which is drawn from the mean low water line (MLW) to the bottom (shaded). The fleet seeking to berth at this supply is shown as one long string of vessels (black) end to end requiring increasing depths of water due to vessel drafts. The figures do not reflect how vessels raft (tie several abreast at one pier slip). Rafting is appropriate to the large vessels that make less frequent multi-day trips. Smaller (day trip) vessels find rafting generally unacceptable.

Even with rafting it is clear that additional general berthing space will be needed to accommodate the peak demand for 1989. Dredging and rehabilitation of some existing, but unused, piers will help reduce this deficit to a very manageable 3,000 to 8,000 linear feet (depending upon the amount of rafting utilized).

Physical layouts were made showing how the needed berthing facilities within Portland/South Portland Harbor could be provided. These lead to two main findings:

1. Portland/South Portland Harbor can physically accommodate the needed development.

2. Although the total investment needed for new berthing is not a terribly large amount (several million dollars), the present market rate for berthing (fees) will not pay for this type of investment. Present market rates for berthing are 1/2 to 1/4 of the fees needed to support the new investment (considering only the marine facility costs and not site acquisition costs.)



LEGEND

Shaded portions represent areas between high and low projections

FIGURE 3

Demand for Berthing

PROJECTIONS BY DEMAND TYPE

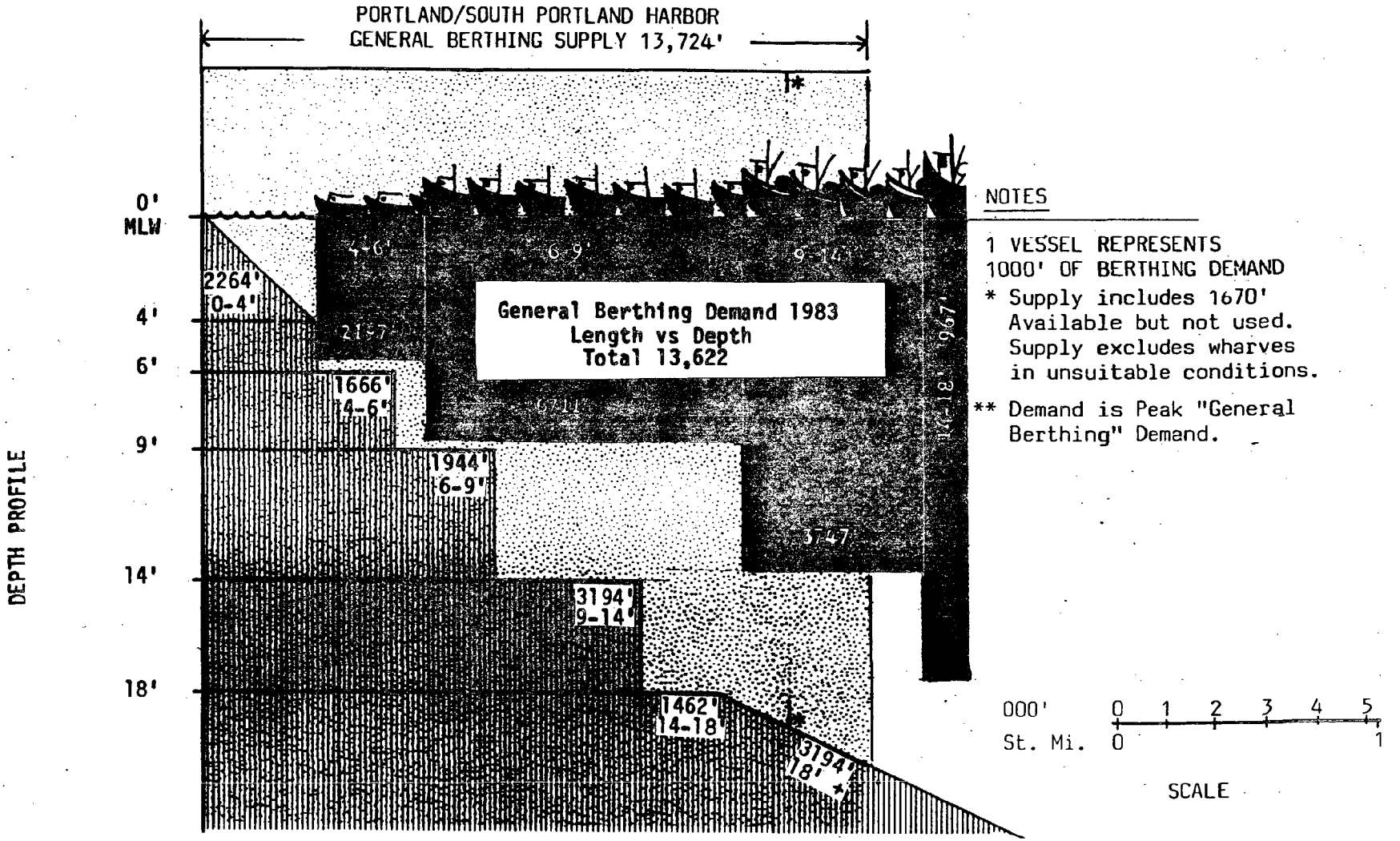
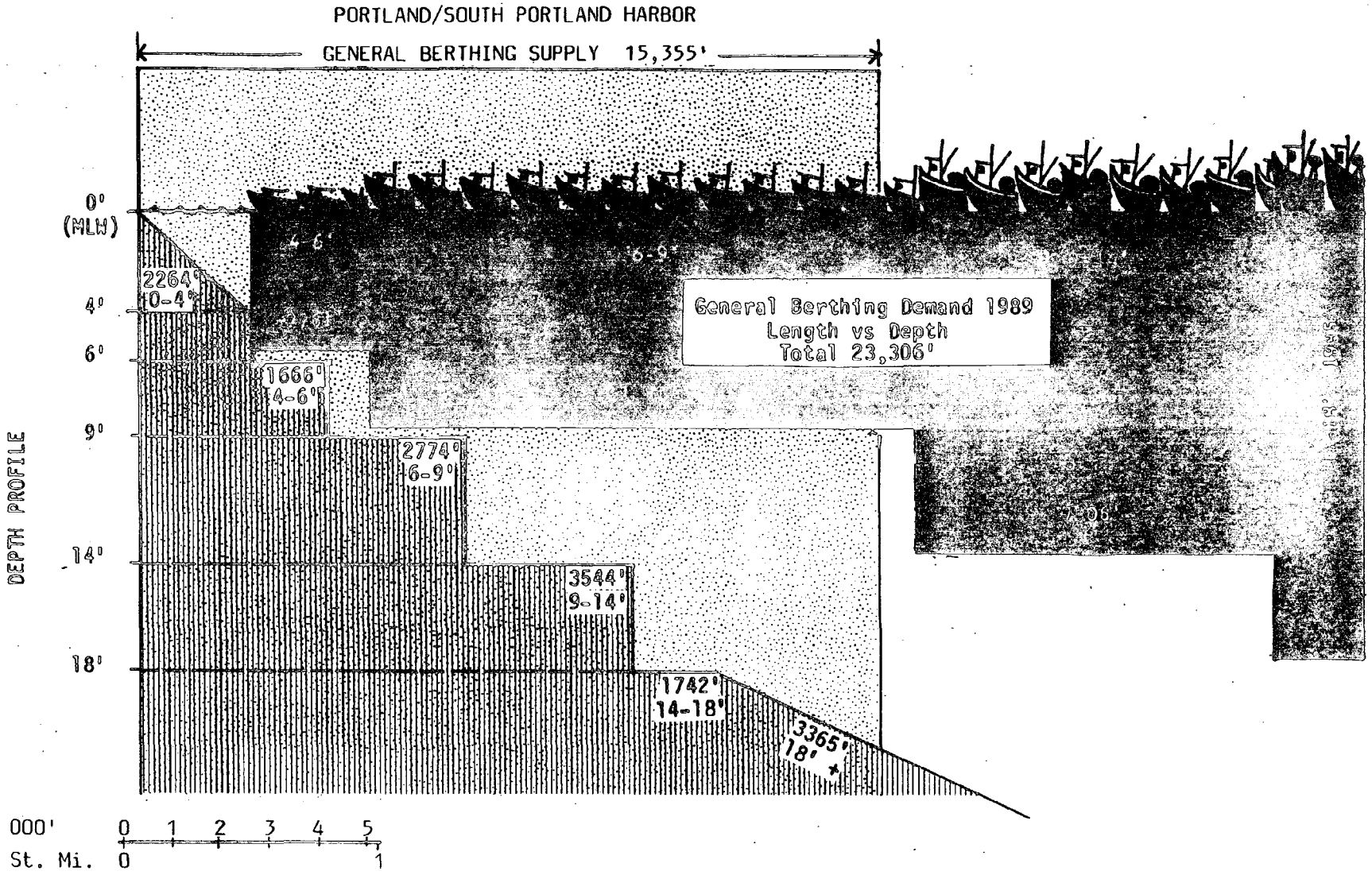


FIGURE 4

1983 General Berthing Supply* and Demand** Profile



SCALE FIGURE 5

1989 General Berthing Supply and Demand* Profile

*Note

1 Vessel Represents 1000' of Peak Berthing Demand

ISSUES

In addition to the major findings about deficits in general berthing facilities, the study also uncovered a number of related issues, briefly noted below. (These issues are discussed in greater detail in the appendices of Vol. II.)

Submerged Lands

The State leasing policy for submerged lands has been mentioned by pier owners as a great obstacle for the expansion of berthing facilities. The Bureau of Public Lands has gone on record (in response to concerns expressed in this study) that it would consider providing predictable lease fees (currently $0.03/sq.ft/yr.) for the financing term of any berthing project. The Bureau has formed an advisory committee to assist them in reviewing the policy for leasing submerged lands. It is important to the future of the Portland fishing industry that the new policies do not hinder the development of new berthing facilities.

Pricing for Berthing

As noted above, the present rent rate will not support the construction of new facilities. Also, because larger vessels require more expensive facilities, the present method of charging by the foot discriminates against the smaller vessels. Charges based on an area relationship (such as Length * Beam) bring the rent into line with the cost of providing the facilities.

Dredging

Dredging is becoming increasingly difficult and expensive as controls on dumping sites become more stringent. Yet dredging is an integral part of harbor development and maintenance. Portland/South Portland Harbor itself is blessed with naturally useful depths. The rehabilitation and development proposals considered in this study would total around 100,000 cubic yards of

dredging, a modest amount. But dredging is an area-wide issue. Both Pine Point and the Royal River need maintenance dredging without which the boats berthed in those areas would have to seek berthing elsewhere in the region, thus further aggravating the regional berthing problem.

Coastal Access

Coastal Access to the shoreline is an important issue for the development of recreational berthing, particularly mooring areas. The lack of access (and parking spaces) closes off some of the major areas offering potential for additional moorings.

Competition

Concern has been expressed that there will be injurious competition between recreational and commercial craft for berthing space. The consultants have found that this appears to be less of an issue than first assumed. Most commercial craft, excepting some lobster boats, require berthing close to the commercial activity of the Portland waterfront. Recreational craft do not need to be close to this commercial zone and can be accommodated in areas outside the harbor. Zoning ordinances for this area are evolving to protect the commercial aspects of this area. However, commercial lobster boats in the outlying areas will be increasingly competing with recreational craft. The towns have the right to organize berthing (mooring areas and public piers) with priorities to commercial vessels if they so desire. Thus, the conditions and available tools are such that competition for berthing should be controllable and competition should not damage the prospects for commercial operations.

Waterfront Development

About 31% of the general berthing space in Portland/South Portland Harbor is feeling pressure of transition away from marine dependent uses that traditionally provided berthing space (but can now no longer afford to do so) and toward higher rent uses (tourist shops, professional offices, residential establishments, etc.) that will have no reason to

subsidize the cost of berthing, and in fact may be operationally incompatible with berthing.

Passenger Vessels

Operators of the excursion/passenger vessels out of Portland/South Portland Harbor have expressed concern that an opportunity for the expansion of tourism on the waterfront is being neglected. The Greater Portland area offers many attractions to interest the potential tour boat rider. Major expansion of this industry seems likely. This expansion requires modest facilities (a total of something over 500' of berthing) but has very strict requirements in terms of proximity to tourist shopping areas, restaurants and parking. Operators have expressed the feeling that more could be done to build upon the natural symbiosis of the excursion/party business with the waterfront tourism of the Old Port section of Portland.

RECOMMENDATIONS

SUMMARY

CONCLUSIONS AND RECOMMENDATIONS AND RECOMMENDED IMPLEMENTING ACTIONS

Growth in the demand for berthing will be substantial. The largest increment of demand growth will be for recreational craft. However, most commercial vessels will require space close to the commercial activities of the Portland/South Portland Harbor facilities while recreational craft growth will be focused in the outlying areas and along the South Portland shore. Competition between these different demands should not become an overwhelming issue.

There will be substantial growth in demand for commercial berthing, led by the increase of fishing vessel traffic in the harbor. In order to support the region's investment in the Fish Pier, and to attract the fishing vessels needed, it will be necessary to provide additional berthing space for commercial use. Demand for this space will be focused mainly within Portland/South Portland Harbor. Most of the additional berthing needed will be for water depths of 6' to 9' (MLW). Analysis of the harbor shows that it is physically possible to provide the berthing needed through a series of reasonably scaled projects. Capital requirements would be on the order of $2 - $3 million dollars. There are two major impediments to these projects. These are the relatively high fees required to support the needed investment and the fact that the marine-related uses that have historically supported the wharves and provided berthing facilities are in danger of being displaced from the wharves by non-marine activities.

Recommendations for the two major classifications of berthing demand, commercial and recreational, are broken into two sections. The first section treats Portland/South Portland Harbor and the commercial berthing issues. The second section treats the outlying areas and the recreational and lobster boat berthing issues.

Items deserving continued planning activities are marked with an "*".

RECOMMENDATIONS FOR PORTLAND/SOUTH PORTLAND HARBOR AND COMMERCIAL BERTHING ISSUES

* 1) From the point of view of berthing needs, it is important that berthing-compatible uses of the wharves be encouraged. Historically, waterfront related activities on the wharves provided berthing as an almost no cost benefit. For primarily economic reasons, these waterfront related uses are being displaced by other uses that will have no reason to continue the subsidy of berthing and in fact may be operationally incompatible with berthing.

2) Rehabilitation and dredging of existing piers should be encouraged. The central location will support the additional commercial berthing needs. Dredging and rehabilitation of the existing structures would essentially rectify the present peak season berthing deficit. These actions represent the lowest cost solutions and would be most supportive of the investments already in place in the harbor.

3) Additional construction for fish boat berthing facilities should be encouraged. Approximately 3,000 to 8,000 linear feet (depending upon the effectiveness of rafting) of new berthing will be needed to match the projections for peak demand for 1989.

4) The Bureau of Public Lands has formed an advisory committee to help them review the policy for leasing submerged lands. So that the needed berthing may be provided the Greater Portland area should press for policies that are compatible with the financing needed for private projects.

* 5) The fees required to support the investment for new berthing facilities are quite high compared to the present market price for berthing. ($94/ft/yr vs. $30/ft/yr.) There are several options for addressing this issue:

- Encourage and/or require commercial berthing facilities in conjunction with

any other commercial uses of the piers and wharves. This is the traditional method of providing berthing, piggy-backing on other facilities.

- Encourage a public program to assist in the maintenance, rehabilitation and construction of piers and wharves which provide commercial berthing.

- Encourage the use of rafting techniques by the fishing industry as is done in some other ports, especially New Bedford and Gloucester.

- Investigate the use of non-traditional berthing arrangements such as: (1) condominium type ownership of berths by boats, and (2) charging on a square foot rather than a linear foot basis.

6) An attractive option would be development of Hobson's Wharf and the Naval Reserve Pier for fishing vessel berthing. Questions of acquisition and compatible shore side uses would have to be addressed.

7) The idea of use of the graving dock basin at the General Electric site in South Portland for lobster boat berthing and servicing merits further consideration.

8) The piers on the Portland side of the harbor should be extended to the Harbor Commissioners' line, wherever feasible, to provide additional berthing.

9) Opportunities to maximize additonal berthing in conjunction with the replacement of the Million Dollar Bridge should be pursued during the bridge planning process. This includes possibilities for berthing basins along the South Portland shore from the bridge to Turner's Island.

10) The City of Portland should provide an adequate public landing as soon as possible.

11) In order to encourage development of private excursion/charter party vessel

businesses, an adequate area of berthing with access to pedestrians and parking areas is needed.

* 12) Many pier owners expressed an interest in participating in a clearinghouse that would help match fishing vessel demand for berthing with the scattered supply. This may become increasingly important as new vessels, unfamiliar with the harbor and pier owners, are attracted to the port to use the Fish Pier. In fact, such a clearinghouse service could serve as a tangible "welcome" mat and an invitation to use the port. The concept should be pursued.

RECOMMENDATIONS FOR AREAS OUTSIDE PORTLAND AND RECREATIONAL AND LOBSTER BOAT BERTHING ISSUES

* 1) Dredging is an important part of berthing facility development and maintenance. Maintenance dredging projects for areas such as the Royal River and Pine Point are in the interest of the whole area and should be encouraged. If these areas had to be closed, this would impact on the berthing pressures in the rest of the area. Areawide coordination to minimize the difficulties in finding sites for dredge spoils should be encouraged. Areawide coordination to address funding for dredging should also be encouraged.

* 2) Public access to the coast is an important element in the development of the berthing and mooring potential of many of the protected coves in the area. The region has a great deal of physical potential for additional mooring areas, but the landside access to these sites and the attendant parking requirements are becoming increasingly difficult to manage. This public access issue is a high priority and should receive continuing attention of state and local officials.

3) Local authorities should recognize their power to organize various berthing uses. Planned grouping of commercial and recreational berthing facilities can help achieve smooth growth to each area's full potential.

RECOMMENDED IMPLEMENTATION AND ACTIONS

- Encourage regional public and private support for a statewide pier improvement program targeted at commercial berthing.

- Update berthing inventory and projections in order to monitor berthing supply and demands.

- Support efforts to provide increased public access and parking facilities for recreational boating needs on a regional basis.

- Promote the development of design guidelines which would provide an incentive for provision of commercial berthing in non-maritime related waterfront projects.

- Encourage the development of policies in the local, regional, state and federal governments which preserve existing berthing and recognize piers and wharves as a critical economic waterfront resource.

- This project has examined and measured the problem and found it to have important region-wide implications. It is recommended that an areawide group continue this work by developing and weighing possible solutions to these issues.

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