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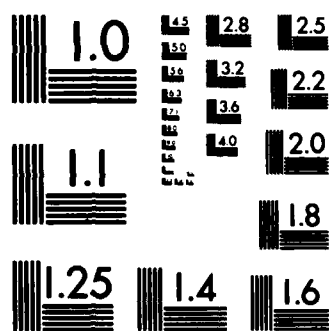
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GREAT

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**A
POSITION PAPER
OF THE
PPIWG
EXECUTIVE BOARD**

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GREAT I
A POSITION PAPER BY THE
PUBLIC PARTICIPATION AND INFORMATION
WORK GROUP EXECUTIVE BOARD

PREFACE

Since the inception of the GREAT River Study, in October, 1974, some of the citizens of the Upper Midwest have been involved and have been participating. Beginning with a series of "Town Meetings" in 1975 - through the most recent GREAT I Interim Status Report Evaluation (June 1978) those who have a stake in what happens on the river have been working hard to make sure that the citizen voice is among those heard at the table of the decision-makers.

This report is produced by the Executive Board of the GREAT I Public Participation and Information Work Group and is to serve as a "companion volume" to the recently published GREAT I Interim Status Report. It is, in part, a response to the Interim Status Report and, in part, a summary of the citizen input gathered to date during the GREAT Study.

The citizen viewpoints, if anything, have not been consistent in agreement on the issues. Rather, citizen input has been wide-ranging in its viewpoint. This report attempts to make an objective statement reflecting and welding the many viewpoints into one - a statement reflecting the best courses of action as best can be determined.

This report is intended for a wide audience; individual citizens who have an interest in the river, government agency people on the local, state, and federal level, and especially those people who will decide major policy changes on the river for the future - the governors of the involved states, our state and federal legislators, and department heads.

This report is dedicated by the citizens of the Upper Mississippi River Basin to our fellow citizen decision-makers in the state and federal capitals, and to those who have individually and collectively provided the input in the past that enables us to present this report today.

THE PUBLIC PARTICIPATION AND INFORMATION WORK GROUP

EXECUTIVE BOARD

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*Co-chairs		

PART I

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The following statements are summarized
from the material contained in the main
text of this report.

RESOLUTION

WHEREAS, the GREAT River Environmental Action Team (GREAT) was created in 1974 and directed to develop a river system management strategy incorporating total river resource requirements, and

WHEREAS, GREAT has recently published an Interim Status Report outlining preliminary conclusions and recommendations for future management of the river, and

WHEREAS, the citizens of the study area have been directly involved in the study since its inception, through a Public Participation and Information Work Group (PPIWG) and,

WHEREAS, the PPIWG has established an Executive Board to act, from time to time, on their behalf

NOW THEREFORE BE IT RESOLVED

That, the Executive Board of the PPIWG, having reviewed the activities of GREAT to date, and having likewise reviewed all citizen input to date, hereby submits this document as its official interim position.

Further, that the Executive Board wishes to go on record with the following statements:

1. The Mississippi River is a valuable natural resource that has served both man and nature with numerous amenities, including fish and wildlife habitat, a recreational resource, a commercial navigation channel, and a beautiful landscape for all to enjoy.
2. The GREAT Study is providing a unique opportunity to learn more about this resource and to make recommendations for future management. GREAT, as a multi-agency and public study effort is to be commended for their efforts in bringing about a better understanding of this complex resource. However, the task is far from complete.
3. The future of the Mississippi River will depend upon not only the findings of the GREAT Study, but on continued efforts by management and enforcement agencies, backed by the public.

4. We understand that GREAT, within the framework of existing time and funding limitations, will not be able to complete a total river management strategy. (This, we feel, is unfortunate, but we encourage GREAT to continue the work it has started until, in fact, a total river resource strategy is developed.) GREAT, in its final report, should address how, and by what means the total strategy will be developed.
5. The publication of the final GREAT report, if done so as to incorporate the information requested in this document, will be a major step toward addressing many of the important aspects of a river system management plan.

Adopted this 17th day of August, 1978


Dan McGuinness, Coordinator

I COMMERCIAL TRANSPORTATION WORK GROUP

- A. Fleeting areas and terminals should be located, to the extent possible, in existing urbanized areas on land that is already grossly affected by man's presence, and not located in highly productive wetland or where there will be a major detrimental effect to the view.
- B. Widening of bends should not be done where such widening will result in destruction of highly productive wetlands or where placement of dredge material resulting from widening cannot be done in a manner that meets state water quality requirements per section 404 (t) of the Clean Water Act of 1977.
- C. We recognize that crucial to the continuation of a commercial navigation system is the operation and maintenance of a navigation channel. We recommend that said channel be maintained to the extent necessary to assure the integrity of a nine foot channel, adequate to allow efficient travel by vessels with a nine-foot draft. We recommend further, that in doing so, that dredging be kept to a minimum depth and width and that placement of material be done in the least environmentally damaging manner possible.

II DREDGED MATERIAL USES WORK GROUP

- A. Every effort be made to place all material dredged from the Upper Mississippi River, as well as the St. Croix and Minnesota River, in locations that will make it available for beneficial uses. Further, the U.S. Army Corps of Engineers, in cooperation with the states and local government should continue to pursue markets for the material.
- B. The U.S. Army Corps of Engineers should seek additional funding to enable them to obtain equipment needed to accomplish beneficial use placement. Further, the Corps of Engineers should attempt to be reimbursed for material from purchasers in those cases where reimbursement is consistent with the local, state, or federal laws.

III DREDGING REQUIREMENTS WORK GROUP

- A. Upon completion of the research being done through the DRWG the Corps of Engineers should assess the applicability of undertaking all effective measures for reducing quantities of dredged material. If reduced depth dredging can be undertaken without substantially increasing the risk of groundings we recommend that it be done.
- B. If research indicates that a reduction in sediment supply will reduce dredging requirements this information should be used to support recommendations from the Sediment and Erosion Control Work Group for implementing upland and streambank erosion control measures in the basin.

IV FISH AND WILDLIFE WORK GROUP

- A. The Weaver Bottoms Study recommendations should be implemented as a comprehensive field test as one means of backwater rehabilitation.

The Fish and Wildlife and Side Channel Work Group, prior to preparation of their final reports should locate on maps other backwater areas in need of rehabilitation and follow up after GREAT with needed evaluations and subsequent programs to rehabilitate those areas.

Where/if workable, the predictive model developed by the University of Wisconsin should be used to aid in determining rehabilitation techniques. (This model is currently being field tested in the Belvidere Slough Area (Pools 5 and 5A) and in GREAT II.)

The recommendations in the Interim Status Report (March 1978) on pages A-76 should be carried out.

In the long run, perhaps using the Computerized Inventory and Analysis process as a tool, the resource managers should develop a comprehensive plan for "protection, preservation and enhancement" of the fish and wildlife resource. Inherent in such a plan, we feel, is the incorporation of fish and wildlife habitat management

as a "project purpose" in all federal agency programs and any changes in legislation needed to assure this goal.

The traditional cost-benefit ratio method of justifying projects on the river may not be applicable to measuring the worth of expenditures of funds for fish and wildlife programs, as the dollar value of the eco-system cannot be measured.

V FLOODPLAIN MANAGEMENT WORK GROUP

- A. This work group should support efforts by the Sediment and Erosion Control Work Group to promote and obtain funds for accelerated streambank and upland erosion control practices as a means of reducing sediment flow into the river, thus maintaining the rivers flood flow carrying capacity.
- B. This work group should continue research to determine effects of dredge material placement on floodflows, and use this information, if possible, to support the concept of removal of all dredged material from the floodplain.
- C. This work group should support enforcement of floodplain and shoreland standards where they exist and adoption of same where they do not exist.
- D. This work group should support a re-evaluation of tributary straightening projects and possible re-design of some of these projects where straightening has resulted in major environmental problems.

VI MATERIAL AND EQUIPMENT NEEDS WORK GROUP

- A. The work group, prior to its final report, should assess all alternative methods of dredging and material transport in an effort to find ways to dredge, transport, and place dredged material in a manner that is consistent with the following:
 - 1. So that near 100% of the dredged material is used for

either beneficial uses, or

2. is transported and deposited out of the floodplain, or
 3. is used for wildlife enhancement programs, or
 4. is provided for maintenance of recreational beaches.
 5. In undertaking 1. through 4. above, the Corps of Engineers should either attempt to meet the respective state Water Quality Requirements under 404(t) or seek to obtain satisfactory variances.
- B. The work group should implement further studies to determine the practicability of alternative methods to reduce accumulation of sediment in the valley.

VII RECREATION WORK GROUP

- A. Where heavy recreation use is evident beaches should be maintained either by placement of dredged material adjacent to the main channel, or by physical de-vegetation in areas where 404(t) prohibits direct placement.
- B. Necessary funding should be provided for establishment and maintenance of other recreational programs such as canoe routes, multi-purpose trails, boat landings, interpretive centers, etc. The Recreation Work Group should, to the extent possible, outline specific needs in its final report.
- C. The Corps of Engineers, in undertaking the Recreational Craft Locks Study, should continue to involve the public.

VIII SEDIMENT AND EROSION CONTROL WORK GROUP

- A. In the final report the work group should provide an evaluation of the alternatives for reduction of sedimentation from streambanks and uplands, showing costs and benefits of each alternative. This information should be used as justification for further recommendations for a major increase in federal and state funding for erosion

control programs throughout the basin.

- B. GREAT should include in its final report a strong statement of support for the findings of this work group, with specific recommendations to the state and federal legislatures for major increases in appropriations for streambank and upland erosion control programs.
- C. The desirability of moving the control point in the pools from mid-pool to the locks and dams is questioned. Any studies on this matter must include a full economic and environmental evaluation.
- D. The work group, in cooperation with the Fish and Wildlife and Side Channel Work Group should recommend a detailed program of specific activities for improving deteriorated backwater areas and maintaining existing productive areas.
- E. A program of streambank erosion control should be expedited as soon as possible on major tributaries contributing sand and silt to the Mississippi River.

IX SIDE CHANNEL WORK GROUP

- A. The work group, in its final report, should provide an analysis of the pilot openings done to date, including any preliminary indications of the effectiveness of the openings (in some cases modifications other than opening). The reports should indicate the success or failure of the pilot projects and recommendations for further action.
- B. The work group should provide the PPIWG with written response to all public requests for side channel openings, including a list of all channels submitted along with comments from the work group answering the following questions:
 - (1) Was the site reviewed by the work group on paper or in person to examine the problem?
 - (2) Was any analysis made of the proposed site to determine what actions should be taken? If yes, what action is

recommended? If no, why was the site not given more attention?

- (3) For each site, the work group should either recommend further action, with justification for same or no action along with justification for same. If further study is needed, a detailed "plan of attack" should be presented for further study needs, who will do the work, what is the cost, the expected product, and deadlines.

- C. In any case, a comprehensive program for side channel modification should be spelled out in detail in the final report.

X WATER QUALITY WORK GROUP

- A. That the work group go on record in its final report supporting continued efforts by the states and the Environmental Protection Agency to require that all point sources of pollution meet federal and state compliance schedules and water quality requirements.
- B. That the work group go on record in support of efforts to minimize non-point source pollution through continuation of the federal/state 208 Water Quality Programs beyond the study stage to actual implementation of measures that will reduce non-point pollution.
- C. That the work group go on record in support of section 404(t) of the Clean Water Act of 1977 and develop its channel maintenance plan and river system management recommendations within the framework of 404(t) criteria. If recommendations for placement of material are for purposes of beach nourishment, fish and wildlife habitat, enhancement or beneficial uses, and criteria cannot be met, a thorough justification for a variance request should be provided. Variances should be considered by the states on a case by case basis with full public involvement.
- D. That the work group speed up its report publication efforts so that results of work done to date can be reviewed by the public prior to public review of the final reports of GREAT.

XI GREAT'S CHANNEL MAINTENANCE PLAN

- A. The alternatives "Removal from Floodplain" and "Placement for Beneficial Uses" are the number one priority. Every effort should be made to provide the necessary equipment and funds to accomplish these objectives.
- B. Meeting the requirements of the respective state water quality standards must be incorporated into the long range channel maintenance/material placement program.
- C. In the final selection of material placement sites, no site should be designated as usable unless it has the concurrence of the PPIWG Executive Board.

XII WILDERNESS DESIGNATION

- A. The Executive Board, at this time, takes no official position regarding whether or not wilderness designation should be made on any lands in the GREAT I area. It does endorse continued public involvement in the decision-making process. The Wilderness Task Force of GREAT later this year, will be making recommendations to the U.S. Fish and Wildlife Service. At such time as the USFWS is considering these recommendations, we request that public meetings (prior to public hearings) and public hearings be held throughout the affected area to assure broad public review prior to any formal recommendations being forwarded to the Congress or the President. Such public meetings should be held in locations as previously suggested by this Executive Board.

XIII SUMMARY STATEMENT

As stated on page 13 of the GREAT I Interim Status Report, "GREAT was directed to develop a river system management strategy incorporating total river resource requirements".

As the study progressed it became obvious that with the time allowed and funding provided GREAT would, in fact, not be able to really develop a "Comprehensive Plan" for the river. The Team felt, at best, that it would be able to develop only the following:

- (a) A channel maintenance plan to the year 2025.
- (b) Some additional recommendations for other uses of the resource.

We, the Executive Board of the PPIWG, feel that it is unfortunate that the original objective cannot be met in full. GREAT must not lose sight of this original objective! An on-going effort must be made until it is met! Within the framework of GREAT's efforts to date, however, there are certain specific statements we feel can be made in GREAT'S FINAL REPORT. In summary we feel that the GREAT final report, as a minimum, must contain the following:

* A detailed management plan for maintenance of the 9 foot river navigation channel for transport of bulk commodities which takes into full consideration the following:

- a) Placement of dredged material shall be only for the purposes of achieving either beneficial uses, removal from floodplain, recreation beach maintenance (only with case by case variance from 404(t) and fish and wildlife enhancement (only where variance can be achieved from 404(t)).
- b) Dredging depths shall be established at a depth necessary to maintain the integrity of the 9-foot navigation channel.
- c) Dredging widths shall be established on a case by case basis, with consideration for placement of material in an environmentally sound manner and minimum loss of productive wetlands.
- d) A channel maintenance plan should not only recognize dredging as a means of maintaining the channel, but must take into consideration the fact that dredging is only superficial treatment of the real disease, sediment flow from the tributaries. Part and parcel of the channel maintenance plan should be specific recommendations for long term measures to control streambank and upland erosion, as the primary cause of the channel maintenance problem.
- e) As part and parcel of the channel maintenance plan, a program for continuation of the on-site inspection efforts should be outlined.

f) Finally, the plan should document specific needs and costs for improved dredging capability, new equipment, methods, etc. needed in order to achieve beneficial use and removal from floodplain objectives.

* Recommendations for river system management that do not directly relate to 9-foot navigation channel maintenance, must include, as a minimum, the following:

- a) A recommendation and justification for increased federal and state erosion control program funding for those areas where streambank and upland erosion is occurring at critical rates.
- b) A recommendation and justification for a complete and comprehensive program of fish and wildlife habitat preservation protection and enhancement. This recommendation must include a map designating where these resources exist and which are in most need of immediate management programs. Where possible, the report should include proposals for specific action, especially for side channel modifications for the Weaver Bottoms and other areas.
- c) A recommendation and justification for use of the Computerized Inventory and Analysis Project as a tool in the development of a total river resource management plan, not just for the U.S. Fish and Wildlife Master Planning Program, but as a multi-agency planning effort. The Corps of Engineers Master Planning efforts should be coordinated with that of the USFWS and the respective states through continuation of a study process patterned after GREAT.
- d) A recommendation and justification for strong local enforcement of floodplain and shoreland ordinances as a means of preventing additional health and safety hazards due to flooding.
- e) A recommendation and justification for specific recreational beach maintenance programs in areas of high user pressures.

- f) A recommendation and justification for increased state and federal funding for establishment and maintenance of canoe routes, boat landings and environmental interpretive and education centers.
- g) As part of the river management recommendations it is important that GREAT include strong support for funding for implementation of streambank and upland erosion control programs, with immediate efforts directed at the Chippewa River system. In addition GREAT should include in the final report a list of priorities for treatment programs on all other tributary systems.
- h) A complete inventory of all side channels along with recommendations for future action for each one.
- i) A recommendation that stresses the need for continued efforts to solve the problems of point and non-point pollution through enforcement of EPA and state Water Quality Standards and continuation of the 208 Water Quality Program.
- j) That GREAT go on record in support of 404(t) of the Clean Water Act of 1977 as a viable means of solving a portion of the water quality problems on the river.

PART II BACKGROUND

1.00 ORGANIZATIONAL BACKGROUND

2.01 For many years, conservation organizations, commercial fishermen, biologists, and sportsmen have expressed deep concern over the methods used to operate and maintain the navigation waterway system of the Upper Mississippi River. Their concerns were directed to the U.S. Army Corps of Engineers, the agency assigned to carry out the navigation mandate for Congress. Under the shadow of a lawsuit initiated against the Corps by the State of Wisconsin in 1973, the Corps prepared environmental impact statements in accordance with the National Environmental Policy Act of 1969. The statements attempted to describe the effects of the operation and maintenance program on the Upper Mississippi Waterway. These documents revealed that current methods of channel maintenance, especially dredging and depositing of dredged materials, were significantly damaging the fragile backwaters, marshes, and sloughs for which the river is famous. The environmental impact statements also revealed that little information was available on many key aspects of river use. The lack of information would make it almost impossible for government agencies or Congress to evaluate alternative means of managing the river in a more balanced way without considerable additional study.

2.02 Amid all of this activity, several agencies and organizations were intensively studying the Corps voluminous environmental impact statements, seeking ways to solve the growing impasse. One of these agencies was the Minnesota-Wisconsin Boundary Area Commission. The commission is the 10-member interstate body created by the two headwaters-area states to make special studies and recommendations on the broad public interest issues of the Upper Mississippi and St. Croix Rivers. As a result of its review, the commission voted unanimously to go directly to Congress with a recommendation for appropriation of funds to immediately begin interdisciplinary studies and field tests. These studies and tests were necessary to give decision-makers the missing information needed to make wise choices to better balance the management of the resource at a cost the public is willing and able to pay.

As a result of growing congressional and public interest in the Upper Mississippi River management problems, the North Central Division Engineer of the Corps and the North Central Regional Director of the U.S. Fish and Wildlife Service announced in September 1974 that they planned to establish a partnership team. The team would work out a long-range management strategy for the multipurpose use of the river. This move soon led to organization of a broad-based Federal-State Task Force, as envisioned by the Boundary Area Commission in its congressional testimony. The Upper Mississippi River Basin Commission had established a special Dredged Spoil Disposal Practices Committee several months before to begin laying the groundwork for a cooperative effort. This committee was composed of delegates representing the five principal river basin states and five key resource-oriented federal agencies. Thus, what finally became known as GREAT was set up in October 1974 as a working partnership of federal agencies and states under the auspices of the Upper Mississippi River Basin Commission.

2.03 Minnesota Representative Albert Quie and former Wisconsin Representative Vernon Thomson joined in supporting the testimony presented by the Boundary Area Commission. The commission asked for an add-on appropriation of \$1 million to the St. Paul District of the Corps for fiscal year 1975 (July 1974 through June 1975). The House of Representatives approved the request in June 1974, but in August the Senate objected to the add-on, contending that the recommended studies and experiments would duplicate the work already programmed by Congress in the \$30-million Dredge Material Research Program under way through the Corps Waterways Experiment Station at Vicksburg, Mississippi. House proponents pointed out that the nationwide study was heavily concentrated on coastal zone, estuarine, Great Lakes, and deep-water port dredging and very little meaningful analysis would be made on the unique problems of river dredging. Senate conferees agreed and accepted an add-on of \$375,000 for special studies and field tests on the Upper Mississippi River between the mouth of the Missouri River and Minneapolis. The Corps reported this amount as its capability for such activities in the St. Paul District portion of the river for fiscal year 1975.

2.04 The GREAT Study was authorized by Congress in Section 117 of the Water Resources Development Act of 1976. The section reads:

"The Secretary of the Army, acting through the Chief of Engineers, is authorized to investigate and study, in cooperation with interested States and Federal agencies, through the Upper Mississippi River Basin Commission, the development of a river system management plan in the format of the 'Great River Study' for the Mississippi River from the mouth of the Ohio River to the head of navigation at Minneapolis, incorporating total river resource requirements including, but not limited to, navigation, the effects of increased barge traffic, fish and wildlife, recreation, watershed management, and water quality at an estimated cost of \$9,100,000."

2.05 The Team established in 1974 is studying the Upper Mississippi River from Minneapolis/St. Paul to Lock and Dam 10 at Guttenberg. This team is called GREAT I. GREAT II was organized early in fiscal year 1977 (October 1976 through September 1977) and is studying the river from Guttenberg to Saverton, Missouri. GREAT III is organizing and will be responsible for the river from Saverton to the mouth of the Ohio River.

2.06 GREAT I is composed of representatives from the following states and federal agencies:

- State of Iowa
- State of Minnesota
- State of Wisconsin
- U.S. Department of the Interior - Fish and Wildlife Service
- U.S. Department of Agriculture - Soil Conservation Service
- U.S. Department of Defense - Department of the Army -
Corps of Engineers
- U.S. Department of Transportation - Coast Guard
- U.S. Environmental Protection Agency
- Minnesota-Wisconsin Boundary Area Commission (ex-officio)
- Upper Mississippi River Conservation Commission (ex-officio)

An organization chart for GREAT I is shown in the following figure.

GREAT I ORGANIZATION



2.07 The Corps of Engineers chain of command is shown on the chart because Congress provided study funding through the Corps and, in section 117 of the Water Resources Development Act of 1976, required the Chief of Engineers to report the results of the study. Section 117 also directed that the study be made "through the Upper Mississippi River Basin Commission". Since GREAT I was formed in 1974, several committees of the Basin Commission have provided policy guidance and direction. The Great River Study Committee is currently serving that function.

2.08 In the GREAT I area, the Great River Study is managed by GREAT I. The equal partnership Team has one voting member from each State and Federal agency involved. The representatives of the Corps of Engineers and Fish and Wildlife Service, the agencies with major management responsibility on the river, serve as cochairpersons. They conduct Team meetings and guide the ongoing studies as directed by the Team. Representatives of the Minnesota-Wisconsin Boundary Area Commission and the Upper Mississippi River Conservation Committee are ex-officio members of the Team. The Team operates under the bylaws of the Upper Mississippi River Basin Commission which require that attempts should be made to settle all issues unanimously. However, if all members cannot agree, an issue can be decided by a majority vote of Federal representatives and a majority vote of State representatives.

2.09 The IOC (Internal Overview Committee) consists of representatives from the three states, a representative of the Minnesota-Wisconsin Boundary Area Commission, and the two Team cochairpersons. The committee functions as an advisory board to the Team. One of its duties is to recommend how GREAT I funds should be spent to best accomplish the study objectives.

2.10 GREAT I has 11 functional work groups (see the figure on page). Each work group is to accomplish the study objectives as they relate to the work group's functional area and as directed by the Team. Work groups are composed of all interested parties wishing to be represented. In addition, representatives of each Team member are encouraged to participate in each work group. Leadership is provided by the state or agency most suited to provide leadership in that functional area. The Public Participation and Information Work Group is an exception. It is coordinated by a contractor

and has broad-based citizen representation. Government and private interests that are not formal Team members are invited to participate in the activities of all the work groups. The Plan Formulation Work Group is composed of the cochairpersons and the chairpersons of each of the 11 functional work groups.

2.11 The scope of the GREAT I Study was defined by the Upper Mississippi River Basin Commission in October 1974. GREAT was directed to develop a river system management strategy incorporating total river resource requirements. To that end, the Commission adopted the following objectives:

- Develop ways to significantly reduce the volume of dredged material removed for the navigation project.
- Open backwater areas that have been deprived of necessary freshwater flow as a result of navigation maintenance activity.
- Assure necessary capability to maintain the total river resources on the Upper Mississippi River in an environmentally sound manner.
- Contain or stabilize all floodplain dredged material disposal sites to benefit the river resource.
- Assure all navigation project authorizations include fish, wildlife, and recreation resources as project purposes.
- Develop physical and biological base line data to identify factors controlling the river system.
- Identify sites that can be developed to provide for fish and wildlife habitat irretrievably lost to water development projects.
- Identify and develop ways to use dredged material as a valuable resource for productive uses.
- Implement programs to provide for present and projected recreation needs on the river system.
- Strive to comply with Federal and State water quality standards.

- Strive to comply with Federal and State floodplain management standards.
- Develop procedures for assuring an appropriate level of public participation.

2. OUTLINE OF PLANNING PROCESS

2.12 The planning process used is supposed to provide a systematic approach for analyzing problems and needs, establishing specific subobjectives from the general objectives, and developing and evaluating alternative management plans. The basic philosophy of the team approach is that viable resource management plans require interdisciplinary planning to adequately address the broad range of complex issues involved, including the economic, environmental, and social consequences of plan implementation.

2.13 The GREAT I Study and report will comply to the fullest extent possible with Corps of Engineers planning procedures and report format. Since the final report will be submitted through the Upper Mississippi River Basin Commission to the participating states and federal agencies and a diverse public, some flexibility in format and style may be expected.

2.14 The report will be prepared in accordance with the Principles and Standards for Planning Water and Related Land Resources as required by the Water Resources Planning Act of 1965. These guidelines include those published by the Water Resources Council in the Federal Register (Volume 38, No. 174, Part III, 10 September 1973) and appropriate guidelines from the various participating Federal agencies.

2.15 As required by the Principles and Standards, planning for GREAT I will focus on two objectives - national economic development and environmental quality. Four accounts - national economic development, environmental quality, regional development, and social well being - will be displayed to give Congress and others an opportunity to evaluate fully the effects and trade-offs of alternatives. Beneficial and adverse effects will be measured in monetary or nonmonetary terms for display in the appropriate accounts.

2.16 GREAT I has attempted to develop its plans by following Corps of Engineers procedures. Plans are developed in three stages. In each stage, four functional planning tasks - problem identification, formulation of alternatives, impact assessment, and evaluation - are performed at least once. The three planning stages are:

- Stage I: A plan of study was developed to guide subsequent planning. This stage was completed in April 1975 when the plan of study was submitted to the Upper Mississippi River Basin Commission and the Corps of Engineers, North Central Division office.
- Stage II: Intermediate plans were developed and evaluated. This stage was completed in July 1976 following submittal of the Phase I Status Report and a checkpoint meeting with representatives of the North Central Division, the Chief of Engineers, and the Board of Engineers for Rivers and Harbors.
- Stage III: Alternatives are being screened and detailed plans are being developed as a basis for selection and recommendation. This stage is scheduled for completion in September 1978 with submittal of the GREAT I Final Report. The final report will have the same general outline as this Interim Status Report. It will consist of an executive summary, a main report, and appropriate appendixes. Reports from each of the functional work groups and comments received from other agencies will be included in the appendixes.

3. HOW GREAT IDENTIFIED ITS STUDY PROBLEMS AND NEEDS STATEMENT

2.17 As noted earlier, the basic objective of the Great River Study is to develop a river system management plan that will incorporate total river resource requirements. Conflicts often occur between the actions of two agencies having management responsibility on the river. These conflicts have contributed to pockets of environmental degradation. Where problems result from neglect of economic, environmental, or social factors, the environment, the people, and the Nation are the losers.

2.18 To help identify the extent and severity of these problems, a series of public meetings was held in Winter 1974-75. From Minneapolis to Lansing, Iowa, the range of public attitudes and concerns was recorded. At this formulative stage, the proposed programs of GREAT I were adjusted to reflect these attitudes and concerns.

2.19 At each meeting, the GREAT program was explained and people were urged to express their opinions. They responded positively even when river damage meant keenly felt personal loss. The response was honest, realistic, and highly useful to GREAT. People who live along the river and those who use it frequently were concerned about lost beauty and degradation of the river's recreational values. Fish and wildlife and maintenance of the 9-foot channel were recognized as large-scale matters that required official regulation and review. Loss of favorite fishing pools, blocking of small-boat channels by sand, and marring of the river's beauty were realities that cut deeply.

2.20 Following these meetings and initial Team organization, an extensive list of problems was compiled. After the list was developed, the Team realized that it was not equipped or charged with responsibility to address all the problems. A list of criteria, based on the study objectives, was developed. These criteria defined the range of problems the Team would address. Guidelines used to identify problems were as follows:

1. The problem demonstrates a need to define Federal, State, and local government roles or a need for change in policy (such as created by conflict at locks).
2. The specific problem or need is located or has significant impact within the riverine area.
3. The public has indicated concerns regarding the importance of a particular problem through newspapers, organization position papers, public meetings, or other means.
4. No other established single or joint body organization (either public or private) is currently addressing the problem or needs; or, if so, the party involved does not have the capability to

adequately carry on the effort.

5. The problem or need, as well as possible solutions, has interstate or intergovernmental implications.
6. GREAT is in a unique position to pursue further study relating to the problem or need.
7. The problem reflects areas of conflict requiring a course of action.
8. GREAT has the capability to integrate the specific need with other major problems and needs of the river in reaching a solution.
9. A solution or recommendation to the problem or need can be realistically expected within the time and money constraints of GREAT.
10. The problem or need directly relates to the GREAT Study objectives adopted by the Upper Mississippi River Basin Commission.

2.21 The above criteria were applied to the identified problems. The problem list is presented as Appendix A.

2.22 This problem list first appeared in the July 1976 Phase I Status Report of GREAT I. Between July 1976 and March 1978 the Team realized its inability to come up with solutions to all of the problems and further narrowed the study scope. The March 1978 report stated:

"Although GREAT was directed to develop a management plan which addresses all uses of the river, the primary concern of the study is to develop a channel maintenance plan which is compatible with other uses of the river. The principal reason for the study was the concern by states and federal agencies that Corps of Engineers channel maintenance practices were increasing flooding and harming fish and wildlife resources. Therefore, the primary effort in the study has been to resolve these

management conflicts. Other study efforts, including recommendations for river management that do not relate to channel maintenance, will be addressed in the final report. The final report will be composed of the following products:

- A detailed management plan for channel maintenance. The plan will be site specific regarding channel characteristics, dredging locations and volumes, material placement sites, dredging equipment needs, and costs.
- Recommendations for river system management that do not relate directly to channel maintenance. These recommendations will apply to enhancement of fish and wildlife resources, sediment abatement, erosion control, recreation, side channel maintenance, and commercial transportation facilities such as fleeting areas and terminals.
- The recommendation for an ongoing management procedure involving the public and all groups that have responsibility for managing the river's resources.

2.23 In format, the final report, which will be released in September 1979, will be consistent with the Principles and Standards for Water and Related Land Resources Planning as established by the Water Resources Council. Recommendations will identify needed congressional, state, or local authorization and the implementing agency. Required environmental impact statements will be prepared by the implementing agencies."

Note: underlining emphasis added

PART III HOW CITIZEN INPUT WAS OBTAINED

3.01 From the Study inception (October 1974) through the present citizen input has been obtained in various ways. Overseeing the entire public participation and information process has been a Public Participation and Information Work Group (PPIWG). From October 1974 until August 1976 the PPIWG was staffed and chaired by the Upper Mississippi River Basin Commission.

3.02 The task force was made up of any citizen interested in participating. "Bridges were people from throughout the geographic study area who volunteered to act as staff extensions in the study area localities. They assisted in press releases, organizing meetings, and identifying "local river experts". Task group meetings were held as needed to prepare for various public activities.

3.03 In July 1976 the staff obligations were contracted out to a private consulting firm. One of the responsibilities of the firm was to broaden the citizen participation efforts. In October 1976 an organizational meeting was held in Winona, Minnesota. As a result of that meeting the organization structure was modified.

3.04 The PPIWG (about 300 members) met and endorsed a volunteer Executive Board. The executive board is made up of 8-10 people (# open) who meet a minimum of every other month to guide the PPIWG program. It acts as a "watchdog" for the full work group on issues evolving in the Study. The PPIWG is a group of volunteers who keep up to date generally on what is going on and meet 2 times per year. They also are invited to all executive board meetings. (For a current list of PPIWG members see Appendix B). The private firm has a full time staff and headquarters in Wabasha Minnesota.

Since May 1974 public input has been obtained in several ways:

- * Town Meetings
- * Special workshops
- * Questionnaires
- * Special projects (boat trips)
- * Periodic PPIWG full membership meetings
- * Executive Board meetings

* Staff work

- phone, in-person and written correspondence
- attendance at interest group meetings (i.e. Sierra Club, Izaak Walton, Rotary, Upper Mississippi Waterway Associates, etc.)
- news articles, editorials.

A detailed list of all events and input gathered to date follows.

3.05 List of PPIWG Events and Input to Date (Total December 4, 1974 - June 17, 1978 = 76)

1. TOWN MEETINGS (Introductory)

* McGregor, Iowa	October 15, 1975
* LaCrosse, Wisconsin	October 16, 1975
* Lake City, Minnesota	October 20, 1975
* St. Paul, Minnesota	October 21, 1975
* Mankato, Minnesota	November 24, 1975
* Montevideo, Minnesota	November 25, 1978

2. WORKSHOPS (Channel Maintenance/Material Placement Plans/Sites)

* Prairie Du Chien, Wisconsin	April 18, 1977
* LaCrosse, Wisconsin	April 19, 1977
* Winona, Minnesota	April 21, 1977
* St. Paul, Minnesota	February 8, 1978
* Winona, Minnesota	February 9, 1978
* Prairie Du Chien, Wisconsin	April 11, 1978
* LaCrosse, Wisconsin	April 12, 1978
* Winona, Minnesota	April 13, 1978
* Red Wing, Minnesota	April 17, 1978
* St. Paul, Minnesota	April 18, 1978

3. WORKSHOPS (Review Draft Interim Status Report)

* McGregor, Iowa	June 20, 1978
* Winona, Minnesota	
* St. Paul, Minnesota	

4. WORKSHOPS (Level B Problem Identification)

* Lake City, Minnesota	September 12, 1977
* LaCrosse, Wisconsin	September 14, 1977
* Lansing, Iowa	September 15, 1977

5. SPECIAL MEETINGS

* Garbage and Sewage Dumping by Commercial Vessels Winona, Minnesota	October 20, 1978
* Recreation Studies Informational Meeting Lansing, Iowa	June 29, 1978

6. SPECIAL EVENT

Boat Tour of River with
Public Information/Input Stops

September 9 - September 17, 1978

Stops:

Lansing, Iowa
Victory, Wisconsin
Genoa, Wisconsin
Brownsville, Minnesota
LaCrosse, Wisconsin
Winona, Minnesota
Wabasha, Minnesota
Reads Landing, Minnesota
Pepin, Wisconsin
Red Wing, Minnesota
St. Paul, Minnesota
Clayton, Iowa

Prescott, Wisconsin
Diamond Bluff, Wisconsin
Lake City, Minnesota
Alma, Wisconsin
Fountain City, Wisconsin
Trempealeau, Wisconsin
Dresbach, Minnesota
Lynxville, Wisconsin
Marquette, Iowa
McGregor, Iowa
Prairie Du Chien, Wisconsin
Guttenberg, Iowa

7. PUBLIC PARTICIPATION AND INFORMATION TASK FORCE/WORK GROUP MEETINGS

- | | |
|----------------------------|--------------------|
| 1. St. Paul, Minnesota | December 4, 1974 |
| 2. Red Wing, Minnesota | February 21, 1975 |
| 3. LaCrosse, Wisconsin | March 6, 1975 |
| 4. Red Wing, Minnesota | March 13, 1975 |
| 5. Winona, Minnesota | June 20, 1975 |
| 6. Winona, Minnesota | July 13, 1975 |
| 7. Ft. Snelling, Minnesota | September 16, 1975 |
| 8. St. Paul, Minnesota | December 5, 1975 |
| 9. Wabasha, Minnesota | July 28, 1976 |
| 10. Wabasha, Minnesota | August 19, 1976 |
| * 11. Winona, Minnesota | October 16, 1976 |
| 12. Wabasha, Minnesota | November 11, 1976 |
| 13. Wabasha, Minnesota | December 9, 1976 |
| 14. Wabasha, Minnesota | January 13, 1977 |
| 15. LaCrosse, Wisconsin | February 10, 1977 |
| 16. Wabasha, Minnesota | March 10, 1977 |
| 17. Wabasha, Minnesota | April 15, 1977 |
| 18. Winona, Minnesota | May 21, 1977 |
| 19. St. Paul, Minnesota | June 23, 1977 |
| 20. Winona, Minnesota | July 21, 1977 |
| 21. Wabasha, Minnesota | August 18, 1977 |
| 22. Winona, Minnesota | October 20, 1977 |
| 23. Wabasha, Minnesota | December 1, 1977 |
| 24. St. Paul, Minnesota | February 8, 1978 |
| 25. Winona, Minnesota | February 9, 1978 |
| 26. Red Wing, Minnesota | April 6, 1978 |
| 27. LaCrosse, Wisconsin | April 7, 1978 |
| 28. Wabasha, Minnesota | June 17, 1978 |

* Major reorganizational meeting

NOTE: At all workshops, special meetings, special events and PPIWG meetings, minutes were taken and forwarded to the GREAT I Team Plan Formulation Work Group and various citizens and/or private groups.

8. WRITTEN COMMENTS AND MISCELLANEOUS INPUT*

<u>By</u>	<u>Topic</u>
Sierra Club, Upper Mississippi Task Force	GREAT Evaluation Report
Citizens for a Clean Mississippi, Inc.	GREAT Evaluation Report
Wilbert F. Arksey	Misc. & various topics
Daniel T. Flaherty	Wilderness areas
Lloyd Spriggle	Sedimentation
Voice of the Mississippi, Inc.	Misc. GREAT Evaluations
Peter Olin	Misc. and various topics
William Howe	Misc. and various topics
Harvey Goodell	Misc. and various topics
Clear Air - Clear Water Unlimited	Riverine disposal
William Pozorski	Material placement
Mount Trempealeau Association	Misc. and various topics
Edwin Hill	Sedimentation
Wally Thiele	Misc. and various topics
Marge Vogel	Misc. and various topics
Barbara A. Frank	Misc. and various topics
Mr. and Mrs. Merritt Horton	Material placement
Mrs. Patricia Fillner	Material placement
Marian Havlik	Endangered species
Roderick Adams, Jr.	Low water problems
Sara Smerud	Misc. and various topics
Bridget Mullen	Misc. and various topics
Roger Steinberg	Misc. and various topics
Lloyd Wilcox	Material placement
Ed Passe	Side Channel opening
Jim C. Coxe	Material Placement
Arnold Vogel	Misc. and various topics
Edward Oldenburg	Material placement
Allen Varo	Rip-rap needs
Winona Port Authority	Barge fleeting
Mrs. Margaret Beranek	Material placement
Steve Herberg	Misc. and various topics
Rod Nilsestuen	Material placement
Ken Irish	Side channel opening
Mike Tallant	Side Channel opening
Congressman Al Baldus	Side channel opening
Cap Kiester	Dredging
Karlyn Berg	General comments
Dick Williams	Water quality and others
Sharlene Frederich	Move navigation channel

* This does not include numerous requests for information nor does this include people who attended various meetings, etc. as noted in items 1-7 above.

9. In addition, PPIWG Coordinator attended various meetings of Izaak Walton League, Sierra Club, Rotary Clubs, Kiawanis Clubs, Minnesota-Wisconsin Boundary Area Commission, Upper Mississippi River Basin Commission, Regional Development Commission, Upper Mississippi Waterways Association and others.

PART IV CITIZEN PERSPECTIVES

1. WHAT THE RIVER WAS (A BIT OF HISTORY)

4.01 Individual resource agencies each have their own specific management, administrative or regulatory role to play in dealing with this resource called the Upper Mississippi River. Accordingly, each agency tends to view the resource within the context of their role; i.e., the Corps of Engineers is primarily concerned with maintaining a navigable channel, the Fish and Wildlife Service with managing a refuge, etc. Each agency sees the river in terms of their own particular mandate based on legislation, regulations, and funding authorizations.

4.02 The people also view the resource in a variety of contexts; that context is often grounded in the individuals historical and/or current relationship to the river. The commercial fisherman may be the third generation of a fishing family, the camper may know the river "like the back of his hand" because he has spent most of his leisure hours enjoying the resource. The towboat captain also knows the river inside-out - he has to in order to do his job well.

4.03 The distinction is an important one. The agency resource manager-regulator-enforcer sees the resource indirectly through the eyes of his agency whose vision is affected by legislation, rules and regulations - all derived from some congressional authority.

4.04 The citizen sees the river directly through his own eyes - unencumbered by his position in a governmental agency. The citizen's concerns, needs, hopes for the resource are many times grounded in natural and human history. It may, therefore, be useful to briefly recall the history of the Upper Mississippi River.

4.05 The Mississippi River, before it was a wildlife refuge, a barge channel, a recreational haven, a source of city drinking water or industrial cooling water, or anything else - just was! About 1 million years ago the Pleistocene Ice Age - with its alternate glacial formation and glacial melt - formed the river basin topography that we know today. At the end of the last glacier (about 10,000 to 12,000 years ago), the Mississippi River con-

tinued to be only a natural watercourse serving the functions of transportation of water and as habitat for aquatic and terrestrial plants and animals.

4.06 The arrival of the American Indians, the Sioux, Chippewas, Sac, Fox, and others, virtually had no effect on the river as a natural system. Limited in numbers and technology, the Indians used the river for transportation, hunting, fishing, etc., but it is unlikely that there was much of an effect on the resource - good or bad.

4.07 Early white trappers, hunters, and traders likewise benefited from the resource but left little in the way of "environmental impact" as we would say today. Since the 1600's change has been constant in the Upper Mississippi River Valley, as witnessed by the following chronology of events:

- 1673 French explorers Hennepin, Marquette, and Joliet, opened the Mississippi River to the White Man.
- 1730: French furtraders in pirogues and bateau followed from 1730 to 1750.
- 1760: Keelboats transported early settlers and military parties followed by flatboats, raftboats, and scows.
- 1823: The first steamboat to reach St. Paul was the "Virginia".
- 1830: Beginning of the fabulous days of the Golden Age of steamboat travel and trade on the Mississippi.
- 1832: A young West Pointer, Lieutenant Robert E. Lee, prepared surveys of the rapids at Rock Island and the mouth of the Des Moines River for navigation improvement.
- 1878: The first comprehensive plan of improvement on the upper river, the 4½-foot channel project, was authorized by Congress.
- 1907: A 6-foot channel was authorized. During the latter years of this project, commercial navigation almost disappeared from the upper river.
- 1939: The 9-foot channel opened to transportation on the upper Mississippi River.

4.08 To date, the Federal Congress has recognized the commercial and fish and wildlife value of the resource through designation of the channel and designation of the refuge. A study was made in the 1960's for designation of a portion of the valley as a "Natural Recreation Area" and currently the potential of the resource for "Wilderness Area Designation" is being studied. The National Recreation Area designation did not gain enough political support to get through congress. The wilderness question is yet to be answered

4.09 History has shown us, then, that the Upper Mississippi River has undergone substantial changes in the interest of the economic development of the country. Not only have modifications been done to the channel to provide for increased draft vessels, but:

- * The floodplain has been modified by development of dikes and levies to protect land, people and structures from flood hazard and by reduction of natural recharge areas due to covering of the landscape, particularly in urban areas.
- * The water has been contaminated with human and animal wastes, cropland runoff, and chemicals of all kinds from cropland, and commercial and industrial effluent.
- * The natural landscape has been modified by development of man's structures of all kinds.
- * Siltation in the river has been caused by erosion of streambanks and uplands - in part natural - in part due to poor grazing and farm practices.
- * Railroads have 'created' a new shoreline and limited access to the river in many places.

4.10 In short, the history of the river has been one of change - change that has resulted in economic benefits and environmental change. In gross terms the changes have, in some places, resulted in improved natural habitat (i.e. creation of new wetlands by pooling of the river behind the locks and dams), but more often the changes in the basin have been to the detriment of the natural environment.

2. WHAT THE RIVER IS -

4.11 Function

Management Entity

- | | |
|--|---|
| * A natural, although modified, ecosystem for plant and animal species | USFWS monitors some populations, regulates hunting and fishing, some management activities |
| * A navigation channel for commercial transportation of bulk commodities | U.S. Coast Guard and Corps of Engineers operate and maintain navigational aspects |
| * A watershed for removal of water from watershed | Corps of Engineers, via locks/dams Flood Control projects manage flow |
| * A recipient of agricultural, residential, commercial and industrial effluent | State pollution control agencies and federal E.P.A. regulates |
| * A recreational playground | Some management by USFWS, Corps, States, Coast Guard - although islands generally unmanaged except for limited attempts to enforce litter laws. |
| * An esthetically pleasing environment for human enjoyment | Some control via land use controls by local government. |

4.12 The river system today can be compared to a planners base map of a totally natural system (Pre-human involvement) which has been overlaid with a series of man-made alterations - some beneficial to some parts of the environment, while detrimental to others. Each alteration or "uses" can benefit one aspect while harming another - nothing man or nature does to the river has "no-effect". Uses can and do conflict. Depending on one's personal values, one's agency mandates, or one's economic investment a person, group, or agency will tend to be more concerned about one use over another and desire to seek a management system that assures survival or enhancement of the resource for that use.

4.13 So today we have before us, in effect, a competitive situation, where a given resource, the Upper Mississippi River, is being allocated for various functions or uses.

PART V

RECOMMENDATIONS AND CONCLUSIONS

1. CITIZEN EVALUATION OF INTERIM REPORT

5.01 Upon publication of the final Interim Status Report the PPIWG Coordinator notified the public, through over 300 mailings and an announcement in "Soundings", that the report was available upon request. With each report sent an evaluation form was included for mail-back to the coordinator. The respondents, along with their responses, are displayed in Appendix C. The following is an analysis of the responses.

5.02 In one evaluation (Column A) citizens were asked to rank the recommendations 1-24 showing highest to lowest priority for accomplishment. In this evaluation those recommendations with the highest average ranking (when combining all responses) received the highest overall ranking in priority. In looking at the Column A Summary (Appendix C.1), we see, for example, that the top ten recommendations are as follows (listed in priority).

Recommendation

1. Maintain fish and wildlife resources
2. Continue public participation
3. Continue dredging coordination
4. Rehabilitate backwaters
5. Continue pursuit of beneficial placement of material
6. Provide state and federal funding for accelerated erosion control
7. Continue sediment monitoring of tributaries and backwaters
8. Start an erosion control demonstration project on the Chippewa River
9. Continue dredging reduction research
10. Stabilize material placement sites

5.03 In the Column B rating (see Appendix C.2) citizens were asked to

place a number (1 through 5) next to each recommendation based on a scale of acceptability. We see that the top ten recommendations in terms of overall average ranking are as follows:

Recommendation

1. Maintain fish and wildlife resources
2. Continue public participation
3. Continue dredging coordination
- *3. Continue pursuit of beneficial placement of dredged material
4. Provide state and federal funding for accelerated erosion control
5. Rehabilitate backwaters
6. Start an erosion control demonstration project on the Chippewa River
7. Stabilize material placement sites
8. Assure use of appropriate dredging equipment
9. Continue sediment monitoring of tributaries and backwaters

*Notes a tie in score

5.04 In the two lists 8 of the 10 recommendations are on both lists. The lists, in effect, provide a cross reference. The Column A evaluation provided an opportunity to prioritize all of the recommendations from highest to lowest priority. The Column B evaluation provided the respondent the opportunity to simply show agreement or disagreement with each separate recommendation. In this way a respondent, if he thought all recommendations were important, could show agreement with all.

5.05 It is interesting to note, when combining both lists that in terms of universal priority as well as universal agreement most of the top 10 items are the same. In fact, the top 3 items are identically rated and ranked. Among respondents there is universal agreement that the 3 most important recommendations in the GREAT I Interim Status Report are:

1. Maintain fish and wildlife resources
2. Continue public participation
3. Continue dredging coordination

5.06 Obviously, as in all of our public participation efforts we cannot say that this evaluation summary represents the universal opinion of all interests. A look at the summary bears that out. Each individual recommendation had a wide range of rankings or ratings. Most had at least one respondent who rated it #1 priority or "highly favorable" and another who gave it lowest priority or "highly objectionable". But, overall, trends and averages do give us an idea which recommendation had the most and least support.

5.07 In addition, we received 17 narrative type comments from other interests. Those comments are all attached as Appendix C.3. These documents, as you will see, over a broad range of topics and stress numerous priorities.

2. PPIWG EXECUTIVE BOARD POSITION PAPER ON WORK GROUP ACTIVITIES

5.08 Based on all citizen input to date the PPIWG Executive Board has prepared a formal set of recommendations for each work group. These recommendations are set forth herein in the form of a Position Paper. The document provides a brief background or "rationale" for the positions set forth.

COMMERCIAL TRANSPORTATION WORK GROUP

I FUNCTION

5.09 "The function of the Commercial Transportation Work Group is to determine present and future problems and needs of commercial river transportation and alternatives to meet these problems and needs" (from GREAT I Interim Status Report, March, 1978).

II BACKGROUND

5.10 In the past 100 years the river has been physically modified so that it could provide for the ever increasing demand for commercial navigation. In providing for the nine-foot navigation channel project in the 1930's a lock and dam system was developed. While other facets of the resource, such as recreation and fish and wildlife, were not part of the project purpose, these were initially enhanced as a result of the creation of the pools behind the locks and dams.

5.11 The CTWG has been evaluating future demand anticipated for use of the riverine environment for terminals, fleeting areas, where bends may be widened or narrowed, and how changes in operation and maintenance will affect the efficiency of commercial river navigation. In reviewing the information from this work group we find that:

1. There is little question that the commercial river navigation mode has had a positive effect on the economy of the upper midwest. Those who have benefited the most are agribusiness and utilities, as well as the barge and towing industry itself. We have all been indirectly benefited as a result of this comparatively cheap and energy efficient mode of transportation.
2. Preliminary studies of the work group indicate that the future will bring increases in the number of barges and tows travelling on the waterway, that there will be needs for more fleeting areas and terminals, and that there will be a continued need for an "operation and maintenance program" to maintain a navigable channel.
3. The CTWG is primarily made up of people from the transportation interests; barge and towing company executives, transportation planners and researchers, representatives of commercial transportation trade organizations, and others. It is chaired by the U.S. Coast Guard. Representatives of modes other than river transportation have sat in on meetings from time to time, but emphasis in all research and studies has been aimed toward the commercial navigation mode.
4. The overall concerns of the work group appear to focus on those things which may hamper or aid the ability of the commercial transportation industry to operate at a level necessary to handle the needs of the industry. Further, the commercial transportation industry desires to be able to operate on the Upper Mississippi River with the lowest risk possible in terms of potential for grounding, delays at locks, waiting at bends or "slow down" in shallow waters. The CTWG has

expressed concern that there are already too many regulations governing their operations and further government involvement will be detrimental to the operation of their free enterprise system. While the CTWG itself has not taken a stand on the "Lock and Dam 26 Issue" nor the issue of "user fees", from review of lobbying efforts on the part of the commercial transportation industry, however, it is obvious that the industry feels that user fees would be detrimental to the industry in terms of their competitive costs of operation and that a new Lock and Dam 26 would certainly provide a more efficient commercial navigation system - thus a more beneficial one than now exists.

III EXECUTIVE BOARD POSITION

5.12 Citizens who have responded to the GREAT Study have a wide range of views regarding the commercial transportation function of the river resource. Views range from "Discontinue use of the river as a commercial navigation channel" to "It is essential to our economy and there should be no or few restrictions on the development of the system". It is necessary to go beyond the statements to see what the citizens are getting at. In general, we have found that citizens with various viewpoints have as the basis for those viewpoints economic interest and/or a personal value system.

5.13 Given the viewpoints and rationale expressed during the public input process, the executive board of the PPIWG recommends the following:

1. In keeping with GREAT's original objective; we feel that a position recognizing the many uses of the resource is necessary and proper. The resource, above all, serves a function as a natural watershed with a modified floodplain. Biologically, it serves an important niche in the ecosystem. That ecosystem, however, also includes man as a species and man has modified it for certain needs. Some modification can be "absorbed" by the ecosystem with only minimal effects. Other modifications can, in effect, eliminate the resource in terms of its biological value. Modifications to the resource for commercial navigation uses are necessary but should be allowed

only to the extent that they either benefit the biological productivity of the resource or cause changes that can be effectively absorbed while still maintaining the natural diversity so important in the "web of life" (man's life included).

2. In light of the above statement the executive board of the PPIWG recommends that commercial navigation be planned for and continued within the following constraints:

- (a) Fleeting areas and terminals should be located, to the extent possible, in existing urbanized areas on land that is already grossly affected by man's presence. No fleeting areas or terminals should be permitted in areas requiring extensive modifications to the natural environment, such as highly productive wetland, areas containing rare or endangered species, or in areas requiring major modifications to wetland in order to provide on-land or water access. Fleeting areas should not be located where there will be major detrimental effects to the "viewshed" from either the river or from on land.
- (b) Widening of bends should not be done where such widening will result in destruction of highly productive wetlands or where placement of dredge material resulting from widening cannot be done in a manner that meets state water quality requirements per section 404(t) of the Clean Water Act of 1977.
- (c) We recognize that crucial to the continuation of a commercial navigation system is the operation and maintenance of a navigation channel. We recommend that said channel be maintained to the extent necessary to assure the integrity of a nine foot channel, adequate to allow efficient travel by vessels with a nine-foot draft. We recommend further, that in doing so, that dredging be kept to a minimum depth and width and that placement of material be done in the least environmentally damaging manner possible. This is likely to raise costs and we feel that

said costs should be recognized by the government and the industry as the cost of improving management for all resources. Should costs raise to a level unacceptable to the taxpayer/consumer the burden of proof to find ways to lower costs (i.e. relax environmental standards or find other means of accomplishing the same objectives) is on the government/industry. It should not be the responsibility of the citizens to prove that a method of operation and maintenance is environmentally damaging and therefore warrants increased costs. Rather, it is the responsibility of the government/industry to prove that changes in operation and maintenance are not environmentally damaging, and do not warrant increased costs or other changes.

In effect, we feel commercial navigation can be continued on the river, but that it must be managed so negative environmental effects are minimized.

DREDGED MATERIAL USES WORK GROUP

I FUNCTION

5.14 "It is the function of the Dredged Material Uses Work Group to identify all possible uses of the dredged material who can and will use the material, and sites where the material can be placed so that it is accessible to potential users". (From GREAT I Interim Status Report, March, 1978.)

II BACKGROUND

5.15 As part of the operation and maintenance of the 9 foot navigation channel the U.S. Army Corps of Engineers has had to annually dredge parts of the river. Placement of dredge material, prior to GREAT, was done generally adjacent to the main channel. Over the past 40 years the placement of dredged material has created new land masses where wetland previously existed. In addition, dredged material placement on top of previous placements has resulted in sand areas that have either not been allowed to vegetate or have been vegetated but intermittently covered. This type of placement has

indirectly resulted in sedimentation of backwater areas as well as the main channel. It is recognized, as well, that placement of dredged material has created many popular beaches and recreation areas.

5.16 As part of the GREAT Study, the DMUWG has been charged with the task of finding beneficial uses for the material as an alternative to traditional placement methods and locations. In order to find beneficial uses the work group studied the properties of the material to find out what it could be used for and it also surveyed potential users to determine the marketability of the material. In reviewing the information from this work group we find that:

1. A "Given" in the work of the work group is the fact that traditional placement of the material has often been detrimental to the environment and use of the material, preferably out of the floodplain, is less damaging than current practices. By the same token, it is recognized that placement of the material in locations conducive to beneficial uses may cost more to the Corps of Engineers and, indirectly, to the taxpayers.
2. Most, if not all, members of GREAT agree that dredging will continue to be necessary for operation and maintenance of the 9 foot channel, at least until the year 2025 (end point of GREAT Study projections). Therefore, the problem of "where to put the material" is a long term one.
3. Research done by consultants and through "in-house" efforts has resulted in findings that the dredge material is usable for fill, road sanding, and as a mixture in compost. All above uses contingent upon physical characteristics of the material.
4. Through efforts of the work group members and from information gathered by the public several uses for the material, and several users have been identified. Private individuals, cities, and highway departments have indicated willingness to use the material provided it is made accessible to on-land modes of transportation.

III EXECUTIVE BOARD POSITION

5.17 Citizens have expressed on numerous occasions their approval of

the concept of beneficial use of dredge material. In February, 1978 the PPIWG held a series of two workshops on the channel maintenance/material placement planning process. Beneficial Use of Material was ranked highest of six placement categories as most preferred by respondents. Likewise, in the evaluation of work group recommendations outlined in an earlier section of this document, the recommendation "continue pursuit of beneficial placement of dredged material" ranked 5th in priority and 3rd in acceptability - both indicators of strong public sentiment for this method of placement.

5.18 Based upon the fact that the DMUWG has found that the dredge material is useful and potentially marketable, the Executive Board of the PPIWG recommends that:

1. Every effort be made to place all material dredged from the Upper Mississippi River, as well as the St. Croix and Minnesota River, in locations that will make it available for beneficial uses. Further, the U.S. Army Corps of Engineers in cooperation with the states and local government should continue to pursue markets for the material.
2. The U.S. Army Corps of Engineers should seek additional funding to enable them to obtain equipment needed to accomplish beneficial use placement. Further, the Corps of Engineers should attempt to be reimbursed for material from purchasers in those cases where reimbursement is consistent with the local, state, or federal laws.

DREDGING REQUIREMENTS WORK GROUP

I FUNCTION

5.19 "The Dredging Requirements Work Group will develop criteria for maintenance dredging of the Upper Mississippi River 9-foot channel system to minimize total dredging quantities without loss of the integrity of the channel." (From GREAT I Interim Status Report, March, 1978.)

II BACKGROUND

5.20 This work group, through the use of mathematical and physical

model research, is attempting to find out if there can be changes made in dredging methods or other changes (such as submerged groines, etc.) can be made that will, in effect, reduce dredging volumes - yet maintain a navigation channel. To date, most of the research is yet to be completed. Some preliminary work has indicated that there may be able to be some reductions in dredging depth in some locations. The work group is also looking at the potential for reduction in sediment supply from the Chippewa River and subsequent reduction in dredging quantities.

5.21 The work group, in the Interim Status Report, noted "A reduction in dredging quantity is essential to reduce the impact of material placement on the existing environment and reduce the cost of alternate placement methods".

III EXECUTIVE BOARD RECOMMENDATIONS

5.22 Citizens have expressed, throughout the study, the need for minimizing the environmentally damaging effects of dredging. Reduction of quantities to be dredged helps reduce the need for dredging and thus reduce potential negative environmental impacts.

5.23 If it is shown that reduction in quantities to be dredged is both environmentally and economically sound the Executive Board of the PPIWG recommends:

1. Upon completion of the research being done through the DRWG the Corps of Engineers should assess the applicability of undertaking all effective measures for reducing quantities of dredged material. If reduced depth dredging can be undertaken without substantially increasing the risk of groundings we recommend that it be done.
2. If research indicates that a reduction in sediment supply will reduce dredging requirements this information should be used to support recommendations from the Sediment and Erosion Control Work Group for implementing upland and streambank erosion control measures in the basin.

FISH AND WILDLIFE WORK GROUP

I FUNCTION

5.24 "The primary objective of the Fish and Wildlife Management Work Group is to determine the means and to make recommendations for preserving, protecting, and enhancing the fish and wildlife resources of the Upper Mississippi River". (From GREAT I Interim Status Report, March 1978.)

II BACKGROUND

5.25 This work group is made up primarily of resource managers from state and federal agencies. The work group members, by vocation, are involved in managing the fish and wildlife resources on the river in the public interest. The work group has had difficulty in "defining the resource" in part because of the complexity of the ecosystem, and also because the river ecosystem is so dynamic - ever changing.

5.26 To date, the work group has undertaken a vegetative mapping project, a study of the Weaver Bottoms to determine a potential rehabilitation program, and a biological/physical simulation predictive model. The most concrete information to date has been a recommendation for specific physical measures to rehabilitate the Weaver Bottoms (Pool 5). In terms of providing a "measure" of the resource and an overall plan to "preserve, protect and enhance" nothing has yet been provided.

III EXECUTIVE BOARD POSITION

5.27 No other issue has drawn such broad and consistent citizen support as the dual problems of fish and wildlife habitat preservation, and reduction of sedimentation; for they go hand in hand. The Sediment and Erosion Control Work Group, the Fish and Wildlife Management Work Group, and the Side Channel Work Group have all stressed that sediment is filling the backwaters, causing them to lose their productivity. This is a natural occurrence that has been accelerated by the "pooling" of the river through construction of the lock and dam system.

5.28 There is widespread public support for preservation and enhancement of fish and wildlife resources. Likewise, there is a general knowledge

that the major cause of habitat loss is due to sedimentation. Specific means for preserving and/or restoring the resource have been suggested, but for the most part not field tested.

5.29 Based on the information to date the Executive Board of the PPIWG recommends:

- 1) That the Weaver Bottoms Study recommendations be implemented as a comprehensive field test as one means of backwater rehabilitation.
- 2) That the Fish and Wildlife and Side Channel Work Group, prior to preparation of their final reports, locate on maps other backwater areas in need of rehabilitation and follow up after GREAT with needed evaluations and subsequent programs to rehabilitate those areas.
- 3) That, where/if workable, the predictive model developed by the University of Wisconsin be used to aid in determining rehabilitation techniques. (This model is currently being field tested in the Belvidere Slough Area (Pools 5 and 5A.)
- 4) That the recommendations in the Interim Status Report (March 1978) on pages A-76 should be carried out.
- 5) That, in the long run, perhaps using the Computerized Inventory and Analysis process as a tool, the resource managers develop a comprehensive plan for "protection, preservation and enhancement" of the fish and wildlife resource. Inherent in such a plan, we feel, is the incorporation of fish and wildlife habitat management as a "project purpose" in all federal agency programs and any changes in legislation needed to assure this goal.
- 6) Finally, the Executive Board of the PPIWG feels that the traditional cost-benefit ratio method of justifying projects on the river may not be applicable to measuring the worth of expenditures of funds for fish and wildlife programs, as the dollar value of the ecosystem cannot be measured.

FLOODPLAIN MANAGEMENT WORK GROUP

I FUNCTION

5.30 "The main objective of the Floodplain Management Work Group is to develop recommendations for dredged material disposal and floodplain development that comply with state floodplain management standards."
(From GREAT I Interim Status Report, March 1978.)

II BACKGROUND

5.31 This work group, made up primarily of people with floodplain management or natural resource planning backgrounds, has been involved to date primarily in delineating the floodplain boundaries (1965 flood) on maps of the river in the study reach.

5.32 In addition, the work group has also been working with the Floodplain Management Technical Task Force of the Upper Mississippi River Basin Commission on selection and use of a math model to assist in evaluation of the effects of dredged material placement on flood flows. The research is planned but has not yet been completed.

III EXECUTIVE BOARD POSITION

5.33 People who live in the valley, and government agencies who work in the areas of flood control and flood insurance, are concerned about the damage done by flooding. Over the years man's modifications of the environment have increased flood risks on one hand, and prevented flood damage on the other. Through the process of urbanization and covering of natural ground cover with structures, roads, etc. man has reduced the ability of the land to absorb rainfall and snow melt and, in turn, increased runoff from the watershed directly into the tributaries and main stem of the Upper Mississippi River. Inappropriate agricultural practices have also accelerated the runoff problem. To protect land, structures, and humans from flooding damage many cities have worked with the U.S. Army Corps of Engineers to build levee and dike systems around improved land. While these dike systems prevent localized flooding the broad effect is increased channelization of the river.

5.34 Finally, sedimentation of the floodplain and placement of dredged material in the floodplain has reduced the capacity of the river to handle major floodflows. In human terms, flooding would not be a problem if man had not built in the floodplain in the first place. But such is not the case.

5.35 The Executive Board of the PPIWG, in light of work done by the work group to date and in light of general citizen concern for their own safety and welfare, recommend the following:

- 1) That the Floodplain Management Work Group support efforts by the Sediment and Erosion Control Work Group to promote accelerated streambank and upland erosion control practices as a means of reducing sediment flow into the river, thus maintaining the river's floodflow carrying capacity.
- 2) That the Floodplain Management Work Group continue research to determine effects of dredge material placement on floodflows, and use this information to support, if possible, the concept of removal of all dredge material from the floodplain and use such material for beneficial uses where possible.
- 3) That the Floodplain Management Work Group support continued enforcement of floodplain and shoreland ordinances where they exist and adoption of same where they do not exist. As part of this effort the states should continue to work with all units of government to limit future filling and development in the floodplain.
- 4) That this work group should support a re-evaluation of tributary straightening projects and possible re-design of some of these projects where straightening has resulted in major environmental problems.

MATERIAL AND EQUIPMENT NEEDS WORK GROUP

I FUNCTION

5.36 The Material and Equipment Needs Work Group is "charged with determining available options for use of existing equipment or additional or different types of equipment to reduce the impacts of channel maintenance

activities". (From GREAT I Interim Status Report, March 1978.)

II BACKGROUND

5.37 The Interim Status Report indicates that since inception of GREAT several pieces of equipment have been purchased to extend the Corp.'s capability to transport dredged material and deposit it in a manner resulting in less environmental damage, and/or providing material for beneficial uses. Basically, the St. Paul District now has two means of dredging - using a hydraulic dredge or a clam shell. The former uses a cutterhead and pumping process whereby the dredged material is pumped in slurry form through a pipe to the deposit point. There is from 50% to 85% water content in this slurry, and this method now necessitates berming the deposit area (since 404(t)) to minimize direct runoff back into the river. The latter (clamshell) method of dredging involves "grabbing" material from the bottom and transporting it by barge to the deposit site where it is dumped in open water and then moved again to land or scooped directly from the transport barge and deposited on land. Neither method, with existing equipment, appears to be able to provide the means to always get the material out of the floodplain or to beneficial use sites accessible by land.

III EXECUTIVE BOARD POSITION

5.38 The citizen input to date stresses that placement of dredge material out of the floodplain and/or for beneficial uses are important considerations. Further, there is a known demand for dredged material - this demand is being more specifically defined by the DMUWG. Finally, as the Environmental Impact Statement for the 9 foot navigation channel and various GREAT documents have stated "current methods of channel maintenance, especially dredging and depositing of dredged materials were significantly damaging the fragile backwaters, marshes, and sloughs for which the river is famous".

5.39 In light of expressed citizen concern for providing beneficial use of dredged material, removing it from the floodplain, and protecting the backwaters, the Executive Board of the PPIWG recommends:

- 1) That the Material and Equipment needs Work Group, prior to its final report, assess all alternative methods of dredging and

material transport in an effort to find ways to dredge, transport, and place dredged material in a manner that is consistent with the following:

- a) so that near 100% of the dredged material is used for either beneficial uses, or;
 - b) is transported and deposited out of the floodplain, or;
 - c) is used for wildlife enhancement programs, or
 - d) is provided for maintenance of recreational beaches,
 - e) in undertaking a) through d) above, the Corps of Engineers either attempt to meet the respective state Water Quality Requirements under 404(t) or can obtain satisfactory variances.
- 2) That the Material and Equipment Needs Work Group, in assessing alternatives, provide an analysis of the costs of all alternatives as compared to current costs.
 - 3) That the Material and Equipment Needs Work Group assist the GREAT I Team in its development of its channel maintenance plan by suggesting equipment needs that will assure compliance with the guidelines noted in 1 a) through e) above.
 - 4) That the Material and Equipment Needs Work Group provide justification to GREAT so that, in its final report, it can request the lifting of the Congressional Moratorium on purchase of needed equipment.
 - 5) That the Material and Equipment Needs Work Group should implement further studies to determine the practicability of alternative methods to reduce accumulation of sediment in the valley.
 - 6) That GREAT should investigate new types of dredging equipment in accordance with the resolution passed by the GREAT I PPIWG Executive Board on June 17, 1978.

I FUNCTION

5.40 "Its function is to develop a program which provides for the integration of recreation opportunities with the operation and maintenance of the 9-foot navigation channel." (From GREAT I Interim Status Report, March 1978.)

II BACKGROUND

5.41 To date the Recreation Work Group has undertaken numerous studies to inventory the existing recreational facilities in the study area, to project demand and capacity for the future, and other related matters. The focus of the work group has been primarily on boater-camper-picknicker-sightseer type recreationist with less emphasis on the fisher-hunter type recreationist.

5.42 In research done to date the work group has found, among other things:

1. That "the sand beaches created by depositing dredged material are the major attraction to many recreationists along the Upper Mississippi River".
2. That most of the areas preferred have at least 25% crown cover (over-story vegetation), as opposed to heavy vegetation or bare sand only.
3. "Preliminary estimates show that at least 60% of recreational boaters in the study area use dredged material islands/beaches. This estimate is conservative".
4. In some places the recreational activities interfere with one another. Occasional conflicts occur among hunters, boaters, trappers, fishermen, campers, and picnickers.
5. Many recreation areas are not adequately marked with signs, have inadequate parking facilities, and are not adequately provided with boat pump-out facilities.
6. There is a shortage of interpretive facilities and canoe routes.
7. Although there is some "psychological conflict" between commercial boats and recreational boats, the records show that most of the boating accidents are between recreational boaters, not recreational boaters-barges.
8. Ice fishing is a major recreational activity. During clement weather, man-day uses are very high, and ice fishing is becoming a more important recreational activity each year.

III EXECUTIVE BOARD POSITION

5.43 The public holds a wide array of opinions about the importance of the river for recreational activity. Of all of the opinions the one expressed more frequently than any other has been that the Corps of Engineers should continue to provide maintenance of existing beaches and even new ones for use by recreationists.

5.44 In light of opinion obtained to date, as well as in consideration of the data provided by work group research to date, the Executive Board of the PPIWG recommends the following:

- 1) Given the fact that use of dredged material disposal beaches are extensively used (work group data for 1976 indicates that in that year more than 250,000 visitor-use days were tabulated for 132 dredged material disposal areas) that a long term program of beach maintenance should be provided. Where heavy recreation use is evident beaches should be maintained either by (1) Placement of dredged material adjacent to the main channel and adjacent to some backwater channels where such placement can be shown to not violate water quality standards of the respective states. (On-site assessment may be needed and applications for variances made.) (2) Physical de-vegetation in areas where 404(t) prohibits direct placement. The latter activity should be undertaken by the owners of the beaches - in most cases the U.S. Fish and Wildlife Service or the U.S. Army Corps of Engineers. Such beach maintenance should become an annual program cost of the respective agencies and incorporated into their master planning programs. Congress should allocate funds in the budgets of these agencies for such activity. At the same time, the agencies may want to pursue the establishment of a recreation management entity, perhaps a third party, although it would appear that the best route would be incorporation of this activity into the existing programs of the respective agencies.
- 2) Necessary funding should be provided for establishment and maintenance of other recreational programs such as canoe routes, boat landings, and environmental education/interpretation centers. The Recreation Work Group, should, to the

extent possible, outline specific needs in their final report. If the CIA program is continued for the entire river, it is imperative that recreational needs be factored into the planning process.

- 3) The problem of commercial-recreational boater conflict at the locks and dams appears to be covered by the Corps of Engineers Recreational Crafts Lock Study. That study is outlining a number of alternative solutions to the problem. The study has held public input meetings during the course of the study and we encourage the Corps to continue to provide an opportunity for public input in this study.
4. It appears that recreational boating accidents on the river have been primarily caused by pleasure boater-pleasure boater collisions. Intoxication on the part of some pleasure boaters may be an important factor in many accidents. We encourage the states, perhaps through the use of the Coast Guard Auxilliary and others, to step up the program of boat operator training and safety education coupled with more enforcement of the "rules of the road" for pleasure boaters.

SEDIMENT AND EROSION CONTROL WORK GROUP

I FUNCTION

- 5.45 "The function of the work group is to:
- * gather base-line data.
 - * devaluate the long-term effects of sedimentation on the aquatic habitat of the Mississippi River.
 - * develop and evaluate erosion control alternatives.
 - * determine the effects of the MPFW/G (Most probable future without GREAT) and the alternatives developed by GREAT I."

II BACKGROUND

5.46 This work group, chaired by the U.S. Soil Conservation Service and made up of resource management personnel from several agencies, has

been working under one of the most well defined plans of action of any of the work groups. To date the research of the work group has shown:

1. Streambank erosion on tributaries is the major source of fine sediments which shoal the navigation channel.
2. Upland soil erosion from agricultural activities is the major source of fine sediments, said sediments being a chief cause of sedimentation of the backwaters.
3. Siltation in the pools and Lake Pepin has been significant.
4. Increases in the level of federal and state financial assistance to provide soil conservation measures on the uplands and streambanks is needed to reduce sedimentation.
5. A new emphasis to erosion control, non-point source pollution control, is needed to result in a major reduction in sediment yields to the river.
6. Raw sand dredged material piles should be stabilized with vegetation.
7. Monitoring of sediment flows from major tributaries should be continued.
8. The alternative for restoring pool capacities by movement of the control point from mid-pool to the locks and dams should be evaluated.

III EXECUTIVE BOARD POSITION

5.47 Of all input received from the public to date, there has been no problem that has received greater attention than that of streambank and upland erosion and its effects on the river environment. Public sentiment has been very strong in favor of stopping upland and streambank erosion. In the latest evaluation of the GREAT I Interim Status Report the respondents ranked the recommendation of provision of state and federal funding for accelerated erosion control in the top ten recommendations. Several citizens and citizen groups have stated that this is their number one concern. It is connected to the recommendation "Maintain Fish and Wildlife Resources". (The number 1 priority in the latest evaluation, is that sedimentation is a major

cause of backwater habitat deterioration.)

5.48 Data gathered by the Soil Conservation Service, further backed by historical dredging records, indicates that the Chippewa and Wisconsin Rivers are prime sources of sediment into the system. There is much sympathy on the part of the public for the initiation of streambank erosion control measures on both of the above-noted rivers. As mentioned earlier in this document, the establishment of the locks and dams has accelerated the problem of sedimentation build up in the system. Studies by this work group indicate that the life of the system in some parts may be as short as 50 years.

5.49 In light of research done to date by this work group, and in light of strong public sentiment for a reduction of sedimentation, the Executive Board of the PPIWG recommends:

1. That in the final report the Sediment and Erosion Control Work Group provide an analysis of the alternatives for reduction of sedimentation from streambanks and uplands, along with costs and benefits of each alternative. This information should be used as justification for further recommendations for a major increase in federal and state funding for erosion control programs throughout the basin. NOTE: Benefits that should be factored into the analysis should include both backwater habitat benefits as well as benefits to the commercial river navigation industry of potential reduced operation and maintenance needs.
2. That GREAT include in its final report a strong statement of support for the findings of this work group, with specific recommendations to the state and federal legislatures for major increases in appropriations for streambank and upland erosion control programs.
3. That, if studies continue beyond GREAT regarding the feasibility and desirability of moving the control point in the pools from mid-pool to the locks and dams, that a full economic and environmental evaluation be undertaken as part of the studies.
4. That, in cooperation with the Fish and Wildlife and Side Channel Work Groups, this work group provide a detailed program of specific

activities for improvement of backwater areas that have deteriorated and maintenance of existing productive areas.

5. That the appropriate agencies expedite as quickly as possible a program of streambank erosion control on all tributaries which supply sand to the upper river.

SIDE CHANNEL WORK GROUP

I FUNCTION

5.50 "The function of the Side Channel Work Group is to determine and document the effects of altering side channels on the backwaters of the Upper Mississippi River." (From GREAT I Interim Status Report, March, 1978.)

II BACKGROUND

5.51 To date, the work group has identified two major problems: (1) Backwater sloughs and channels are becoming blocked by sediments and dredged material resulting in habitat loss; and (2) No one is certain what effects will result from altering flows into the backwaters.

5.52 The following conclusions have been made by the work group:

1. Although side channels and backwaters are deteriorating, no one solution will work for all areas. It would appear that closing or partially closing some side channels will perpetuate the quality and integrity of some backwaters. In other areas, new or larger openings may have to be made.
2. Because the existing backwater system is a result of man's modification of the river (locks and dams), continued life of the system will have to be maintained in somewhat of an artificial manner.

III EXECUTIVE BOARD POSITION

5.53 The public, during the course of the study, has generally been in favor of some sort of program of side channel modification with the primary aim toward revitalizing backwater areas. There has also been considerable sympathy toward opening some side channels for primarily

recreational access reasons. At various town meetings and gatherings the public has expressed many specific concerns regarding the opening of specific side channels. To date, the PPIWG has recorded numerous side channel opening requests on the part of the public (over 50 individual requests). Most of these are documented either in the 1975 Town Meeting Report, or the 1977 Boat Trip Report. Others have come through in individual letters or statements. All requests have been forwarded to the Side Channel Work Group Chairman. The requests are not from one isolated stretch of the river, but along the area from lower Pool 4 through Pool 10. There has been interest throughout the study area for rehabilitation or preservation of various backwater areas (also see town meeting and boat trip reports) that would be affected by side channel alterations. There have been concerns ranging from the need to open channels to improve recreational boat access to needs to rehabilitate old fishing holes and wildlife habitat.

5.54 In light of the extensive documentation of public concern for side channel opening and in light of the work done to date by the Side Channel Work Group (most notably the various pilot projects), the Executive Board of the PPIWG recommends the following:

1. That the Side Channel Work Group, in its final report, provide an analysis of the pilot openings done to date, including any preliminary indications of the effectiveness of the openings (in some cases modifications other than opening). The report should indicate the success or failure of the pilot projects and recommendations for further action.
2. The work group should provide a written response to the PPIWG for all requests for side channel openings, with a listing of all channels submitted along with comments from the work group answering the following questions:
 - (a) Was the site reviewed by the work group on paper or in person to examine the problem?
 - (b) Was any analysis made of the proposed site to determine what actions should be taken? If yes, what action is recommended? If no, why was the site not given more attention?

- (c) For each site, the work group should either recommend further action with justification for same, or no action along with justification for same. If further study is needed, a detailed "plan of attack" should be presented for further study needs, who will do the work, what is the cost, the expected product, and deadlines.
3. In any case, a comprehensive program for side channel modification should be spelled out in detail in the final report. If the work group does a thorough job of meeting its final report goals, as noted on page A-144 of the GREAT I Interim Status Report, March 1978, the public will feel that its concerns have been met.

WATER QUALITY WORK GROUP

I FUNCTION

5.55 "The main functions of the Water Quality Work Group are to investigate and evaluate the effects on water quality of the primary river uses and associated maintenance." (From GREAT I Interim Status Report, March 1978.)

II BACKGROUND

5.56 The work group, to date, has undertaken a number of studies. A study of the effectiveness of polymers injection into dredge material was ineffective, as was a study of the use of a silt curtain at the downstream of a dredge operation. A survey of sediment quality in 1974 found that pollution "sinks" are in existence in the study area. A study of the effects of the first tow through Lake Pepin (March 1977) has not been published yet, so nothing is yet known. A study of effects on water quality of dredging (hydraulic) in Pool 2 has recently been published and is under review by the PPIWG. In effect, little more is yet known about the effects of dredging and commercial navigation on water quality than was prior to GREAT.

5.57 Since the inception of GREAT two significant events relating to water quality have occurred. (1) In large part due to the extensive

efforts of a citizen group called Citizens For A Clean Mississippi, Inc. a major bypass by the Metropolitan Wastewater Control Commission (Twin Cities Pig's Eye Treatment Plant) was averted and a compliance timetable for plant improvements was approved by the Minnesota Pollution Control Agency. The compliance schedule calls for on-land disposal of solids as soon as November, 1978. (2) The Clean Water Act of 1977 (Section 404(t)) was put into law by the U.S. Congress. The law requires the Corps of Engineers to meet state water quality criteria in its dredge material placement operations.

5.58 These two actions are anticipated to substantially aid the problem solving efforts on the Mississippi River in terms of water pollution. They do not address, however, the effects of other point sources, non-point source pollution, or effects of dredging on commercial and recreational navigation.

III EXECUTIVE BOARD POSITION

5.59 Water quality improvement is a matter of much concern and relevance to the GREAT effort. The quality of the river in this system has an effect on fish and wildlife habitat, recreational opportunities, and human health and safety. Improved physical conditions in the backwaters are of little value if the water is too polluted for sustenance of plant and animal species. Improved beaches are of little value if people cannot swim in the river or water ski. Fishing and hunting is of little value if fishermen and hunters cannot eat the catch because of high PCB content or other chemical accumulations in the species. All uses of the river, bar transportation, are hampered by poor water quality.

5.60 In light of the above, the Executive Board of the PPIWG recommends the following:

1. That GREAT go on record in its final report supporting continued efforts by the states and the Environmental Protection Agency to require that all point sources of pollution meet federal and state compliance schedules and water quality requirements.
2. That GREAT go on record in support of efforts to minimize non-point source pollution through continuation of the federal/state 208

Water Quality Programs beyond the study stage to actual implementation of measures that will reduce non-point source pollution.

3. That GREAT go on record in support of section 404(t) of the Clean Water Act of 1977 and develop its channel maintenance plan and river system management recommendations within the framework of 404(t) criteria. If recommendations for placement of material are for purposes of beach nourishment, fish and wildlife habitat, enhancement or beneficial uses, and criteria cannot be met, a thorough justification for a variance request should be provided. Variances should be considered by the states on a case by case basis with full public involvement.
4. That the Water Quality Work Group speed up its report publication efforts so that results of work done to date can be reviewed by the public prior to public review of the final reports of GREAT.

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