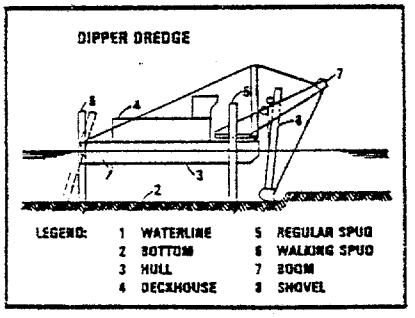
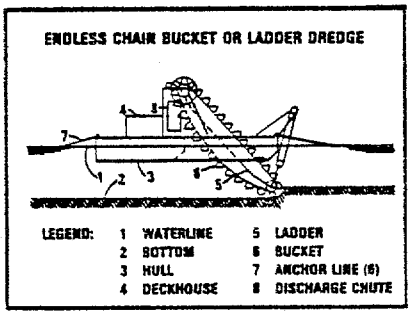
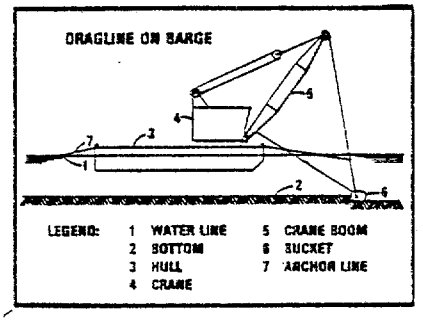
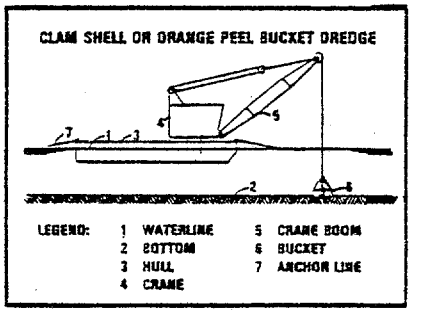
Summary of Dredged Material Disposal Planning in the Duluth-Superior Harbor

September 1981 - August 1982









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SUMMARY OF DREDGED MATERIAL DISPOSAL PLANNING
in the DULUTH-SUPERIOR HARBOR
September 1981 - August 1982

prepared by the

Metropolitan Interstate Committee....
a joint venture of the Northwest Regional Planning Commission
and the Arrowhead Regional Development Commission.

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Introduction

In the past year, the Metropolitan Interstate Committee, on behalf of local units of government, undertook several related endeavors all aimed at resolving one or more of the numerous aspects of the complex issue of dredging and disposal in the Duluth-Superior harbor. These efforts were funded under various programs, but the majority of the funds came from the Wisconsin Coastal Management Program.

The efforts fell into two main categories: 1) analysis of potential disposal methodologies and sites, and, 2) inter-governmental liaison. This report presents the results of the work done in these areas over the past twelve months.

As background, it should be noted that while dredging and disposal has long been closely related to commercial shipping and waterfront development, it was not until the adoption of the harbor plan that the issue was deliberately inter-woven with other harbor concerns. Most specifically, disposal was seen as a potential tool with which to intentionally improve the natural resource base of the harbor and to correct past negative impacts caused by filling operations. Without ignoring the environmental issues raised by the in-water placement of dredged material, the plan encouraged greater use of the material rather than simply discard it or to construct expensive disposal facilities.

The concepts outlined in the harbor plan were expanded upon in a subsequent report ("Recommendations for the Disposal of Maintenance Dredged Material in the Duluth-Superior Harbor", MIC, September 1981) done by the MIC recommending future disposal sites. Among the suggested sites and methods were new island creation for wildlife habitat, marsh creation and enhancement, filling of man-made deep holes in the harbor, upland reuse and beach nourishment. Although this report was relatively thorough, many of the recommendations required additional research. Moreover, the was presented as being an agenda for the discussions required to develop a plan of action fully acceptable by all parties. Thus, much more work was necessary and the past year saw some of this work undertaken.

Disposal Site Analysis

With the completion of the future dredged material disposal site report, emphasis was placed on achieving consensus on it or some acceptable version of it. In addition, utilizing funds from the State of Minnesota, work was done on developing a plan for a new wildlife management area in the harbor on a man-made island; under consideration for this site was the use of dredged material to create sandy habitat on the island, to expand the island, and/or to create additional smaller islands nearby to provide more habitat.

With CMP funds three actions were taken: analyze other potential disposal sites; further investigate the reuse market for dredged material; and work with the Corps of Engineers, the State and the City of Superior on a beach nourishment demonstraton project.

New Site Analysis

In reviewing the disposal site report, the Superior Board of Harbor Commissioners stated that one site in particular should be added to the recommended list, or at least be considered for such inclusion. Discussions with Harbor Commission and City staff identified two other sites that also could be evaluated at the same time. The MIC staff then reviewed the three sites using the same criteria employed in the initial report, but without the services of the consulting engineer who assisted in the first effort.

Appendix A contains the full draft report prepared under this follow-up exercise. Even though it was written and presented late in 1981, it remains a draft report for several reasons of which the primary one is the desire of the Superior Harbor Commission to wait for additional research information.

The draft report investigated three sites - West of Incan, Connors Point East, and the Bunge Dock (see map in Appendix A for locations). The draft report, which when accepted by the MIC would become a part of the initial disposal site document, offered the following recommendations:

1. Bunge Dock

   The Bunge Dock should be the first major land creation site used in the harbor because of its low cost, relative ease of construction, and proximity to half of the harbor maintenance dredging sites. The development of this site should include the relocation of the dumping box for the Itasca reuse disposal facility.

2. Connors Point East

   The Connors Point East site should be considered for use but only after site specific research regarding the fish habitat has been

conducted. If this research determines that the value of the habitat is of significance, then the site is to be eliminated unless it is also determined that the loss of the habitat could be acceptably recouped elsewhere in the harbor.

3. West of Incan

   The West of Incan site is not recommended because of the loss of extensive and valuable fish habitat.

The Superior Harbor Commission disagreed with the recommendation on the West of Incan site stating that the area is extremely valuable as a potential waterfront facility. Despite the concern over the loss of fish habitat, the Harbor Commission felt that the site should be listed as a recommended area and that the environmental impact issue could be worked out at the time a firm development proposal was offered.

The Wisconsin Department of Natural Resources responded to the draft site analysis with a report ("St. Louis River Northern Pike Report", by Stephen Schram of the WDNR, Brule, Office, November 23, 1981) that summarized the results of on-going fish research in and around the West of Incan site focusing on northern pike spawning and migration patterns. That report stated that while northern pike are mobile, they spend the bulk of their time within a short distance of their spawning grounds. It noted that the Grassy Point area is one of only two major spawning areas in the lower 15 kilometers of the harbor. The report concluded:

> "Habitat preservation is the single most important management goal for northern pike in the St. Louis River estuary. Spawning areas in Allouez Bay and Grassy Point as well as nursery areas, which would include virtually all shallow water habitat, must be preserved. Shallow water habitat also provides spawning and nursery areas for the abundant forage population found in the estuary. Loss of this habitat will affect not only the forage population but ultimately the gamefish population which includes northern pike."

The implications of the report for the West of Incan site is that with the adjacent spawning area the West of Incan site becomes, in the WDNR's mind, a vital nursery and feeding area for those fish and hence an area to be preserved for that purpose. The WDNR's resolve in this regard is bolstered by the historic losses of wetlands and shallow water areas in the lower harbor.

Because there has been no resolution concerning this site, the MIC has placed the draft paper on hold. However, attempts are being made to achieve some sort of agreement. The MIC staff did propose one possible compromise that may break the deadlock. Underlying this compromise are the following four assumptions:

a. The bulk of the 150 acre parcel is valuable habitat for the harbor fishery.

b. The WDNR can protect the site from development for only a limited period of time through the denial of fill permits. At some point the pressures will be such that a permit will have to be issued and,

because of the nature of the project, the entire site may be developed.

c. The WDNR does not have the resources or is unwilling to commit them if they have them for the purpose of acquiring the parcel. Other "permanent" means of protecting the site do not seem to be available.

d. While the site is an excellent waterfront development site, the best way of developing it is to have it filled and waiting for a potential developer. Superior will find it extremely difficult to sell land that does not exist. The odds are slim that the WDNR could be pressured into granting a "speculative" permit (the scenario envisioned in 'b' would occur only with an imminent development in hand).

The compromise would consist of the WDNR granting a bulkhead line and lakebed lease now to the City for, say, a 50 acre extension of the Incan dock. In exchange, the City would deed the remaining submerged property to the WDNR. While the City gains a sizeable piece of developable land along the channels, the WDNR gains permanent protection of a valuable fishery resource.

The current status of the situation is that the compromise is being considered at a low level of review, the WDNR continues to conduct research in the area, and the Superior Harbor Commission is preparing a development concept which utilizes the site and which covers the environmental impacts of such use. The issue will be raised again as soon as the Superior Harbor Commission completes and presents its concept paper. A meeting with the Harbor Commission in August 1982 re-defined the scope of this paper; the Harbor Commission intends to discuss it at the September session.

Reuse of Dredged Material

Using dredged material in upland construction projects has been an historic use of the material in the harbor. The MIC's disposal site report carefully evaluated the market for reusing dredged material and used this demand to accordingly decrease the amount and size of permanent disposal facilities.

That report found that local dredged material is suitable only as construction fill. The market for this purpose was estimated at 30,000 cubic yards annually. This level of demand was based on the historic useages as reported by private contractors who sell dredged material and by the City of Superior which sold material from the Barkers Island project.

The WDNR has argued that the projected level of reuse is far too small. The agency's unofficial logic is spelled out in the letter included as Appendix B. The WDNR feels that the reuse market is large enough to justify the stockpiling of nearly all useable material rather than creating land, using permanent disposal sites or disposing in open water.

However, the MIC stands by its earlier position. Although the Barkers Island material moved at a rate of almost 50,000 cubic yards a year, several large projects (WisDOT building and a road viaduct) accounted for most of it. Forecasts made in conjunction with Superior officials did not envision any

other such projects occuring during the time period affected by the plan (25 years after the exhaustion of the current site).

It should be noted that the discussions with the WDNR dealt with maintenance dredged material. Another factor in the MIC's estimate that the WDNR does not seem to include is the impact of the proposed harbor improvement project, which if implemented, will generate 1.5 million cubic yards of reuseable material. The inclusion of this mammoth amount of material would clearly eliminate any need to stockpile maintenance material except as to provide small amounts at sites closer to the reuse project than is the improvement project site.

The issue of reuse as it has evolved over the past year focuses on the locally perceived need to have permanent disposal sites because the level of reuse is not sufficient to handle the demand versus the WDNR position that all useable material should be stockpiled for eventual reuse. The WDNR position implies that few, if any, non-reuse site options should be given consideration.

Beach Nourishment Demonstration

The Wisconsin Coastal Management Program has been working at the state level to resolve the various issues that have led to dredging stalemates in many of the State's harbors. As part of this effort, the WCMP has sought disposal demonstration projects in several Lake Michigan and Lake Superior harbors, the Superior harbor among them. MIC staff worked with WCMP, Corps, WDNR and Superior personnel to design such a project.

Unfortunately, the project that resulted from the discussions - to nourish the beaches at the base of Wisconsin Point - failed to be implemented in time for the 1982 dredging season. Although several questions were raised that caused that failure, a major one was the insistence by the WDNR that disposal take place on the beach or within eight feet of the shore. Corps and local officials, the MIC staff included, argued that the purpose of the demonstration was to see if disposal in 8-12 feet of water using existing equipment would have a significant impact on the beach. From the local perspective, it appeared that the WDNR had already determined that such a practice was useless even though there are no experiences on the Lake Superior coast to support this premise.

As of August 1982, the demonstration is being viewed as a possiblity for the 1983 season. The City must resolve matters of bulkhead lines, lakebed leases and site design. The issue of the depth of disposal is still under discussion.

Other Disposal Options

Using State of Minnesota funds, the MIC began the design of a wildlife management area on and around Interstate Island. The plan for the island will have several phases including the possible construction of new islands and mudflats in nearby shallow waters and the filling of a man-made deep hole adjacent to the island. One source of material for both the island creation and deep hole filling features is maintenance dredged material. In fact, the

MIC's disposal document included these sites as recommended disposal sites and hence the relationship with the other dredging and disposal activities.

The details of the management plan are not germane to this discussion, but what is important is the work undertaken to implement the plan, especially that portion which deals with disposal.

The first issue concerns the ownership of the existing island and any newly created ones. Minnesota law is rather straight forward stating that such land belongs to the State. Wisconsin law, however, finds that the riparian land owner has claim to this property. Thus, the first hurdle is to determine the riparian owner and negotiate with them to gain ownership or at least use of the land for the public. Progress in this regard has been made with the Burlington Northern and C. Reiss Coal Co., the two private owners of the area in question.

The second issue is the ability to dispose material below the ordinary low water mark in Wisconsin. Again, in Minnesota the law provides for such activity accepting that certain standards are met and permits are received. In Wisconsin, such activity is not currently allowed outside of bulkhead lines. The WDNR, in its policy statement on dredging and disposal, clearly indicated that deep hole filling and island creation as contemplated in the Superior harbor would not be permissable under current regulations.

Within the past year the MIC has strived to build the case for allowing deep hole filling and new island creation when such activities were in the public interest (for either habitat management and/or recreation). A recently awarded WCMP grant to Northwest Regional Planning Commission will permit more detailed work on the deep hole portion of this matter.

Inter-governmental Liaison

One of the major functions of the MIC regarding the harbor is the coordination of activities between the various federal, state and local agencies involved with the harbor. Most of this work occurs through the Harbor Advisory Committee which is composed of technical and policy representatives of these 15 agencies. From Wisconsin there are representatives from the Departments of Transportation and Natural Resources, Superior and Douglas County Planning Offices, the Superior-Douglas County Development Association and the Superior Harbor Commission.

The Harbor Advisory Committee (HAC) provides a vehicle whereby multi-state and multi-disciplinary issues can be discussed between agencies in an open and non-binding forum. One value of the HAC is that it brings together agencies that do not often meet except in highly formal gatherings such as hearings. The formal and informal exchange of information and views is critical to resolving many of the issues facing the harbor, especially those that involve agencies with opposing perspectives and/or legal mandates. (See Appendix C for copies of HAC meeting minutes covering topics funded by this WCMP grant.)

One example of the inter-governmental coordination work done regarding dredging is the follow-up site analysis as requested by the Superior Harbor Commission. The initial report and the subsequent work were and are being funneled through the HAC.

A second area concerns the U.S. Army Corps of Engineers' proposed harbor improvement project. Over the years the MIC's role in this project has been to work with the Corps on public hearings, information gathering, as a catalyst to reactivate the study once it had been shelved and to coordinate the local response between Superior and Duluth.

In the past year, the MIC prepared summaries (Appendix D) to present the project to the Superior Harbor Commission and the Duluth Port Authority. The MIC also worked with the Corps and Superior officials on a field visit of the proposed disposal site, which is located within Superior. A staff biologist with the MIC assisted Corps, Superior and other federal officials in assessing the impacts of the disposal site. Finally, MIC staff worked with the Corps and local officials in drafting letters of local support and commitment to the project.

Last, the MIC, through the HAC, has worked to change those state regulations that prevent or hinder the proper management of the total resources of the harbor. Regarding dredging, the MIC has advised the Wisconsin Coastal Task Force (1981) on dredging and disposal issues and the problems presented by certain Wisconsin laws. In late 1982, another MIC initiative reached fruition when the Minnesota DNR published its proposed changes in its water permit regulations. Nearly all of the changes recommended by the MIC were included

in the document. A HAC meeting was held so that the MDNR could present the proposed rules. As reported in the minutes found in Appendix C, the rules were thoroughly discussed, including input from Wisconsin interests. One obvious goal is to obtain similar rules on all harbor affairs in both states. The HAC discussion advanced this cause.

Future Efforts

In the upcoming year, the MIC will continue to act on the steps taken in the past year. Among the major items will be:

1. Disposal Site Analysis

   The first item is to resolve the West of Incan site issue and amend the disposal plan document accordingly. This work will include intensive discussions with the Superior Harbor Commission and the WDNR. There is also the chance that additional site specific research using WDNR and other resources for this purpose.

   A second thrust will involve the use of WCMP funds to research the impacts of filling the man-made deep holes in the harbor with dredged material. Although these holes have been recommended as potential sites, both DNRs and the Wisconsin one in particular, are hesitant to endorse this option. In Wisconsin there will need to be changes in the regulations and laws. The study will attempt to describe the actual environmental impacts and to assess the various options and costs associated with deep hole disposal.

2. Open Water Disposal

   Disposal of dredged material in the open waters of Lake Superior has not occurred for over a decade. Much attention will be given to securing the beach nourishment demonstration project on Wisconsin Point as a first step towards resolving at least some portion of this issue.

   Other work will be aimed at obtaining more research on the impacts of open water disposal, particularly since the chemical composition of dredged material has changed with the improvements in local waste treatment facilities. Continued review of state and federal laws will also be undertaken.

3. Reuse

   The reuse market will continued to be examined. A portion of the deep hole work will involve investigating the use of the holes as temporary storage sites for material to be later pumped onto land for reuse projects.

4. Habitat Development

A major element of the MIC's harbor work will be natural resource management. One of the aspects of this effort will be to seek the use of dredged material as a building material for island creation, marsh creation/restoration and habitat maintenance.

Appendices

Appendix A

ADDITIONAL SITE DESCRIPTION AND ANALYSIS REGARDING FUTURE MAINTENANCE DISPOSAL SITES

prepared by the Metropolitan Interstate Committee
Duluth-Superior urban area communities cooperating
in planning and development through a joint effort of the
Arrowhead Regional Development Commission and the Northwest
Regional Planning Commission.

(Note: this analysis was prepared in response to comments made by the Superior Board of Harbor Commissioners on the MIC report, "Recommendations for the Disposal of Maintenance Dredged Material in the Duluth-Superior Harbor." This material will eventually be recommended for inclusion into that report.)

This paper describes and analyzes three additional sites for possible inclusion into the recommended future disposal site program as adopted by the MIC. The sites are all in Superior and have been suggested by the Superior Harbor Commission and the City Planning staff. The sites are: West of INCAN dock (also known as the Case-Western site), Connors Point East and Bunge Dock. They were not included in the original report for the following reasons:

1. West of INCAN - The Wisconsin DNR has stated its objections to the filling of this site on numerous occassions and has supported its position with extensive research on the site. The WDNR has identified the area as being vitally important to the game fishery of the harbor. The MIC agreed with the WDNR opinion of the area and, thus, precluded its consideration as a disposal site.

2. Connors Point East - At the time the report was being conducted, Superior was securing a grain elevator development on Connors Point in the general vicinity of this site. Assuming that this effort was going to be successful, the City did not press for the consideration of the potential disposal area. With the withdrawal of the private developer for the elevator, the site now becomes available for review.

3. Bunge Dock - This site was simply overlooked. Thinking regarding this dock had been focused on merely smoothing out the irregularities on the eastern face which would not have required enough fill to make it worthwhile to designate the site for disposal.

Site Descriptions

The following site descriptions are not as detailed as those in the original report. Whereas the MIC had hired an consulting engineer to describe and evaluate the first round of sites, the following descriptions and evaluation were done by the MIC staff. Thus, only basic information is available for the three sites. All technical information regarding volume, dike length and land

area is estimated. The accompanying map generally locates the sites within the harbor.

West of INCAN

Site type: land creation

This large site is comprised of an extensive shallow water area and the remains of an old slip. A dike would be built westward from the end of the INCAN dock to the old slip and then southerly to land. The dike would be built to a height of five feet above the water. A variety of disposal techniques could be used: offloading with land-based crane and then use bulldozers or draglines for distribution within the site; bottom dump and then hydraulically pump into the site; or, hydraulically pump directly from scows. When filled, the site could be used for commercial shipping operations. The site will need the harbor improvement project to deepen the adjacent channels to 27 feet before the site will be acceptable.

Volume:	2,000,000 cubic yards
Dike length:	5,000 feet
Land area:	148 acres

Connors Point East

Site type: land creation

This is a relatively small site located on a shallow water area on the eastern edge of Connors Point. Dikes would be built to a height of eight feet above the water. The small size of the site lends itself to offloading scows with a land-based crane and a minimal amount of rehandling. The resulting land would be used for commercial shipping operations. It should be noted that this disposal site is not part of the proposed new grain elevator development nor does the use on non-use of this site impact on that project.

Volume:	280,000 cubic yards
Dike length:	2,500 feet
Land area:	17 acres

Bunge Dock

Site type: land creation

This site has excellent potential because of its large volume, small diking requirement and ease of disposal. Disposal could be treated as was the Nettleton Slip a few years ago. Scows would be bottom dumped within the slip and an underwater berm at the end of the slip would be built to prevent the material from escaping. Draglines could be used to distribute the material throughout the site. The dike would be completed when disposal operations were almost finished. As with the other sites, this site would be used for shipping operations.

Volume: 1,100,000 cubic yards
Dike length: 700 feet
Land area: 40 acres

Technical Site Evaluation

The purpose of the initial report was to screen the alternatives leaving the reasonable options and sites for further use in the formation of an official program for future disposal. The following technical and legal evaluations offer a rationale for the inclusion or exclusion of the three additional sites in the recommended program.

Since all three sites involve creating land from existing open water areas, there will be adverse impacts associated with each site. This evaluation assumes that some or all of these impacts can be acceptably compensated for unless noted otherwise. In all but one case, the value of the created land is considered to offset any additional capital or operating costs for the site (as compared to the least expensive methods of disposal).

The West of INCAN site is an extremely attractive site from the perspectives of development and disposal. As a future development site, it is large, has good land access and is well served by the railroads. It will need the harbor improvement project to provide a 27 foot channel depth adjacent to it. Finally, it is publicly owned, which makes development easier and less expensive.

As a disposal site, this area is close to much of the dredging activity in the harbor, it has a good estimated volume to cost ratio and has a long lifespan (roughly 10 years).

However, the vast majority of the site has been and continues to be extensively researched by the WDNR because of the value of the area to the harbor and Lake Superior fishery. A study done for the MIC found that this shallow water area is excellent habitat for walleye (fingerlings) and yellow perch (nursery, adult forage), both of which are prime game fish. Subsequent work by the WDNR has substantiated these initial findings. The value of the site is increased in light of the loss of the Erie Pier shallow water area for the current disposal facility; the amount of good, shallow water habitat (less than 3.5 feet in depth) is limited in St. Louis Bay, a fact that both DNRs have observed.

The Connors Point East site is small, but remains an excellent disposal site from the developmental perspective. Connors Point is a prime waterfront development area in the harbor and the addition of this land would enhance its potential. The only developmental issue with this site would be the possible road and rail congestion that may occur if several new operations were built on the point.

The site does suffer from its small size in that the cost of site preparation would be high relative to the amount of material to be deposited there. Thus, as with two other potential small disposal sites, the cost of developing the

site should be borne by the land owner, in this case the public. The value of the resulting land will more than compensate for this up front cost.

To a lesser degree than the previous site, the Connors Point East area has value to the harbor fishery. The shallow water area has been identified as good habitat for game fish such as yellow perch and walleye. Precisely how valuable this site is relative to other sites and to its role in the harbor has not been extensively documented. The results of further study would help determine the true impacts of filling this site, and,thus, help determine whether or not the site could be available or at what cost.

The Bunge Dock site has great potential on all counts with no serious limiting factors aligned against it. Disposal would be inexpensive and convenient since much of the harbor's maintenance dredging occurs in the nearby Superior Harbor Basin. The resulting land has solid developmental potential with good road and rail access, excellent water access, and sufficient size for most types of waterfront facilities. The only possible cost item is for the land since it is privately owned. Significant adverse environmental impacts seem to be non-existent.

The one potentially negative aspect of the site is its impact on the disposal facility for the Itasca reuse disposal operation. The scow dumping box for that operation is located in the slip proposed to be filled. This concern can easily be handled by leaving a notch in the end of the filled slip (and out of the way of any future shipping operation). The dumping and hydraulic pumping operation for the Itasca site can be be located within this notch with no loss of effectiveness for that disposal alternative and, depending on design, at a reasonable cost. Another option would be to locate the dumping operation on the eastern face of the Bunge Dock

Figure 5. DISPOSAL SITE EVALUATION - NEW LAND CREATION SITES

Criteria	West of INCAN	Connors Point East	Bunge
Engineering			
Construction feasibility			
Transport feasibility			
Treatment of dredged material			
Time to implement			
Life expectancy		X	
Site stability			
Long-term monitoring/ maintenance			
Environmental			
Substrate compatibility			
Persistance of impacts	X	X	X
Alteration of existing character	X	X	X
Impacts on faunal reproduction			
Effects on fishery resource	XX	X	
Toxicity to aquatic or terrestrial ecosystems			
Effects on water quality			
Economic			
Capital investment		X	
Annual operating cost			
Land cost			X
Equipment needs			
Public Health & Welfare			
Effects on water quality			
Effects on air quality			
Proximity to public water supply			
Public safety			
Other			
Energy consumption			
Limits to other uses of resources	XX		X
Land availability			X

X = is an issue XX = is a significant, potentially limiting issue

Regulatory Evaluation

Disposal of dredged material is governed by all three levels of government with the States playing the most significant role. The Federal government, through the Corps of Engineers using standards devised by the Environmental Protection Agency, issue permits for disposal in navigable waters. The two Departments of Natural Resources and the Minnesota Pollution Control Agency issues permits governing fill, water quality, effluent discharges, solid waste and lakebed leases. A summary of these laws is found in Chapter 6 of the MIC's disposal report.

The following review provides an evaluation of the impact of the existing legal structure upon the proposed disposal options. This review was conducted by the staff of the MIC and not by the agencies whose rules are being cited. The intent of the evaluation is to describe the likely results if these sites were offered to the agencies for permits.

The review lists the site, a determination on whether it is possible for the agency to permit the site, and comments indicating the agency's probable response and reasons for it.

West of INCAN

A permit for this site could be issued using the bulkhead and lakebed lease provisions in tandem. However, because of the WDNR's stated interest in the fishery value of the site, it is unlikely that a permit would be granted. The amount of habitat lost is large and most probably could not be adequately compensated for elsewhere within St. Louis Bay or the lower harbor.

Connors Point East

Again, a permit could be issued. It is questionable whether the permit would be issued, however. The full value of the known fish useage of the site is unknown and thus is a "wildcard" in the permit process. No firm statement can be made on the likelihood of a permit being issued.

Bunge Dock

Again, a permit could be issued. Unlike the other two sites, it is probable that the permit would be issued if a developer for the site was identified (that is, the land was not being created for purely speculative purposes). The impact on the Itasca disposal box is not a legitimate issue for the delial of the permit, even if there was no subsitute dump facility constructed.

RECOMMENDATIONS

The Bunge Dock site should be the first major land creation site used in the harbor. Following it would be the INCAN slip and the Berwind Dock site. The SPAD and Connors Point (end, not the new east site) are to be used when the land owners see fit. The development of the Bunge Dock site should include the relocation of the disposal facility for the Itasca reuse disposal

operation.

The Connors Point East site should be considered for use but only after site specific research regarding the fish habitat has been conducted. If this research determines that the value of the habitat is of significance, then the site is to eliminated unless it is also determined that the loss of the habitat could be recouped elsewhere in the lower harbor.

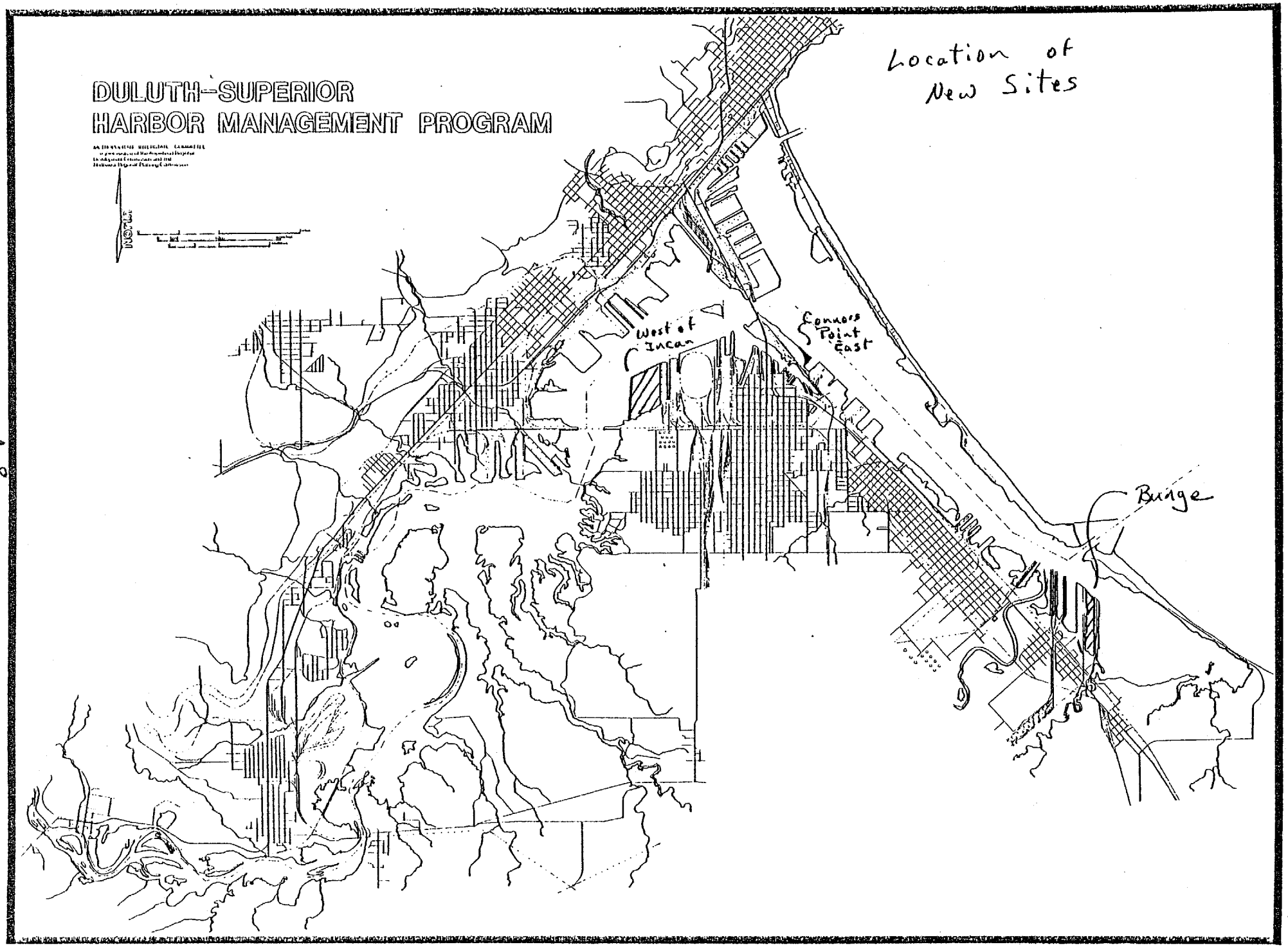
The West of INCAN site is not recommended because of the loss of the extensive and valuable fish habitat.

Discussion

The addition of the Bunge Dock and, perhaps, the Connors Point East sites greatly increases the capacity of the total recommended future disposal program. Over a 25 year period following the exhaustion of the Erie Pier site, the recommended program now has a maximum capacity of 6,543,000 cubic yards, well in excess of the estimated need of 5 million cubic yards. This revised capacity breaks down as follows:

Permanent site capacity:	5,793,000 c.y.
Reuse demand:	750,000 c.y.
Total	6,543,000

Any in-water disposal (beach nourishment, mid-depth open lake) would be in addition to these totals.


DULUTH–SUPERIOR
HARBOR MANAGEMENT PROGRAM
NORTH
Location of New Sites
West of Interlake
Connors Point East
Bridge

Appendix B

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES
Northwest District Headquarters
Box 309
Spooner, Wisconsin 54801

Carroll D. Besadny
Secretary

March 8, 1982

File Ref: 1600

Mr. John Powers
Metropolitan Interstate Committee
200 Arrowhead Place
Duluth, Minnesota 55801

Dear John:

It appears we are behind in responding to your request for information and will catch up by answering your letters of December 30, 1981, and February 10, 1982.

Regarding the Arrowhead Bridge fishing pier, Wis DOT has agreed to redesign the section of bridge to be used as a pier. This salvage operation would then be guided by a specific plan. Reconstruction (essentially replacing the deck and railings) would be done by local interests. To the best of my knowledge, we are on schedule.

You're welcome to use the harbor map showing changes since 1861 which we will forward to you shortly.

It is encouraging that we agree, reusable dredged material should play a major role in the overall disposal program. We do not disagree with your analysis of the reasonably predictable need for the material. It is the unanticipated need that the analysis fails to address. A case in point would be the DWP rail yard relocation to Pokegama and improvements planned at other yards; I don't believe the need for granular fill for these projects was ever considered. We believe a one-two million yard stock pile would be a prudent objective, along with facilities to process and store this material.

Dredged material is classified as solid waste and therefore, subject to the rules contained in NR180 and NR 347. As a practical matter, there is no real mystery in how these rules are applied. Each dredging project is considered on a case by case basis as follows:

1. NR 180.13(2)(b)4,a, requires licensing of sites used for the disposal of dredge spoils of more than 3,000 cubic yards of materials from Lake Superior. Sites where it has been determined, based on available information, that a potential for ground or surface water pollution exists, must also be licensed by the Department.

2. NR 347, Regulation of Dredging Projects, specifically outlines the sediment sampling and analysis requirements for dredge projects. It addresses such things as number of samples, types of sampling procedures, parameters, and testing methods. Bulk sediment analyses results are compared to "Guidelines for the Pollutional Classification of Great Lakes Harbor Sediments".

3. One of the Department's policies, stated in NR 37, is to encourage reuse of dredged materials. Exemptions to the solid waste disposal requirements may be granted should the tests of the material show that no environmental harm will occur from this reuse. A copy of NR 347 is included for your use.

The Department's commitment to reuse dredged material is contained as a policy statement in NR 347. We are aware of the 1977 sediment quality data from EPA on the harbor deepening project. It appears there are some chemical parameters that indicate elevated levels in the sediments, but this condition would be manageable under the proposed dredging system. At this point, it cannot be said with absolute certainty that all the material reaching the disposal site would be physically and chemically suitable for reuse. However, it is our best judgement based on previous experience that the hydraulic transport process will sort the materials so as to make it suitable for reuse.

Regarding your final question, the Department has never conducted a market analysis of the future need for dredged material. Our past experience in Superior and other local communities suggests that where it is available, it seems to get used! Given the assumptions of your question, that quantity would be added to whatever is available at the time. Such quantities would be well in excess of the predictable needs identified in your analysis; it is anyone's guess as to what the actual demand may be at that time.

I trust the foregoing will be of value to you in reaching a common understanding on the question of reuse of dredged material from the harbor.

Sincerely,

William F. Richie

William F. Richie
Environmental Impact Coordinator

WFR:mj
cc: J. Rieckhoff - Brule
J. Donatell
G. LeRoy
G. Meyer - ADM/5
R. Rodin - WRZ/5
S. Druckenmiller - EI/3
R. Krill - SW/3

Appendix C

MINUTES
of the
Duluth-Superior Harbor Advisory Committee
September 14, 1981 meeting
ARDC Offices - Duluth, Minnesota

MEMBERS PRESENT	REPRESENTING
Don Wilson	WisDOT
Bill Newstrand	MnDOT
Davis Helberg	SPAD
Dan Retka	MDNR
Sandy Sweeney	City of Duluth
Jerry Reickhoff	WDNR
John Pegors	MPCA
Bill Hammann	Superior Harbor Commission

OTHERS PRESENT

Herb Johnson, Tom Kucera, Jack Scrippek, Earl Huber, Rich Staffon and Pete Otterson - MDNR; Candace Jacobs - Duluth League of Women Voters; Keith Yetter - Zenith Dredge; Tom Wood - Lake Superior Basin Studies Center; Tom Davis - F&WS; Kim Bro and Cliff Craft - Wisconsin Sea Grant; Stanley Walczynski - United Northern Sportsmen; Steve Thorpe - MnDOT; John Powers - MIC.

I. Call to order

John Powers called the meeting to order at 1:20 p.m.

II. Spirit Lake Navigation Improvement Surplus Property

John Powers explained that the General Services Administration has sent out notices that certain parcels of land in the St. Louis River have been declared surplus property and that they are available for acquisition by local units of government. The parcels include Spirit Island and nearby marshes and submerged lands totalling roughly 38 acres. John said that he would recommend to Duluth that the City acquire this property for use with the Western Waterfront Trail for educational, recreational and environmental management purposes.

III. Dredged Material Disposal Program

John Powers presented the recommended program and explained the reasoning for the elimination of certain options. In summarizing the conclusions of the report John said that in his opinion it is clear that some form of in-water disposal is mandatory if the harbor is to be dredged once Erie Pier is filled. Among the points raised in the subsequent discussion were the following:

a. Jerry Reickhoff wanted to know what the threshold was for determining the "economic feasibility" of a site. John said that

specific figures were not available, but rather that relative cost comparisons were made. He added that if the other factors in choosing a site were deemed more important than cost, then a high cost site could be selected. In most cases, the high cost sites were discarded.

b. Bill Hammann asked if specific law changes would be included in the final report. John replied that detailed language changes were not in the report, but that the general intent of preferred changes would be clearly stated.

c. Pete Otterson felt that the lack of firm data on the pollutant load in the harbor prevented the design of a realistic program. He suggested that a base line study be conducted to determine the amount and extent of pollution in the sediment prior to selecting disposal sites.

d. Don Wilson thought that a weak spot in the plan was the land creation element. He said that the Berwind site in Duluth has poor water access and thus will have reduced value for development. He added that the INCAN site in Superior will require extensive work, especially in relocating the existing shipping operations. He felt that these shortcomings should be highlighted in the report.

e. John Pegors said that without the resolution of the "who pays" issue which has been raised on the national level by proposed user fee legislation, the attempt at designing a disposal program will be premature. He added that the issue of cost and responsibility should be addressed on a site-by-site basis as well as for the harbor as a whole. Davis Helberg noted that with the myriad of bills in the hopper regarding user fees and with the uncertainty residing over the entire issue, it would be best to proceed as planned and take on the matter as it evolves, if it even becomes fact at all.

MOTION: Davis Helberg - that the Harbor Advisory Committee recommends that the Metropolitan Interstate Committee adopt the report "Recommendations for a Comprehensive Plan for the Disposal of Maintenance Dredged Material in the Duluth-Superior Harbor."

SECOND: Bill Newstrand

Motion carried with seven ayes and one abstention (MPCA).

Prior to the vote on the motion John Powers noted that the vote is not binding on the agencies represented on the HAC nor does it necessarily represent endorsement of the report by any agency. Request for endorsements and action by the agencies will follow after the MIC acts on the report.

Pending action on the report by the MIC the document will be

published in its final version and will include changes that reflect the discussion of the HAC meeting.

In casting their votes, both Jerry Reickhoff and Dan Retka noted that there are many issues yet to be resolved. They agreed that in-water disposal will have to be practiced in some form, but the precise nature of that action will require careful study by all involved.

III. Interstate Island Management Project

John Powers briefly described this project which is aimed at creating a joint state wildlife management area using Interstate Island and the surrounding shallow water area. He said that the intent of the project was to provide better and more habitat for key bird and fish species and to provide an area to compensate for unavoidable losses associated with future developments. A summary of the project is attached to the minutes.

Tom Wood from UMD's Lake Superior Basin Studies Center presented a slide show on the development of islands from dredged material. The sites and the points he covered were:

James River - low energy area; expanded an existing island into a 7-10 acre island and tidal marsh; dike surrounding site was made from dredged material with armoring provided by gravel; targeted as habitat for geese and ducks; a tidally influenced marsh was deliberately designed within the confines of the diked area; although site was planted, natural succession quickly became dominant; currents flowed through the site.

Columbia River - also began with an existing island; this is a high energy site; site had been overtopped twice during spring runoff; material for the island was deposited hydraulically and then shaped with machines; site was vegetated with selected species; some tidal influence on site; roughly 75 acres.

In response to questions Tom noted that maintaining the desired level and mix of vegetation is a big issue. One practice is to periodically bury the site with new dredged material and begin the revegetation process anew.

Tom said that wind erosion was often combatted through the use of snow fences. He added that these fences could also be used to develop and secure dunes.

Among the comments regarding the Interstate Island project were:

a. Herb Johnson felt that the deep hole should be filled to a final depth of 2-3 feet. He agrees that the 8-9 foot depth is important to fish, but he feels this importance is as a transition zone and

not as a large basin.

b. Develop ring of islands to create maximum amount of protected waters and a diversity of habitat.

c. Although habitat is aimed at target species (terns, plovers, walleyes, northern pike and yellow perch), additional habitat types will be encouraged to support other species.

d. Develop a ring dike as was done on James River and then create openings to permit flow of water through site.

e. Island design is still open to discussion, especially by experts in coastal processes and hydrology.

f. Ownership is an issue. Minnesota has tentatively claimed its portion of the island, but Wisconsin law will require more time before that state can claim its side of the island.

John Powers said that the result of the current planning effort for the island will be a management plan that the two states can use as the basis for designating the area. A final version should be completed by the end of this year.

IV. Adjournment

The meeting was adjourned at 3:15 p.m.

MINUTES
of the
Duluth-Superior Harbor Advisory Committee
January 27, 1982 meeting
ARDC Offices - Duluth, Minnesota

MEMBERS PRESENT	REPRESENTING
Bill Newstrand	MN/DOT
Bill Lehman	City of Superior
Davis Helberg	Duluth Port Authority
Jerry Reickhoff	WISDNR
Jim McCarville	Superior Harbor Commission
Courtland Mueller	Corps of Engineers
John Pegors	MPCA
Roger Roznoski	Coast Guard
Milt Stenlund	MNDNR

OTHERS PRESENT

Pete Otterson - MDNR; Al Nelson, Ray Flaherty, Bill Grimstad - Burlington Northern RR; Duane Lahti, Steve Schram, Fred Strand - WDNR; Al Shea - Wisconsin Coastal Management; Paul Gableman - DM & IR RR; Tom Wood - Lake Superior Basin Studies Center; Betty Hetzel - Douglas County; Milt Pelletier - United Northern Sportsmen; Dave Zentner - Izaac Walton League; Keith Yetter - Zenith Dredge Co.; Barb Kucera - Duluth Herald-News Tribune; John Powers - MIC.

I. Call to order.

John Powers called the meeting to order at 1:15 p.m.

II. New Harbor Projects

John Powers briefly described two new projects for which the MIC is pursuing funding from the Wisconsin Coastal Management Program. One project is the development of a use plan for Clough (Whiteside) Island stressing low intensity recreational development with environmental management. The project would also involve attempts at facilitating transfer of the property from private to public ownership.

The second project follows upon the recently adopted future dredged material disposal program. The project will investigate in detail the filling of man-made holes in the harbor. Included in the work will be environmental impact analysis, exploration of legal issues and continued liaison with local, state and federal agencies on the entire disposal plan.

III. Interstate Island Management Area

John Powers offered background material on the project as it stands to

date. He noted that both DNRs have taken steps to accept designation and development of the island itself and that the BN Railroad has presented a claim to part or all of the island. Representatives from the DNRs and the BN were in attendance to present their concerns and positions.

Jerry Reickhoff said that the WDNR is working on determining ownership of the Wisconsin side of the island. He said that under Wisconsin riparian law, the shore owner owns out to the state line. He added that the WDNR is currently operating under the plan to designate only the island and for the time being is withholding final judgement on the new island creation aspects of the program.

Don Wilson wanted to know the criteria that were used to select Interstate Island for this type of project. John Powers said that the island is isolated from most human disturbances, is centrally located within the harbor, has few, if any optional uses for development and, by being in St. Louis Bay, provides an opportunity to compensate for historic as well as potential future environmental losses in this highly developed portion of the harbor.

Milt Stenlund said that the MDNR has authorized staff to pursue the designation and the development of the island proper and, like the WDNR, is withholding action on the rest of the plan. He stated that Minnesota under a previous ruling claims that part of the island which lies inside Minnesota. He referenced a memorandum written by Paul Faracie, Attorney General assigned to the MDNR, stating that because the island was created from an area once below the ordinary low water mark, the land belongs to the State. Milt added that the MDNR is not opposed to anyone else claiming the island, but it will reserve the right to scrutinize the documentation for those claims.

Bill Lehman said that it appeared by the Minnesota memorandum that Minnesota declared St. Louis Bay to be part of a lake while Wisconsin court cases have declared it to be a river. He wondered if it were declared a river in Minnesota as well, would the ruling change. Pete Otterson said that Minnesota law is based on navigable waters and not distinctions between lakes and rivers.

Ray Flaherty of the BN said that the BN claims portions of the island on the Wisconsin side under state riparian law. He said the BN is still investigating any potential claims on the Minnesota side. The BN's major concern is the possible imposition of new regulations on the BN, the operation of its bridge and the possible reconstruction/realignment of the bridge that would occur because of the establishment of a wildlife management area on the island. Because no plans have been finalized, neither of the DNRs nor the MIC could state what regulations or limitations, if any, might exist because of designation. Ray added that the BN's Wisconsin claim has been put into writing but that there has not been any communication with the WDNR on the matter as of this time.

Dave Zentner wanted to know if fish and wildlife management projects have been ranked as to priority for attention and funding, and can the DNRs state whether or not Interstate Island is a good place to invest limited resources. John Powers said that the only "ranking" that has occured has been by the MIC in its efforts to push various projects that are recommended in the harbor plan.

Don Wilson suggested that the BN be kept informed of any permits that will be necessary to reconstruct the bridge. He added that if designation of the island as a wildlife management area is going to affect the issuance of these permits, that this information also be forwarded to the BN.

IV. Future Dredged Material Disposal Program

John Powers provided a brief background on the disposal plan as it was recommended by the HAC to the MIC and then adopted by the MIC. He said that the Duluth Port Authority endorsed the program but that the Superior Harbor Commission had stated concern over portions of it.

Jim McCarville said that the Harbor Commission agreed with the document with the exception that three other sites should be included as part of the long range plan. He quickly stated the case for the Bunge Slip and Connors Point East sites on which there is no disagreement. These sites were overlooked in the initial planning process, but now can be added. John Powers agreed that these sites are acceptable, although the Connors Point East site will be relatively expensive because it is small.

The site that the Harbor Commission wants included is known as West of INCAN. Jim said that the area is large, would be inexpensive on a per cubic yard basis to develop and fill, and represents an excellent development opportunity for the city. He agrees that there are environmental questions over the use of the site, but he feels that these can be resolved. He said that the Commission wants the site included in the plan so that its use is not prematurely prohibited. Changes in economic conditions, the addition of new data regarding the harbor fishery and the existance of a future developer are all considerations that could alter existing perceptions on the need to protect the site on environmental grounds.

Don Wilson added that the WISDOT District staff agrees with the Harbor Commission. He noted that the imposition of user fees for dredging will force the localities to utilize the lowest cost disposal alternatives and that this site represents an excellent and inexpensive option.

Jerry Reickhoff said that the WDNR has always been on record as opposing the filling of the site. Steve Schram offered data supporting the fishery value of the site using northern pike as an example. He said that the site is an excellent nursery area for young fish and is a spawning area for prey species used by pike. The site is adjacent to a

major lower harbor northern pike spawning bed, and because pike remain relatively close to their spawning beds, it is important that good nursery and feeding habitat exist near them. He noted that there have been significant habitat losses in St. Louis Bay and that any future losses would harm the fish population in the area and the estuary.

Tom Wood inquired as to the existence of a fishery management plan jointly adopted by the two DNRs and if it existed, what was the importance attached to northern pike. He said that without a plan the DNRs could not safely state that northern pike are an importance species to be managed and that without a plan the DNRs were not in a position to unequivocably state that the West of INCAN site is vitally important. As a follow up question, Davis Helberg wanted to know if the DNRs did cooperate on fishery matters.

Jerry and Steve replied that the DNRs do cooperate citing the ongoing walleye tagging and spawning ground management work. They added that the DNRs are in the preliminary stages of preparing a fishery plan for the estuary. They also said that there is no question to the WDNR that the northern pike is an important game species that is to be managed for maximum production in the harbor.

Don Wilson and Jim McCarville wanted to know if there was not some compromise solution perhaps involving filling in a portion of the site and providing mitigation for any environmental losses. Jerry responded by saying that there is no evidence at this time that the site is needed. Jim said that industrial development cannot work without having the site already in hand as opposed to "maybe" having the ability to fill the site when and if a developer comes along.

Dave Zentner suggested that it may be in the best interest of Superior to forget about the site and to get on with the business of developing more acceptable sites. He also noted that mitigation of environmental losses due to development has seldom been realized. He said that to be acceptable mitigation must be enforceable at the time the losses are occurred.

Al Shea suggested that the city might want to document the potential for development of the site. John Powers added that it would be helpful if both the WDNR and the City could provide detailed written presentations of their points of view. This information can then be used by the MIC to prepare an amendment to the existing disposal program covering the West of INCAN, Connors Point East and Bunge sites.

V. Adjournment

The meeting was adjourned at 2:25 p.m.

MINUTES
of the
Duluth-Superior Harbor Advisory Committee
March 10, 1982 meeting
ARDC Offices - Duluth, Minnesota

MEMBERS PRESENT	REPRESENTING
Bill Lehman	City of Superior
Courtland Mueller	Corps of Engineers
Bill Newstrand	MnDOT
Lt. John Sedlak (for Roger Roznoski)	Coast Guard
John Pegors	MPCA
Gene Hollenstein	Minnesota DNR
Jim McCarville	Superior Harbor Commission
Bill Cortes	Duluth Port Authority
John Allen (for Don Jorgenson)	WisDOT

OTHERS PRESENT

Martin Forbes - WisDOT; George LaValley, Paul Gableman - DM&IR; LeRoy Angell, Earl Huber, Herb Johnson - MDNR; Capt. Gregory Bean, Maj. Charles Jones, Les Weigum - COE; Alden Lind - Save Lake Superior Assn; Stanley Walzynski - United Northern Sportsmen; Phil DeVore - Lake Superior Basin Studies Center; G. Goransson, Robert Libby, A. Dougherty - International Shipmasters; Bob Bruce; Stan Jacobs; Chuck Henderson - Duluth Chamber of Commerce; Candace Jacobs; Kim Bro - Wis Sea Grant; Betty Hetzel - Douglas Co. Board; Steve Thorpe - MnDOT; John Powers, Tom Davis - MIC staff.

I. Call to Order

John Powers called the meeting to order at 1:35 p.m.

II. Draft Harbor Improvement Project Plan

John Powers opened the session by stating that the sole topic for discussion was the Corps of Engineers' draft feasibility plan and EIS for the harbor improvement project. He emphasized that the discussion was to be on the technical points of the project.

Major Charles Jones presented briefly outlined the plan. He introduced Captain Greg Bean who will be replacing Jones as the project manager and Les Weigum, chief of the environmental branch in Detroit. The remainder of the meeting consisted of questions and answers on the project. The following is a recap of the discussions on the various items.

1. Impact of floating pipeline to disposal site.

There will actually be two pipelines - a 20" line to the site carrying water and solids, and a 12" line carrying the return water to the bay. The report does not thoroughly discuss the impacts of the lines several nearby homes nor does it address adverse impacts on one boat landing and the private docks of Billings Park homes. These will be

added to the report. It was suggested, and the Corps will investigate the idea, that all or part of the pipeline be submerged to reduce or eliminate the barrier effect.

2. Cost sharing

Jones explained that under the current rules the local sponsor(s) is required to pay $2.7 million for the recommended plan with the federal government covering the rest. The states have no funding responsibility.

However, under a cost sharing plan proposed by the Carter administration, the states would be asked to pick up 5% of the first cost of the project. The federal and local split would be the same as before, but the actual amount of federal funds would be reduced by the amount paid by the states. This plan has not been adopted by Congress and, hence, is not in effect.

There are other cost sharing (user fee) proposals before Congress at this time, all of which would supercede the Carter administration's plan. Since none of these plans are in place, their impacts cannot be measured by the Corps. The Carter plan is included in the report because the Corps, as an Executive office, represents the President and until President Reagen deletes or supercedes the first plan, that plan remains the administration's proposed funding plan to be suggested in all Corps projects.

3. Cost Allocation on Page 50

The cost allocation showing the split between dredging and disposal costs is wrong as stated on page 50. This will be changed to show that $1.7 million for the pipes and pumps for the disposal facility are a federal cost.

4. Why was Berwind site not selected?

Jones said that after meeting with all the appropriate regulatory agencies including a field trip to the sites, the Corps decided that the Berwind site was a valuable fishery site. He explained that these discussions took place with the regulatory agencies only because they were the ones that issued permits and had management authority over natural resources.

Gene Hollenstein (MDNR) said that the documentation to support the value of the Berwind site to the harbor fishery is solid. He added that the Corps concurred with the authority of the state over the area. Alden Lind questioned the strength of the data used to reject the site. He said that the report offers no convincing information to support the claim that the site is valuable.

5. Cost splits

Although the Corps determined costs and benefits for each segment of the project, they did not include that data in the report. It is

available to those who desire it. He provided the following volumes to be dredged for each of the major channels:

Cross Channel	95,000 c.y.
North Channel	365,000
South Channel	500,000
Upper Channel	112,000
Arrowhead Bridge Widening	280,000
Minn. Channel	590,000

Jones noted that the channels will be widened as they are deepened. The range of this widening is from 8-20 feet on each side. The actual increase will depend on the quality of the material and its stability.

6. Reuse of the dredged material

Jones said that the determination that 1.5 million of the 2 million cubic yards dredged is suitable for reuse was based on discussions with the MPCA and the WDNR. He said that the primary criterion was grain size (pollutants tend to be associated with the smaller particules). He added that the Corps did consider transport of the material to be reused and the air quality effects of this activity, but that the responsibility for reuse will lie with the City of Superior.

7. Mitigation

Jones said that there has been no request by any agency to mitigate or compensate for any adverse effects of the project. There will be revegetating of the disposal site once disposal has ceased.

8. Significance of harbor lines

Alden Lind inquired as to the significance of the harbor lines. No one present had a definitive answer. The lines were established to define the area of federal navigation rights; that is, beyond the lines no fill was permitted because it would interfere with those rights. The impact of the lines on controlling fill has been more or less superceded by federal and state laws on pollution, fill, bulkhead lines and the like.

The discussion digressed to ownership of submerged property. Gene Hollenstein said that Minnesota has stated that it owns submerged lands in the state. Bill Lehman said that in Wisconsin, the riparian owner also owns the submerged lands of rivers, but that the state owns the water (hence, a permit is required to remove the water above the land in order to fill).

9. Could non-federal parties do the improvement project?

Yes, but the Corps would only maintain the harbor to its authorized depths, which for the upper channels is 21 and 23 feet.

10. Consideration of new development

Alden Lind asked if the Corps discussed the idea of a new coal dock with the City of Superior on a portion of the to-be-deepened channel. No, the Corps did not discuss the issue. Bill Lehman noted that the City has no such project on line at this time and does not envision it in the near future.

Lind pushed for a clean demarcation between the developed and the undeveloped portions of the harbor with the line being placed at the Grassy Point railroad bridge. He said this would prevent the gradual loss of environmentally important areas. Keith Yetter agreed with the concept of the line, but said it should be at Hallett Dock #6. He observed that the concern is not for the gradual chipping away of environmental areas but of development areas.

John Powers stated that no black and white demarcation of use areas can be defined in the harbor. He said that while the use of particular areas can be generalized to one type of use or another, any and all uses will be located within all parts of the harbor because of the nature of the harbor and our use of it.

11. Consideration of future actions

The Corps did consider future maintenance dredging costs, but they will be minimal (average of 2,000 c.y. per year). The Corps did assume that Erie Pier will be filled and available for development by 1990.

Jones noted that the public comment period is open until 29 March 1982.

III. Adjournment

The meeting was adjourned at 3:15 p.m.

Minutes
of the
Duluth-Superior Harbor Advisory Committee
May 12, 1982 Meeting
ARDC Offices, Duluth, Minnesota

MEMBERS PRESENT	REPRESENTING
Bill Lehman	City of Superior
Bill Hammann	Superior Harbor Commission
John Allen (for Don Jorgenson)	WISDOT
Dan Retka (for John Chell)	MinnDNR
John Klaers (for Henry Royer)	WLSSD
Jerry Reickhoff	WisDNR
Bill Newstrand	MnDOT
Dennis Johnson	MnDOT
Court Mueller	Corps
Davis Helberg	Duluth Port Authority

OTHERS PRESENT

Bob Bruce, Phil DeVore - project consultants; Martin Forbes - WisDOT; Paul Gableman - DM&IR; Kim Bro - UW Sea Grant; Steve Schramm - WisDNR; Betty Hetzel - Superior; Jeff Jensen - Jensen Brothers; John Powers, Tom Davis - MIC staff; one person from United Northern Sportsmen; one unknown person.

I. The meeting was called to order at approximately 1:30 p.m.

II. Superior Waterfront Project

John Powers stated that the MIC received funds from the Wisconsin Coastal Management Program last year to study alternative uses of the NP ore dock, Hog Island and the mouth of the Nemadji River. He noted that prior to receiving the funds the MIC discussed the project with Superior interests including the Development Association, City Planning and the Harbor Commission. A consultant was hired to do the actual work. The consultant's mission was to investigate the range of potential uses for the area, to recommend one or more uses and to examine the intertwined developmental and environmental issues in the area. The resulting report will be used by Superior and the WDNR to seek appropriate development and management for the dock and surrounding property. Today's discussion will center on a draft copy of the consultant's report.

Robert Bruce, project consultant, proceeded to review the draft report. First he introduced Phil DeVore and Tom Davis (now on the MIC staff) as two other members of the consultant team. A third member, Dave Krech, was not present.

After distributing copies of the draft report, Bruce described the planning process. He noted that they checked on zoning, land use, ownership, roads and utilities, dock condition, soils, vegetation, fish and bird useage and similar background information. Among the pertinent findings were:

- dock is structurally sound although the deck needs replacement; there is some slumping of land under the dock indicating probable need to repair dock wall;

- there is some spawning by northern pike and yellow perch, but, in general, the site is not unique nor relatively valuable in this regard;

- there is some bird useage of value, but insignificant when compared to other areas within the lower harbor;

- Newton Creek has historically and currently carried various pollutants into the Hog Island marsh.

Bruce then explained the alternatives considered for the area. He stated that although they used the harbor plan as a guide, they felt it necessary to explore ideas that may eventually require changes in the plan.

For the mouth of the Nemadji River, their recommendation is to leave it as it is. No particular management is required except to let it remain undisturbed.

Many different uses were considered for the NP ore dock. Among those excluded from further analysis were iron ore/taconite shipping, hotel/motel, small boat facilities, residential, educational, retail, large vessel berthing/repair and ship loading museum. Although grain shipping made it past the first screening, it was eliminated because it requires on dock storage and additional rail and truck traffic in the East 2nd Street corridor, and it removes flexibility in the use of the dock.

The initial recommended use for the dock is a flexible, multi-purpose dry bulk shippin operation with emphasis on coal. Dead storage would be done inland with a conveyor transporting the product to the dock. The old pockets on the dock would be used for live storage for vessel loading, which would be done by shuttle conveyor. Coal blending could be accomplished by having two adjacent pockets, filled with two different types of coal, dump onto the shuttle conveyor at the same time in the proper proportion.

Estimated cost for the operation would be roughly $40 million. Among the major issues would be dust generated by the inland storage area.

Possible uses excluded from further study at Hog Island included non-water related industry, hotel/motel, small boat facilities, residential, educational and total conservation/resource management.

Bruce said that the recommended action for the island would be to develop day recreation facilities. These would include parking lot near the island, boardwalk over the marsh to the island, trails, docks for day boat mooring and an observation tower. The tower, roughly 70 feet high, would offer views of the lake, nearby docks, Superior entry, Superior itself and Duluth. Total cost for the project would be around $100,000.

Questions and discussion centered on the following points:

1. Aqua-culture - Bruce had mentioned the possibility of salmon "ranching". In response to a question, he noted that there are too many obstacles at this time to consider implementing the idea. Among the problems are sport vs. commercial fishing and the carrying capacity of the lake.

2. Grain shipping - even if the alternative will be not ranked as the preferred use for the dock, could more information regarding it be added to the report.

3. In response to a series of questions by Betty Hetzel, Bruce noted that Hog Island is roughly 70 acres in size (including marsh); that the NP dock trestle is not sufficient to hold trains, but can hold conveyors - besides, the BN does not want to surrender its air rights.

4. In light of the fact that the ORTRAN coal dock is operating far below its capacity, would a second coal dock result in unnecessary competition. Bruce noted that coal shipping isn't always a function of dock capacity; it also includes contractual concerns related to ownership of the coal and the dedication of the facility to a given shipping movement. Thus, the new dock may not necessarily mean an unwarranted duplication of facilities.

5. John Allen asked if there was a compatibility problem between the dock and the proposed recreation area. Bruce indicated that although dust may be a problem, he feels that it is an attraction for the recreation area to be able to safely view a dock operation. He did note that the mix of small boats and the larger vessels may pose some problems that would have to be looked into.

6. John Allen said that WisDOT felt the "do nothing" approach should be taken for the island so as to keep all options open. He also wondered if the island could be used to handle relocation of the gull colony at MP's Hibbard plant. Tom Davis responded that Hog Island is not a good site for colonial birds because of the easy access from land for predators.

7. Bill Lehman noted that the recent wetlands zoning act passed by Wisconsin supercedes City prerogative regarding zoning along the mouth of the Nemadji. Some changes in the City's ordinance will likely be done.

8. Dennis Johnson asked how would the document be used. John Powers indicated that the MIC will act on it and may use it as a rationale for changing the harbor plan. Superior and its various agencies will use the document in whatever way is possible to aid in the actual development of the area. The WDNR may use the report to help in reviewing that development.

9. In response to a question, Phil DeVore said that the Newton Creek sludge that has been deposited in the Hog Island marsh should probably be left alone and not be dredged out. Resuspension would be more

harmful than letting it lie dormant.

10. Bill Hammann suggested that the final report note commercial fishing (salmon "ranching") at Hog Island as an option. Phil DeVore said that there is no need to have the activity on the waterfront noting that a far better site would be on the Nemadji River where the chemical imprinting could be handled better.

11. Bill Newstrand suggested that the report examine liquid bulk shipments as well as dry bulk.

III. Harbor Environmental Management Plan

Because of the time, Tom Davis only briefly explained this project. After handing out a draft outline of the environmental management plan, he said that the purpose of the plan is to follow through on the natural resource statements provided in the harbor plan.

He noted that the desire is view the harbor with a wholistic perspective, trying to manage it as a single resource even though it is not entirely under public control for that purpose. He is identifying key parcels and developing management suggestions for them. Some of the sites, such as Interstate Island, will have detailed plans. By managing the key sites in a coordinated manner, it is hoped that adequate protection and enhancement of target species will result.

Tom noted that a full draft will be issued later for HAC discussion.

Bill Hammann asked if there would be any key parcels located between Barkers Island and the old Arrowhead Bridge. Tom said that outside of Interstate Island the only site that may be considered is the submerged area west of the INCAN dock. (Editorial comment: needless to say there will be considerable discussion and debate on that one.)

IV. The meeting was adjourned at 3:25 p.m.

Minutes
of the
Duluth-Superior Harbor Advisory Committee
July 27, 1982
ARDC Offices, Duluth, Minnesota

MEMBERS PRESENT	REPRESENTING
Bill Lehman	City of Superior
Bill Hammann	Superior Harbor Commission
John Chell	MDNR
Fred Strand	WDNR
John Allen	WisDOT
Court Mueller	Corps of Engineers
Sandy Sweeney	City of Duluth

OTHERS PRESENT

Dan Retka, Herb Johnson, Dave Milles, Gene Hallenstein, Ron Anderson, Earl Huber, Pete Otterson - MDNR; Stanley Walzynski - United Northern Sportsmen; Duane Lahti - WDNR; Martin Forbes - WisDOT; Jerry Niemi, Phil DeVore - UMD; Jan Green - Audubon; Alden Lind - SLSA; Tom Mack - Mn Sea Grant; Tom Davis, John Powers - MIC staff.

I. The meeting was called to order at 1:35 p.m.

II. Other topics

It was announced that the Corps of Engineers will be holding a public workshop on August 11 in Duluth. Time will be 7:00 p.m. in the Great Hall at the Radisson Duluth Hotel. The workshop will concern the preliminary feasibility studies for the Great Lakes connecting channels and harbors study.

John Powers updated the situation with the harbor improvement project stating that Superior and Duluth will be responding to a Corps letter on cost sharing alternatives. The Corps is seeking 1) statement of City support and intent to participate in the project and, 2) City opinions on 100% cost sharing ideas.

III. Proposed MDNR Water Regulations

Dave Milles said that the MDNR had, until 1978, operated under a system of policies, but that no formal rules were in place for the issuance of permits. In 1978, the MDNR adopted its first set of rules. These rules are being amended for many reasons including the necessity of meeting the needs of commercial harbors.

He indicated that in general the rules will allow more lenient exercise of the rules within harbor areas as opposed to the more natural, less developed waters of the state. Harbor areas so designated for this consideration must be under the jurisdiction of a legally defined port authority (under Chapter 458). In response to a question, he noted that Two Harbors would be treated like any other area, while Duluth would be considered a port.

One of the new differentiations is that within ports "port facilities" are deemed allowable uses on the waterfront. Port facilities are any operation necessary to

the operation and maintenance of the port. A port facility might include a disposal site if the site was part of a comprehensive port plan.

Each port area will have to develop and have the Commissioner approve a port plan that indicates the types and location of various uses within the harbor. Among the items that should be included are disposal sites and new development sites. No site can be located beyond the existing harbor line. In approving the plan, the Commissioner will consider not only environmental concerns, but also "reasonable" development.

Dave indicated that the rules for disposal were altered, especially within port areas. Limited deposition within the floodlplain would be permited for up to one year to facilitate transfer and reuse of material; these sites are not to be operated so that they become permanent.

Redeposition of dredged materials into bodies of water will be allowed if there are no feasible alternatives. Allowable reasons for redeposition are correction of erosion problems, habitat enhancement and mitigative actions. Cost will be considered in determining "no feasible" alternatives, but the major factor will be impact on resources.

Phil DeVore interjected that the rules will not permit open lake disposal even if there is no negative impact unless one of the three conditions above is met. He said that this approach does not make sense in light of the facts that the lake is the ultimate and natural destination of the sediments, the method is (assuming the material is non-toxic) biologically acceptable, and is less expensive. Gene Hallenstein replied saying that because MPCA permits are still required for open lake disposal, the MDNR is down playing that option.

Alden Lind stated that efforts on reducing upstream man-made erosion must be increased. Milles said that elsewhere in the rules there are sections that address this issue. Alden added that before beach nourishment is permitted, there must be agreement on the desireability to protect and maintain what are, in the geological sense of time, transient features (reference was made to Atlantic Ocean barrier islands and comparing them to the two points).

In response to a question, Dave Milles said that habitat enhancement is not a higher priority because, once again, MPCA permits are required. Since MPCA variances are difficult to receive, the MDNR down played this option relative to the others.

Dave noted that the definition of wharves has been altered to better reflect the needs of developed ports. He added that maintenance dredging permits are issued in conjunction with the initial construction permit.

Because the MDNR cannot issue variances as such, it created a new section that allows waivers to be granted in exceptional circumstances, those being when a public project which must be built has no other alternative except that which requires the breaking of the rules. This provision was primarily instituted for DOT projects. Also, under this section, an applicant can demand a hearing in the event the Commissioner does not grant an applicant's request on a permit.

In regards to the last provision, Jan Green asked if there is a provision for a hearing request in the event the Commissioner did grant an applicant's request for a permit. Milles said that such recourse exists under other statutes. Jan

suggested that for the public projects covered by the waiver provision that a hearing be mandated and not just suggested.

John Chell offered that these items could be qualified as mandatory Environmental Assessment Worksheet projects that would require review by the Environmental Quality Board.

Milles then briefly mentioned other, non-harbor provisions in the proposed rules. One change concerns the placement of rip-rap along shores. Under the proposed rules, no permit would be required if natural, native rock is used and there is no more than a five foot extension into the water; there would be no restriction on the lineal placement of the rip-rap. Jan Green said that in the absence of a lineal placement limit, it is possible for a person to rip-rap an entire frontage of any length. Dave replied that this is possible, but that economics will pose an effective limiting factor.

John Powers asked why the Federal harbor line was used in determining the outermost limit of fill. He said that the rule should permit fill past this point if the Federal government waives the effect of the harbor line (i.e., waives its navigational rights) in that particular instance. He said that projects such as Interstate Island cannot be undertaken as the proposed rule stands. Gene Hallenstein responded that the rule is there to prevent the excessive filling of the port areas.

There was a brief discussion on who submits a port plan to the MDNR. Gene Hallenstein indicated that the MDNR thought that the Port Authorities would be doing this. John Powers replied that the Port Authorities may not necessarily be the appropriate agency and that the issue requires more consideration by the MDNR.

Dave Milles said that the MDNR would be receiving comments on the rules until the end of August.

IV. Harbor Natural Resources Plan

Tom Davis said that MIC was funded by the Legislative Committe on Minnesota Resources to develop a natural resources management plan for the harbor. He said that this plan is an expansion and refinement of the natural resources section of the existing harbor plan. When this effort is adopted by the MIC, the harbor plan will be appropriately amended to incorporate all of the recommendations and changes.

Tom said that premises for this plan are: 1) to approach the harbor in a holistic fashion, seeing it as a single ecosystem, 2) stress enhancement of the existing resources, 3) permit coordinated mitigation and compensation actions, and 4) focus on key parcels essential to the maintenance and management of the resource base.

He stated that the goal of managing the harbor as a whole will be achieved by the active protection, maintenance, development and management of the selected key parcels. These parcels were chosen on the basis of their importance to six factors: 1) critical status species, 2) critical status habitats, 3) other species, 4) other habitats, 5) recreation, especially that which is resource based, and 6) aesthetics. Each parcel is then classified into one of the following management categories: natural, conservation-natural, conservation-managed,non-managed, and special.

Tom said that the 24 parcels identified in the draft report represent 3,400 acres of the 110,000 total acres in the estuary. The addition of the Superior Forest would add another 500 or so acres (not all of the 4,400 acres in the forest are included in the parcel).

Alden Lind and Jan Green asked if the old landfill on Wisconsin Point was included in the program and added that if it wasn't, it should be because of its potential negative impact. Davis replied that it was not specifically included. Bill Lehman and Duane Lahti stated that the site is protected by groins and that 60 feet of new beach has accreted by them. Lahti added that the WDNR is monitoring the site for leachate and for erosion. In response to a question, he noted that not all of the nearby area is being monitored for downshore erosion effects from the groins.

Bill Lehman added that the landfill is not a habitat site in the sense of a Hearding Island and that therefore it does not belong in the document.

Gene Hallenstein and John Chell were concerned about the selection of sites and the impact of exclusion of other sites. Tom Davis said that other sites can be included if deemed necessary after their review according to the criteria used on the initial sites. Excluded sites are not being "written off" as worthless and open to any and all development. He said that these sites are not as valuable as the others and do not require special management designation and techniques.

Jan Green said that Great Blue Herons will not be on the Minnesota special concern list. She suggested that special management techniques to protect heron nesting sites may be unnecessary as the birds can fend for themselves and their nesting sites do not last for many years.

She added that terns and plovers need at least 270 degrees of clear vision in order to make their nesting sites well designed. This requirement may be a problem on some of the selected parcels.

Alden Lind asked if the Superior Forest disposal site was part of the plan. Tom indicated that it was not and, he added, that the Fish and Wildlife Service has reviewed this site relative to the planned disposal and has found it acceptable.

Bill Hammann suggested that the West of Incan (Wisconsin Grassy Point) site be divided into several parts based on development potential. This way the City could develop one section while the others are managed for natural resources.

Sandy Sweeney asked if Tallas Island in Riverside was considered as a prime site. Tom Davis said that the island does not possess unique or vitally important habitat, but that its inclusion in the Western Waterfront Trail is an adequate level of protection for it.

V. Adjournment

The meeting was adjourned at 3:40 p.m.

Appendix D

Summary: Harbor Improvement Project Plan

The Corps of Engineers, Detroit District, has released a draft "Feasibility Report and Draft Environmental Impact Statement on Harbor and Channel Modifications: Duluth-Superior Harbor, Minnesota and Wisconsin." In this report the Corps studied four basic plans of action:

1. Deepen and widen upper channels with disposal at the Berwind Dock site.

2. Deepen and widen upper channels with disposal at the Superior Municipal Forest site.

3. No action

4. Downstream development (no new dredging; move upstream docks down to St. Louis Bay)

Plan four was eliminated and no additional analysis was done on it. The following total investment costs were generated for the remaining two action plans.

Cost Item	Plan 1	Plan 2
Dredging	$4,000,000	$4,000,000
Disposal	2,621,000	4,339,000
Lands, easements	35,000	67,000
TOTAL	$6,656,000	$8,406,000
Benefit/cost ratio	3.21:1	2.54:1

Although Plan 1 is the National Economic Development Plan (the one that provides the most benefits for the least cost), Plan 2 is the recommended plan. The rationale for this selection is that Plan 2 has far fewer adverse environmental impacts than does Plan 1. Also, Plan 2 has greater support than does Plan 1.

The benefits to be generated by the recommended plan are (values show annual savings or gain):

1. Increased vessel efficiency at the existing upstream docks. Vessels will be able to load deeper. ($1,156,000)

2. Elimination of "topping off" costs for upstream docks. ($75,000)

3. Reduced transit time for vessels using the Cross Channel. ($455,000)

4. Reuse of dredged material. ($11,000)

Under the tentatively recommended plan, dredging will occur in the area shown on the map on back. Dredging will be done with either a hopper dredge or a conventional hydraulic dredge. Material will be pumped from a transfer point near the Arrowhead Bridge to the Superior Forest disposal site. Most of the material will eventually be reused for upland construction projects.

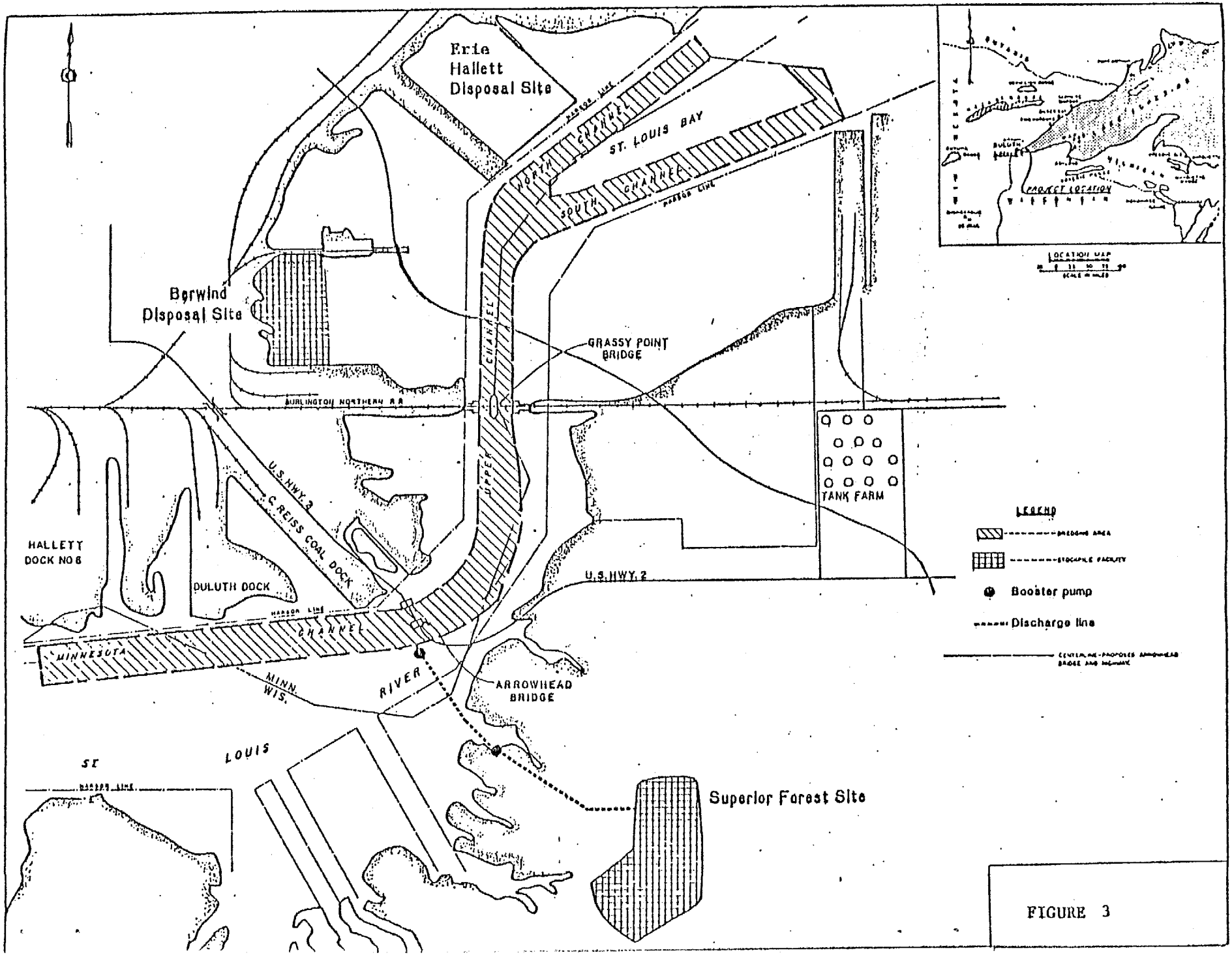

Erie
Hallett
Disposal Site
Berwind
Disposal Site
NORTH CHANNEL
SOUTH CHANNEL
ST. LOUIS BAY
HARBOR LINE
GRASSY POINT
BRIDGE
BURLINGTON NORTHERN R.R.
UPPER CHANNEL
U.S. HWY. 2
C. REISS COAL DOCK
TANK FARM
HALLETT
DOCK NO 6
DULUTH DOCK
HARBOR LINE
CHANNEL
MINNESOTA
MINN.
WIS.
RIVER
ARROWHEAD
BRIDGE
ST
LOUIS
HARBOR LINE
Superior Forest Site
LEGEND
Booster pump
Discharge line

FIGURE 3