

AD-A096 442

ARMY ENGINEER DISTRICT ROCK ISLAND IL
GREAT RIVER ENVIRONMENTAL ACTION TEAM (GREAT II). UPPER MISSISS--ETC(U)
DEC 80

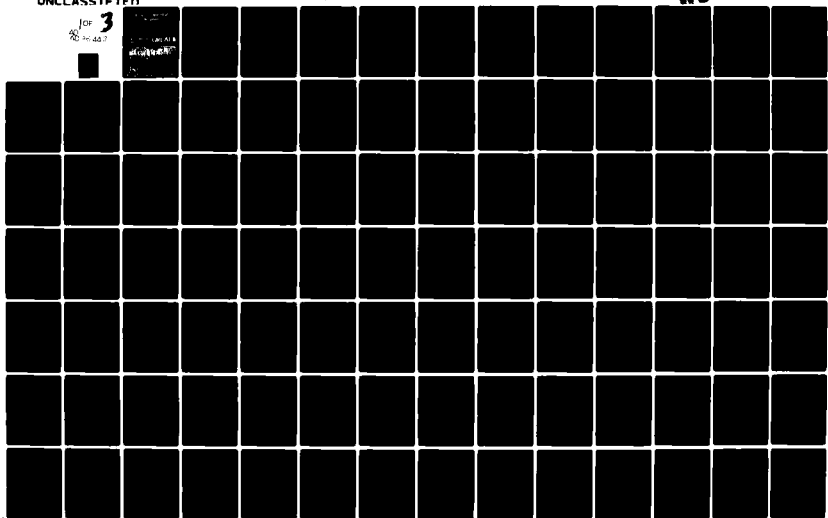
F/6 13/2

UNCLASSIFIED

RL

OF 3
70-442

AD-A096 442
GREAT RIVER ENVIRONMENTAL ACTION TEAM (GREAT II). UPPER MISSISS--ETC(U)
DEC 80



AD A 096442

Environmental Report

(Supplement to Main Report)

LEVEL III

THIS DOCUMENT IS BEST QUALITY PRACTICABLE.
ONE COPY FURNISHED TO DDC CONTAINING A
SIGNIFICANT NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.

DECEMBER
1980

GREAT II

Upper Mississippi River
(Guttenberg, Iowa to Saverton, Missouri)



This document has been approved
for public release and sale; its
distribution is unlimited.

81 3 17 195

Great River Environmental Action Team

DISCLAIMER NOTICE

**THIS DOCUMENT IS BEST QUALITY
PRACTICABLE. THE COPY FURNISHED
TO DTIC CONTAINED A SIGNIFICANT
NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

ENVIRONMENTAL REPORT

A SUPPLEMENT TO THE MAIN REPORT
OF THE
GREAT RIVER ENVIRONMENTAL ACTION TEAM (GREAT II)

(GREAT II), Upper Mississippi River (Guttenberg,
Iowa to Saverton, Missouri). ~~Environmental~~ Environmental Report.

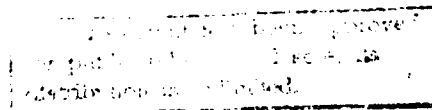
111 DECEMBER 1980



GREAT RIVER ENVIRONMENTAL ACTION TEAM (GREAT II)

A

→ U.S. ARMY ENGINEER DISTRICT
ROCK ISLAND
CORPS OF ENGINEERS
CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61201



4112

FOREWORD

The Environmental Report is a supplement to the Main Report of the Great River Environmental Action Team (GREAT II). The purpose of this document is to document and display, in summary fashion, the environmental analysis process and the results of that process for the 56 recommendations adopted by the GREAT II Team.

Most of the recommendations call for further study prior to actual implementation of physical changes on the river system. Therefore, the environmental analysis carried out on the recommendations is only preliminary. As this document points out, prior to actual implementation, many of the actions called for will require additional Environmental Assessment and/or Environmental Impact Statement documentation.

The information in this document is an initial effort to display alternatives considered to the proposed actions, and to define the broad scope of the environmental consequences of carrying out the GREAT II recommendations.

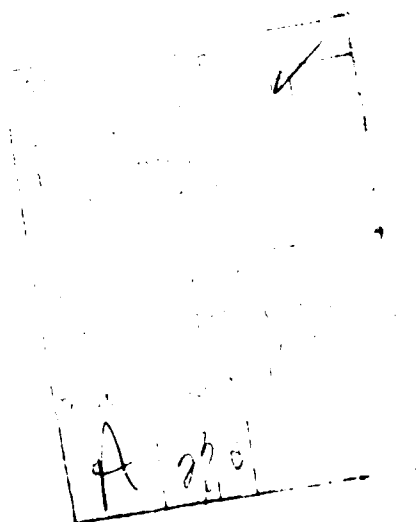


TABLE OF CONTENTS:

	<u>PAGE</u>
Foreword	i
I. INTRODUCTION	1
II. DISCUSSION OF REQUIREMENTS	1
III. APPLICABILITY OF LAWS, ORDERS AND REGULATIONS TO THE GREAT II STUDY RECOMMENDATIONS	2
Figure #1	5
IV. GUIDE TO DATA USED IN PREPARING THIS REPORT, <i>AG2</i>	6
Figure #2	10
V. ENVIRONMENTAL SUMMARY:	11
A. COMMERCIAL TRANSPORTATION	11
- Display of Accounts	12
- Actual Wording of Recommendations 1-7	15
- Environmental Summaries	
Recommendation 1	21
Recommendation 2	23
Recommendation 3	25
Recommendation 4	27
Recommendation 5	29
Recommendation 6	31
Recommendation 7	33
B. CHANNEL MAINTENANCE	35
- Actual Wording of Recommendation 8	36
- Environmental Summaries	
Recommendation 8	37
Special Summary-Disposal Plan	39
C. COMMERCIAL/INDUSTRIAL/UTILITY DEVELOPMENT	41
- Display of Accounts	42
- Actual Wording of Recommendation 9	43
- Environmental Summaries	
Recommendation 9	44
D. FLOODPLAIN MANAGEMENT	46
- Display of Accounts	47
- Actual Wording of Recommendations 10-12	48
- Environmental Summaries	
Recommendation 10	49
Recommendation 11	51
Recommendation 12	53

TABLE OF CONTENTS

(CONTINUED)

	<u>PAGE</u>
V. E. RECREATION, ...	55
- Display of Accounts	56
- Actual Wording of Recommendations 13-22	58
- Environmental Summaries	
Recommendation 13	63
Recommendation 14	65
Recommendation 15	67
Recommendation 16	69
Recommendation 17	71
Recommendation 18	73
Recommendation 19	75
Recommendation 20	77
Recommendation 21	79
Recommendation 22	81
F. WATER QUALITY, ...	83
- Display of Accounts	84
- Actual Wording of Recommendations 23-33	86
- Environmental Summaries	
Recommendation 23	91
Recommendation 24	93
Recommendation 25	95
Recommendation 26	97
Recommendation 27	99
Recommendation 28	101
Recommendation 29	103
Recommendation 30	105
Recommendation 31	107
Recommendation 32	109
Recommendation 33	111
G. SEDIMENT AND EROSION, ...	113
- Display of Accounts	114
- Actual Wording of Recommendations 34-38	115
- Environmental Summaries	
Recommendation 34	118
Recommendation 35	120
Recommendation 36	122
Recommendation 37	124
Recommendation 38	126
H. FISH AND WILDLIFE RESOURCES, ...	128
- Display of Accounts	129
- Actual Wording of Recommendations 39-43	130

TABLE OF CONTENTS

(CONTINUED)

	<u>PAGE</u>
V. H. - Environmental Summaries	
Recommendation 39	136
Recommendation 40	138
Recommendation 41	140
Recommendation 42	142
Recommendation 43	144
I. CULTURAL AND AESTHETIC	146
- Display of Accounts	147
- Actual Wording of Recommendations 44-48	148
- Environmental Summaries	
Recommendation 44	151
Recommendation 45	153
Recommendation 46	155
Recommendation 47	157
Recommendation 48	159
J. PUBLIC INFORMATION AND EDUCATION	161
- Display of Accounts	162
- Actual Wording of Recommendation 49-51	163
- Environmental Summaries	
Recommendation 49	166
Recommendation 50	168
Recommendation 51	170
K. COORDINATION, G.	172
- Display of Accounts	173
- Actual Wording of Recommendations 52-54	174
- Environmental Summaries	
Recommendation 52	177
Recommendation 53	179
Recommendation 54	181
L. LEGISLATION	183
- Display of Accounts	184
- Actual Wording of Recommendations 55-56	185
- Environmental Summaries	
Recommendation 55	186
Recommendation 56	188
Exhibit A - Sources of Additional Data	190
Exhibit B - List of Preparers	191

ENVIRONMENTAL REPORT

I. INTRODUCTION

This document contains a discussion of the applicability of the National Environmental Policy Act (NEPA) to the GREAT II study and its recommendation, a review of the various efforts completed by GREAT to develop environmental impact data, and an Environmental Summary for all GREAT II Team approved recommendations. The information is provided to enable the reader to assess the impacts of those recommendations for which adequate data has been developed and to point out to the implementing agencies the need for additional environmental analysis, where it has been determined that such is needed.

II. DISCUSSION OF REQUIREMENTS

A. Broad-Based Legislation and Executive Orders

The primary legislative act which serves as a foundation for federal agencies to fully consider the environmental effects of their actions is the National Environmental Policy Act of 1969, as amended (P.L. 91-190, and amending legislation P.L. 94-52 and P.L. 94-83). The purposes of this Act are:

"To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality."

The Act, further, established a basis for the preparation of environmental impact statements for "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.....".

The Clean Air Act as amended by P.L. 91-604 and Executive Order 11514 as amended by Executive Order 11991 provided additional requirements relative to agency implementation of the requirements of NEPA.

The most definitive overall Federal guidance for how to apply NEPA in the planning and decision-making process and instructions for preparation of environmental assessments and impact statements is contained in 40 CFR Parts 1500-1508, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, prepared by the Council on Environmental Quality.

All of the above-cited documents provided direction for all Federal agencies and were applicable to the GREAT II study in light of the fact that it was a federal-state interagency study funded by Congress through appropriations to the U.S. Army Corps of Engineers.

Applicable provisions of other acts, executive orders, rules and regulations not specifically cited above were also considered by the GREAT II Team in the development of its reports, and the implementation of any proposed actions are subject to applicable laws, executive orders, etc. (Sec. 33 CFR 230.25).

B. Specific Regulations Used in This Study

Because the GREAT study was funded primarily through the U.S. Army Corps of Engineers (Rock Island District) the regulations of this agency provided the detailed guidance for development of environmental impact analysis information. Specifically, Engineering Regulations ER 200-2-2 series was consulted, (33 CFR Part 230) and ER 1105-2-240, which provide specific guidelines for conducting environmental impact assessments and making a determination of the environmental significance of proposed actions.

III. APPLICABILITY OF LAWS, ORDERS AND REGULATIONS TO THE GREAT II STUDY RECOMMENDATIONS

A. The Nature of the Study

As described in Chapter I of the Main Report, this study resulted in a product that lies somewhere between a general planning report and a report calling for a specific construction activity. In effect, it contains elements of both. The recommendations that resulted from the study process vary in their implementability and significance. Because of the broad range of the study and the various levels of detail to which the different components were addressed, the level of environmental analysis required by NEPA and subsequent regulations - for each recommendation - varies.

As part of the effort undertaken to develop the draft reports, GREAT II carried out an analysis of the impact associated with the GREAT II recommendations (Pages 519-616, Draft Plan Formulation Technical Appendix, Volume 1). This analysis provided a preliminary determination for each recommendation that indicated: (1) no Environmental Assessment (EA) or Environmental Impact Statement (EIS) needed, (2) Environmental Assessment needed, and/or (3) an Environmental Impact Statement needed. This analysis was carried out based on criteria established by NEPA and subsequent regulations noted

earlier. Of the sixty-one recommendations contained in the draft, seven were determined to need Environmental Impact Statements prior to final determination for implementation. Twenty-nine were determined to need Environmental Assessments (with possible future determination for EIS need) and twenty-five were determined to need neither an EA nor EIS.

As part of the GREAT II Team review of the draft recommendations, agency and public comments and final Team action, several recommendations were modified. The supporting data, although the recommendation may have been changed, still reflects the general intent of the recommendations.

B. Impact Analysis Done as Part of the Planning Process

1. The recommendations contained in Chapter III of the Main Report were generated through an iterative process. Functional work groups, following problem identification and study task development, identified and reviewed alternative solutions (i.e., recommendations). The alternatives considered, the selected alternative, the rationale for the selected alternative, and a preliminary identification of impact categories of the selected alternative were all recorded on a "Preliminary Impact Assessment" form, contained in the work group appendixes.
2. In addition, for each work group selected alternative (hereafter referred to as recommendation). The work group completed a "Recommendation Impact Assessment" form which lists the major impacts of the recommendation and compares the most probable future with and without implementation of the recommendation. This form was contained in each work group appendix.
3. Each work group, for its approved recommendations, completed an "Impact Assessment Summary" -one or two matrixes displaying the significance of potential impacts by seventeen categories of impacts. This form was contained in each work group appendix.
4. As the many work group recommendations were combined by the Plan Formulation Work Group into "PREP" recommendations, an "Impact Assessment Table" was prepared for each "PREP" (with appropriate reference to original work group recommendations) describing the elements of the proposed actions, the potential impacts if no action is taken and if it is taken. This information was contained in the Draft Plan Formulation Work Group Appendix, and the Main Report.
5. All of the above information was then provided to an independent consultant who, based on analysis of the elements of the recommendations and already completed impact assessment data, made a determination of further EA and EIS needs, if any. This information, entitled a "Preliminary Evaluation Matrix", was contained in the Draft Plan Formulation Work Group Appendix.

6. In the process of public and agency review and subsequent final approval of the recommendations, wording changes were made, and some elements within old "PREPs" were reorganized. Some new recommendations (in some cases containing parts of other PREP recommendations and additional new wording) were developed. On the basis of this work a final environmental summary was completed combining and referencing all previous applicable data. This information was recorded on an Environmental Summary for each final approved recommendation. This information is contained in Chapter V of this document. It is further discussed and described in Chapter IV.

C. Alternatives Analysis

As part of the environmental documentation described in items B. 1-6 above, alternatives to original work group recommendations were identified. The Preliminary Impact Assessment, noted above, contains a list of alternatives considered. At the work group level these alternatives were analyzed and based on work group discussions a selected alternative was chosen and this became the "work group recommendation". On the Preliminary Impact Assessment form, the work group stated its rationale for choosing its selected alternative. While the work groups carried out an alternative analysis and assessment of the environmental impacts of alternatives, this process and the data supporting the process is generally not documented. Therefore, the rationale for selection is the only formal statement justifying the selection of the recommendation.

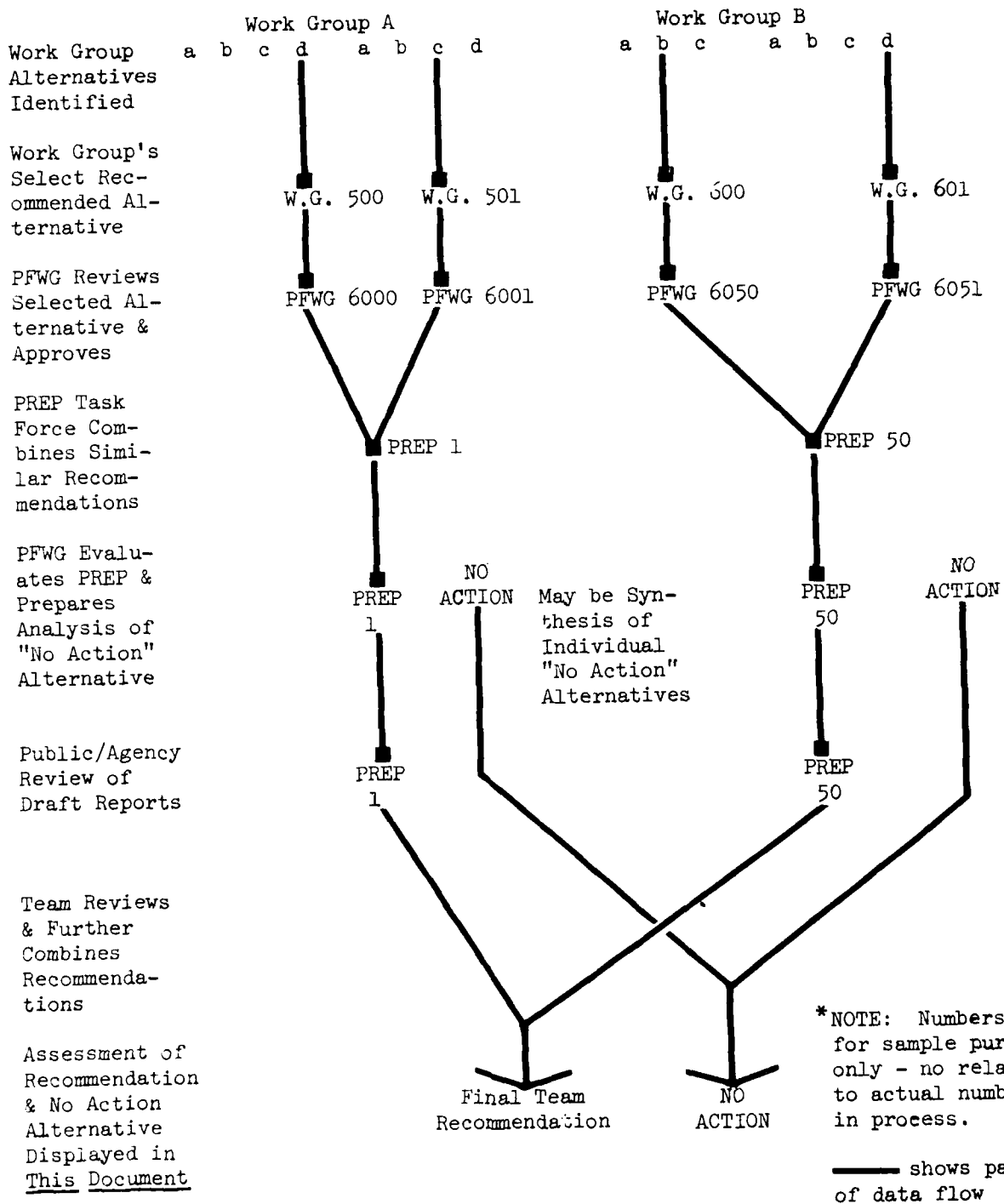
At the Plan Formulation Work Group Level each recommendation was reviewed and adopted. Prior to final adoption by the Plan Formulation Work Group many individual but similar recommendations were combined by a report writer Task Force and the combined recommendations given a "PREP" number. The "PREP" recommendation, as adopted by the PFWG, are those which appeared in the draft Main Report and draft Plan Formulation Appendix for public review. The "PREP" recommendations were assessed as well as the "No Action" alternative to the "PREP" recommendation by the Plan Formulation Work Group (see items B. 4 and B. 5 above).

In the process of applying public and agency comments to the "PREP" recommendations, the team further modified recommendation wording and, in some cases, further combined wording or separated a recommendation into more than one. The assessment contained in Chapter V of this document is for the recommendations as finally adopted by the GREAT II Team.

Figure 1

GREAT II

SAMPLE RECOMMENDATION DEVELOPMENT/ASSESSMENT PROCESS



In all cases the Team only considered the selected and no-action alternatives of the proposed action. In order to assure compliance with the requirements of NEPA, the implementing agency should evaluate the adequacy of the assessment made during the planning process. If determined appropriate, additional assessment of the alternatives to the proposed action should be made by the responsible agency prior to implementation to assure that all alternatives are adequately addressed as required by NEPA.

The preceeding flow chart visually displays the process of recommendation development and assessment from the work group level to final team approval. (See Figure 1)

IV. GUIDE TO DATA USED IN PREPARING THIS REPORT

To enhance the reader's understanding of the information contained in Chapter V, the following discussion is presented. The components and the recommendations therein are presented in the same order as they are contained in Chapter III of the Main Report. For each component a copy of the "Display of Accounts" as originally contained in the Draft Main Report is included again to give an overview of the proposed actions and EQ and NED accounts. Next, the approved recommendations, as they appear in Chapter III of the Main Report are displayed.

The Environmental Summary, displayed next, summarizes data from the various forms and tables described in Section III. B. of this chapter. The Environmental Summary is meant to pull the information from these various sources together in a manner that enables the reader to see, in brief form, the major impacts of each recommendation and whether or not these impacts are significant enough to call for further documentation.

For purposes of GREAT II Team review of this document in draft form, each "Environmental Summary" form was accompanied by the following data (in the order listed):

1. a "Matrix Analysis", as prepared by a consultant to determine the significance of the recommendation and need for further environmental documentation (discussed in Section III.B.5)
2. an "Impact Assessment Table" as prepared by the Plan Formulation Work Group. (Discussed in Section III.B.4)
3. a "Recommendation Impact Assessment" form for each of the work group recommendations used to develop the final recommendation. (Discussed in Section III B.2)

4. a "Preliminary Impact Assessment" form for each of the work group recommendations used to develop the final recommendation. (Discussed in Section III. B.2)

This data has not been reproduced for the final Environmental Summary, however ten copies of this information, fully assembled for all recommendations, has been placed on file with the member agencies of GREAT II. The locations where this data is stored and can be reviewed is listed in Exhibit A of this document.

The Environmental Summary form itself contains eleven items of information. Each item is discussed below:

1. Component - This item states which of the twelve components of the recommended plan is being addressed.
2. Tracing Numbers -
 - a) The final recommendation number as cited in Chapter III of the Main Report is stated here.
 - b) The PREP numbers are the numbers given the recommendations as they appear in the Draft Main Report and Draft Plan Formulation Technical Appendix. (May be a combination of PFWG recommendations)
 - c) The PFWG numbers are the numbers assigned to the recommendations when they were approved by the PFWG.
 - d) The Work Group numbers are the numbers given the recommendations by the originating work groups when they approved the recommendations. Note: Many final recommendations are a combination of more than one work group recommendation and there may be several numbers listed for this item from one or more originating work groups.
3. Purpose, Need and Objective of the Proposed Action - In accordance with 230.9 (c), a brief description of the need for the proposed action and its purpose and/or objective is discussed.
4. Short Title of Recommendation - This is stated to aid the reader in associating the recommendation with the impacts described. The full wording of the recommendation precedes each summary.
5. List of Alternatives Evaluated - A synthesized list of the alternatives identified and considered at the work group level. They are taken from the Preliminary Impact Assessment forms for all of the work group recommendations which were used to develop the final recommendation and may be examined in their entirety in the back-up material following the summary.

6. Brief Description of Affected Environment - Here is a brief description of the environment that would be affected by the proposed action. A detailed description of the GREAT II study area is contained in the GREAT II Draft Plan Formulation Appendix, Volume II, Exhibits.

7. Environmental Consequences of Alternatives Considered - The summary, in tabular form, presents a discussion of the impacts of the Proposed Action and No Action alternatives, as the final alternatives narrowed down for team consideration from the array of work group identified alternatives. The discussion of impacts will be brief and will address those aspects of the environment which are most directly affected by the alternative discussed. This assessment is not intended to substitute for an EIS and does not follow the EIS process.

8. References - A list of references used to obtain the information necessary for the discussion. The referenced information in most cases is available for review at the locations listed in Exhibit A of this document. The documents from which these data were extracted will also be cited.

9. Rationale for Selected Alternative - This statement is based upon information contained in the Preliminary Impact Assessment form for the work group recommendations which went into the development of the final recommendation.

10. Environmental Documents Required -

a) FONSI - Finding of No Significant Impact - This designation is checked where it is determined, based on this summary assessment and referenced material, that the selected alternative does not warrant further Environmental Assessment of an Environmental Impact Statement.

b) This Assessment Adequate - This is checked if the data contained in this document is adequate to be termed an Environmental Assessment.

c) Further Environmental Assessment Needed - This classification is checked when it is determined that adequate information does not exist to meet the requirements of NEPA, etc. Where an EIS is planned to be done by an agency, the EA step may be bypassed.

d) Environmental Impact Statement Needed - This classification is checked if, based on this Environmental Summary, an EIS is needed prior to final determination for implementation.

e) Responsible Party - When item (c) or (d) above were checked, this line indicates the responsible agency for completing the noted environmental document(s).

11. Additional Discussion - Any comments which may clarify impacts or further actions needed are discussed here and additional references may be cited.

All of the above-referenced information, pulled together, constitutes the GREAT II Environmental Report for all recommendations in the Main Report. Detailed environmental information for the Channel Maintenance Plan disposal sites is displayed and discussed in the Channel Maintenance Handbook, another supplement to the Main Report.

Additional information about specific work group recommendations, in addition to being displayed in the referenced back-up data, is contained in the individual work group appendixes. Figure 2 is a guide to work group appendixes cross-referenced to work group recommendation numbers.

Figure 2
DETAILED GUIDE TO TRACING NUMBERS
FOR WORK GROUPS

On the Environmental Summary, Item 2.D., Work Group Numbers, the work group recommendations that were combined to make up the back-up data for the final recommendation are listed. Back-up data was prepared in the form of "Preliminary Impact Assessment" and "Recommendation Impact Assessment" forms, these forms are available at locations listed in Exhibit A. For the reader desiring to further research the work group information about the subject, the following guide will aid the reader in determining which appendix the data can be found.

<u>Work Group Number</u>	<u>Appendix in Which Additional Data Can Be Found</u>
1 - 10	Water Quality Work Group Appendix
501 - 503	Sediment & Erosion Work Group Appendix
1001 - 1050	Recreation Work Group Appendix
1501 - 1505	Public Participation & Information Work Group Appendix
2001	Material & Equipment Needs Work Group Appendix
2501 - 2506	Floodplain Management Work Group Appendix
3001 - 3040	Fish & Wildlife Work Group Appendix
3501 - 3512	Side Channel Work Group Appendix
4001 - 4012	Dredging Requirements Work Group Appendix
4501 - 4506	Dredged Material Uses Work Group Appendix
5001 - 5008	Cultural Resources Work Group Appendix
5501 - 5526	Commercial Transportation Work Group Appendix

These Appendixes as well as the Main Report, Channel Maintenance Handbook and Plan Formulation Technical Appendix, are available upon request from the following:

Richard J. Fleischman
U.S. Army Engineer District
Rock Island Corps of Engineers
Clock Tower Building
Rock Island, IL 61201 Phone: (309)788-6361

A. COMMERCIAL TRANSPORTATION

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN

COMMERCIAL TRANSPORTATION COMPONENT (PAGE 1 OF 3)

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT		
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS	DOLLAR COSTS
A. Greater pleasure craft and commercial tow use of the UMR. B. Reduced congestion and improved safety to both recreational and commercial craft. B. Improved relations between UMR commercial and recreational users. B. Greater access to UMR. B. Cultural resources could be lost or destroyed during parking lot construction. B. Greater need for installation of sanitary facilities at access areas. C. -- D. -- E. Improved safety.	A. Increase in the disturbance of aquatic habitats by barge tows. A. Increase by turbidity potential due to increased boat traffic. A. Increased potential for shoreline erosion due to increased traffic. B. -- B. Access parking lots run-off may increase turbidity and may contain toxics such as lead. C. -- D. -- E. Aquatic habitat could be destroyed or altered.	A. -- B. Improved efficiency in locking through. B. Cost for parking lot land acquisition, development and maintenance could be high. C. -- D. -- E. --	A. Locking times to industry - PREP 1 B. Lock congestion alleviating measures -PREP 1 C. Planning study of locks improvements - PREP 1. D. Maintain auxiliary locks - PREP 1. E. Mooring cell - PREP 1.	A. \$28 million B. \$5.7 million C. -- D. -- E. \$18 million	A. \$1 thousand B. \$6.7 million C. \$100 thousand D. -- (on-going program) E. \$750 thousand

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
COMMERCIAL TRANSPORTATION COMPONENT (PAGE 2 OF 3)

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL PHYSICAL/CHEMICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS
F. Improved safety. G. -- H. Improved charts aid to pleasure boaters - improved safety. I. -- J. Improved safety to river users. K. -- L. --	F. Aquatic habitat could be destroyed or altered. G. -- H. -- I. Reduce potential for toxic chemical spills. J. Greater potential for dredging. K. -- L. --	F. Deferred replacement of locks. G. Cost of study. H. Cost for reorganization etc., of charts will be recovered through chart sales. I. Charts improve efficiency of commercial tows. J. Potential for increased dredging and associated costs. K. Reduction in time lost due to groundings or waiting. L. Fewer accidents. M. Less transferring of USCG personnel. N. Fewer accidents and associated bridge repairs. O. Potential for increased costs to railroads. P. --	F. Extension of guidewalls-PREP 1. G. Advance planning and design of lock system - PREP 1. H. Reorganize navigation charts - PREP 2. I. Definition of emergency dredging - PREP 3. J. Aids to navigation program - PREP 4. K. Enforce bridge regulations - PREP 5. L. Rebuild, replace or remove underutilized bridges - PREP 5.	F. \$17 million G. * H. * I. \$7.5 million J. \$2.3 million K. \$37.6 million L. --
				P. \$800 thousand G. * H. * I. * J. \$600 thousand K. * L. -- (on-going program)
				* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
COMMERCIAL TRANSPORTATION COMPONENT (PAGE 3 OF 3)

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS
M. Improved safety to all river users. N. -- O. --	M. Reduced potential for accidental spills. N. -- O. Some environmental issues may not receive proper considerations.	M. Reduced loss of cargo. M. Less repairs. N. Reduction in transportation costs - increased potential for cost savings to consumers for goods. O. Greater efficiency in processing permits initial program costs offset by long-term savings.	M. Pier detectability improved - PREP 5. N. Intermodal transportation policy - PREP 6. O. Streamline permitting process - PREP 7.	M. \$27 million N. * O. \$11.5 million
				M. \$765 thousand N. * O. \$7 million
				* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

RECOMMENDATION 1

The Barge Traffic Forecast Study conducted by the CTWG shows that significant increases in commercial vessel and recreational craft traffic are predicted for the UMR over the next 20 years. The RID/COE should develop a program to conduct advance planning of the UMR navigation system so that locks whose capacity will be exceeded can be identified and studied in accordance with existing legislation (i.e., NEPA, P & S, 404T, etc.). Advance planning is desirable to determine those measures necessary to improve lock capacity, in coordination with environmental concerns and to implement those measures so to avoid the development of extreme congestion, delays and hazardous conditions in the lock areas.

As GREAT II did not specifically study the impacts of barge traffic (and increased traffic) on the environment, the RID advance planning program should include (but not be limited to) the following:

- * A study to determine the effects of barge traffic (and increased traffic) on the environment. This study would then provide additional information for the advance planning program.
- * Coordination with and utilization of the results of the Master Plan Study to determine the carrying capacity of the UMR.
- * If the Master Plan does not complete this study the RID/COE should include this study as part of their advance planning program.

In order to improve the safety and locking efficiency of the existing locks for both commercial and recreational interests while this program is being developed, the RID/COE should develop a plan to institute the following specific non-structural and structural measures. Appropriate feasibility studies must be conducted prior to development of structural measures.

Non-structural measures would include, but not be limited to the following:

- * Improvement of efficiency by providing average lock processing times for each lock to the barge and towing industry. These processing times could be used as a standard against which to judge their crew performance and provide for improved crew training where necessary to reduce locking times.
- * Improvement of safety by installing 'locking' information signs at each lock. These signs would give recreational boaters an indication of the next 'locking time' for recreational craft. This information would also be broadcast on local radio stations and/or on a COE low power AM radio network. CB radios could also be installed at the lock and locking information broadcast to boaters via the radios.
- * Improvement of lock congestion by implementing sequenced locking procedures at Lock 22 as Lock 22 experiences heavy congestion.

Structural measures to be considered in this program would include:

- * Establishment of lock waiting areas at each lock and dam.
- * Establishment of boat launching facilities in each pool as identified in Recommendations 14, 16 and 17, to reduce the necessity for recreation lockage.
- * Construction of a mooring cell just north of Lock 22 for commercial barges.
- * Extension of the upper and lower guidewalls at Locks 20, 21 and 22.

The plans for structural measures must be developed in accordance with all existing environmental regulations and special consideration given to:

- * Evaluating the historical significance of the structures in relation to overall navigation.
- * Providing for mitigation of fish and wildlife impacts, measured in habitat units and calculated on secondary as well as primary impacts.
- * Providing for adequate mitigation of associated bank erosion.
- * Considering the needs of recreation (i.e., nearby boat ramps) when placing structures.

RECOMMENDATION 2

The NCD/COE should update navigation charts of the UMR and reorganize the pages in consecutive order. The new charts should include more data on bridge clearances, highline crossing clearances, navigation aids, etc.

Also, areas within the Upper Mississippi Wild Life and Fish Refuge and Mark Twain National Wildlife Refuge should be clearly identified on navigation charts. In addition, the NCD/COE should develop individual pool navigation charts for recreation boaters which emphasize boating hazards, access sites, service areas, safety tips, laws on "rules of the road" and emergency service information.

RECOMMENDATION 3

The USCG should improve its navigation aids program in the following manner:

- * Conduct an evaluation of industry requirements and the necessary level of aids to navigation resources to satisfy those requirements.
- * Obtain better portable sounding equipment to perform high speed, low cost channel surveys for the effective placement of buoys.
- * Institute better coordination and cooperation with the Corps of Engineers at the working level to place or replace navigation and/or hazardous channel condition aids.
- * Obtain better user input to determine the areas and types of hazards causing frequent commercial and recreational accidents.
- * Provide greater experience levels and stability of "aids-to-navigation" personnel through lengthened tours of duty and prerequisite assignments. This appears to be the most necessary policy change.

RECOMMENDATION 4

To reduce potential hazards to navigation the USCG should take the following actions:

REGARDING NAVIGATION HAZARDS

The USCG should, in cooperation with the COE, undertake an inventory of commercial and recreational navigation hazards in segments of the GREAT II study area with a history of frequent accidents. An action plan should be devised for eliminating hazards or protecting water traffic from them. Political, legal and administrative actions should be specified as well as technical requirements. While this plan is being developed, there are other types (see below) which can be implemented immediately that would reduce hazards to navigation.

Studies should also be made to determine the need for improved lighting methods for night barge operations, to insure maximum safety for recreational boaters.

REGARDING ENFORCEMENT OF OPERATING REGULATIONS

Compliance with bridge regulations is imperative to insure safe passage. Operating regulations must be vigorously enforced by the U.S. Coast Guard. To accomplish this, the Acts of 18 August 1864 and 3 March 1899, the Bridge Act of 1906, and the General Act of 1946, should be amended to provide for civil penalties in certain circumstances and for other purposes as recommended by the USCG.

Specifically, the USCG should modify the existing Bridge-to-Bridge Radio Telephone Regulations to require the use of radio telephone calls in blind situations.

REGARDING OBSTRUCTIVE BRIDGES

The USCG should conduct a study to forecast the magnitude and nature of rail and vehicle bridge traffic over Mississippi River operating-type bridges and quantify its effect on safety and operation of commercial vessel navigation. This study should include an evaluation of the utilization of existing bridges by land traffics. Recommendations regarding removal of under-utilized bridges could then be made.

Where new bridges are proposed, through the Truman Hobbs Act, or otherwise, the USCG should develop guidelines for assessing the impacts on navigation. The parameters to be considered should include span, location and orientation of the bridge with respect to channel contours and width and current patterns. Moveable bridge and bridges at bends should be avoided if at all possible. Present water traffic density and the range of tow dimensions should be considered. Expected developments in the number and sizes of tows and in the types of cargo carried should be taken into account. The Truman Hobbs Act should be

amended in order to better implement the above measures. These amendments would be:

- * To include replacement or repair of bridge protection systems.
- * To include benefits to land as well as marine interests. Because public money is being spent, the total public benefit should be considered in benefit/cost ratios.

REGARDING DETECTABILITY OF BRIDGES

Plans to replace or rebuild bridges are costly and time-consuming. While these plans are being developed the USCG can reduce navigation hazards by immediately improving: 1) the detectability of bridge piers through the use of radar transponders, conical reflectors or marking with reflective tape and, 2) the aids to navigation on approaches to bridges. An innovative system is needed which allows pilots to line up and maintain alignment with greater accuracy, especially where the bridge approach includes a bend.

RECOMMENDATION 5

Each transportation mode has unique advantages and disadvantages. The public interest will best be served by focusing public policy on the development of an efficient inter-modal transportation system.

The State and Federal DOT's should develop policies which focus on and promote inter-modal transportation systems. In developing specific implementable plans, the impacts of these plans on each transportation mode, as well as the total system should be analyzed. Specifically, these agencies should:

- * Coordinate federal, state, local, and private interests to maintain and improve rail service to key port areas.
- * Insure sufficient highway load and volume capacity to key port areas.
- * Research inland port development including analytical support, development of technical criteria and guidance, and monitoring and documenting port activities.
- * Develop better cooperation between states for common waters where area wide port facilities are needed.
- * Encourage development of local comprehensive plans.

RECOMMENDATION 6

Industry attempts to comply with permitting procedures in order to acquire a permit for fleeting facilities and/or river development are often time-consuming, costly and frustrating.

State and Federal agencies concerned with permitting of fleeting and river development should streamline, where applicable, their permitting procedures by instituting the following procedures (all criteria and procedures in recommendation may not be applicable to both State and Federal governments):

- * Establish time limits in which comments may be received or project reviews conducted.
- * Coordinate responses between various agencies or departments within a state.
- * Establish more precised evaluation guidelines for environmental analyses so that project assessments can be accomplished at a reasonable cost and in a timely fashion.
- * Require documentation supporting objections or concerns expressed by agencies or individuals.
- * Investigate issuance of general permits for minor and similar activities.

These procedures are not intended to bypass the environmental review process and/or to negate the final approval power of the land management agency.

RECOMMENDATION 7

To date, adequate studies to identify the primary, secondary, and cumulative impacts of barge fleeting have not been undertaken to aid in siting of fleeting areas.

The RID/COE, in order to meet anticipated fleeting requirements, should undertake studies in coordination with the state and federal resource agencies to assess the environmental and economic impacts of barge fleeting on the UMR. These studies should be used to identify fleeting sites and measures which will protect fish and wildlife resources. They should include tree damage, backwater mooring, required dredging, conflicts with other uses, turbidity, shoreline erosion effects on endangered species, introduction and resuspension of sediments and the total ecosystem.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Commercial Transportation

2. TRACING NUMBERS:

A) FINAL 1

B) PREP 1

C) PFNG 6180, 6081, 6182, 6175, 6176, 6177, 6189, 6218, 6226, 6227

D) WORK GROUP 5504, 5505, 5506, 5500, 5508, 5509, 5509, 5516, 1005, 1014, 1015

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The objective is to improve lock processing times for commercial tows, thereby reducing transportation costs, reduced fuel consumption, possible reduced disturbance to fish and wildlife habitat in vicinity of locks due to reduced waiting time, and minimize recreation/commercial conflict.

4. SHORT TITLE OF PROPOSED ACTION:

Improvement of locking efficiency & safety through planning, training, distribution of information, lock structural modifications and recreational craft holding areas

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Eliminate recreation craft lockage
4. Alternate recreation/commercial lockage
5. Give recreation boats priority
6. Construct separate locks for rec. traffic
7. Increase launching access in pools
8. Rebuild and enlarge locks
9. Reduce commercial traffic

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The navigation channel from Saverton, Missouri north to Guttenberg, Iowa. Move directly the open water habitat above and below each lock structure (locks 10-22). Where recreational craft holding areas are proposed the affected environment will be site specific where these areas are selected and will include both terrestrial and aquatic habitat (sites not yet selected).

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Increased commercial and recreational use of the river and its tributaries, resulting in increased erosion and sedimentation. Increased erosion and sedimentation could result in increased turbidity, which could affect the river's ability to support aquatic life. Increased erosion and sedimentation could also result in increased flooding, which could affect the river's ability to support aquatic life. Increased erosion and sedimentation could also result in increased erosion and sedimentation, which could affect the river's ability to support aquatic life.	EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10.
No Action	If a decision is made to improve the river and its tributaries, the results could be improved water quality, increased potential for erosion control, and increased potential for erosion control. Increased potential for erosion control could result in increased erosion and sedimentation, which could affect the river's ability to support aquatic life. Increased potential for erosion control could also result in increased erosion and sedimentation, which could affect the river's ability to support aquatic life.	EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10. EPA, 1973, "The River and Its Tributaries," p. 10.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The recommendation contains a series of individual recommendations from the recreation and Commercial Transportation work groups. Individual measures would not fully address the problem.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: BID/DOE - See Below
- D) ☒ E.I.S. NEEDED RESPONSIBLE AGENCY: Same

11. ADDITIONAL DISCUSSION/NOTES:

Structural Measures will require an E.I.S. Non-Structural measures will have no significant impact and should be implemented without delay. Planning elements of this recommendation will clarify additional environmental document needs.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Commercial Transportation

2. TRACING NUMBERS:

A) FINAL _____

B) PREP _____

C) PFNG _____

D) WORK GROUP _____

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Lack of current information about bridge clearances, utility crossings, navigation aids and navigation hazards increase the potential for accidents and therefore cargo spills, damage to life and property. Present navigation charts difficult and outdated.

4. SHORT TITLE OF PROPOSED ACTION:

RID-11: Develop and update navigational charts.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Update charts
4. All needed information
5. Revise charts incrementally

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The entire navigable waters area of the upper Mississippi River from Head of Navigation to mouth of the Ohio River. See PEAT II Draft Plan Formulation Appendix, Volume II for detailed description of the RID-11 portion of the river.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Adoption of this alternative impacts are related with this recommendation. Positive impacts as a result of more improved navigation channels will be reduced potential for accidents and thus reduced damage to life, property and habitat. The latter will be positively affected if errors which related to accidents were reduced.	See Appendix one table explained in introductory narrative parts III and IV.
NO ACTION	Result of No-action would be continued inadequacy of information for commercial and recreational boaters and thus continued potential for accidents and resultant damage to life, property, and habitat.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended action is combination of alternatives 3,4,5, and fully address the problem. Individual alternatives only partially address the problem.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: N/A
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Commercial Transportation

2. TRACING NUMBERS:

- A) FINAL 3
- B) PREP 4
- C) PFWG 6185
- D) WORK GROUP 5512

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The overall purpose is to reduce constraints to commercial navigation. The direct need identified is for improved responsiveness by the U.S. Coast Guard in maintaining navigation aids and administering the aids to navigation program.

4. SHORT TITLE OF PROPOSED ACTION:

U.S. Coast Guard should improve the aids to navigation program through better trained personnel, better equipment, and coordination.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended Action
- 2. No Action
- 3. Expand channel dimensions
- 4. Another government agency perform A/N services

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Commercial navigation channel from head of navigation to mouth of Ohio River, directly, and adjacent backwater areas indirectly. See PFWG Draft Technical Appendix, Volume II for detailed description of environment.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no adverse impacts associated with the recommendation. Potential positive impacts could be reduced. Environmental damage due to reduced water or accident and especially hazardous materials.	OTW Appendix and attached into explained in introductory narrative.
No ACTION	Not improving aids to navigation would continue prevent inadequate Coast Guard services and thus continued potential for spills and damage to property and life at the present level.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended Action was identified by the OTW as the most cost effective measure to address the stated need.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: U.S. Coast Guard - New Bedford
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Part of the action calls for a study of industry requirements. While the study does not require EA or EIS, the results may require such documentation if study recommends actions having significant impacts.

ENVIRONMENTAL SUMMARY

1. **COMPONENT:**
Commercial Transportation
2. **TRACING NUMBERS:**
 - A) FINAL 4
 - B) PREP 5
 - C) PFNG 6186, 6187, 6188, 6195, 6178
 - D) WORK GROUP 5513, 5514, 5515, 5517, 5518
3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**
The overall purpose is to minimize navigation constraints. The direct objectives include minimizing navigation hazards, including obstructions, restricting vessel movement and bridge detectability.
4. **SHORT TITLE OF PROPOSED ACTION:**
Inventory navigation hazards, determine bridge needs, enforce bridge operating regulations, improve bridge detectability.
5. **LIST OF ALTERNATIVES EVALUATED:**
 1. Recommended Action
 2. No Action
 3. Enforce criminal penalties
 4. Remove obstructive bridges
 5. Improve bridge alignment
 6. Construct guidewalls at bridges
 7. Restrict vessel traffic
 8. Remove obstructions
6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**
Commercial Navigation Channel in GREAT II Study area, in general, and aquatic habitat near existing bridges and identified hazardous areas.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	If navigation hazards are reduced due to this recommendation, the potential for accidents and thus, loss or damage to life, property, and habitat will be reduced. Most directly affected by reduction in hazards could be aquatic environment.	OTW-1 Appendix OTW-11 Appendix SIAT-11 by type report and data explained in inter- dustry narrative (parts III and IV).
NO ACTION	Increased potential for accidents, delays at bridges, and intermodal conflicts will result from no action in relationship to increased in commercial traffic of the river system.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

The recommended action includes a series of actions that best address the varied hazard problems identified by the OTW.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☐ THIS ASSESSMENT ADEQUATE
 C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: USCG - See below
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Enforcement of existing regulation, improvement of bridge pier detectability and institution of a process to assess impacts should not significantly affect the environment. Studies may identify alternative actions that may require further environmental documents.

ENVIRONMENTAL SUMMARY

1. **COMPONENT:**

Commercial Transportation

2. **TRACING NUMBERS:**

A) FINAL 5

B) PREP 6

C) PFNG 6104

D) WORK GROUP 5522

3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**

The unique advantages and disadvantages of each mode of transportation need to be taken into consideration. Current state and federal policies deal with each mode individually, resulting in an inefficient and fragmented approach to overall transportation policy.

4. **SHORT TITLE OF PROPOSED ACTION:**

Promote intermodal transportation policy and plans.

5. **LIST OF ALTERNATIVES EVALUATED:**

1. Recommended Action
2. Individual modal administration
3. No action

6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**

This action, if adopted on a national scale, will have nationwide implications in long-term development and planning for all transportation modes. For the GREAT II Study area the navigation channel and its various elements will most directly be affected.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Recommendation: The project is consistent with the National Environmental Policy Act (NEPA) requirements of the Department of the Interior (DOI) and the Bureau of Land Management (BLM) for the protection of the environment. Further study should be conducted to determine the feasibility of the project.	DOI Appendix The following information is provided for the project: Appendix A - Environmental Impact Statement (EIS) and Appendix B - Environmental Assessment (EA).
NO ACTION	No action is recommended for the project. The project is not consistent with the National Environmental Policy Act (NEPA) requirements of the Department of the Interior (DOI) and the Bureau of Land Management (BLM) for the protection of the environment.	None

9. RATIONALE FOR SELECTED ALTERNATIVE:

A. The project is consistent with the public interest and the intent of the National Environmental Policy Act (NEPA).

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: State and Federal Agencies
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: State and Federal Agencies

11. ADDITIONAL DISCUSSION/NOTES:

Specific actions proposed by agencies to implement the intent of this recommendation may require additional E.A. or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Commercial Transportation

2. TRACING NUMBERS:

A) FINAL 6

B) PREP 7

C) PFWG 6194

D) WORK GROUP 5522

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The purpose of this action is to streamline the permitting/review process for large fleeting and terminal areas as past experience has demonstrated that the current process is expensive and time consuming to the industry.

4. SHORT TITLE OF PROPOSED ACTION:

Streamline the permitting process for fleeting areas and river development projects.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended action
2. Do nothing
3. Eliminate permit procedures

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Actions in the river corridor, especially potential fleeting areas and shoreline advantageous for industrial and commercial development, are regulated by current permitting process and may be affected by this recommendation. See Draft PFWG Technical Appendix, Volume II for more detailed description of the river corridor environment.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	This is an administrative action which would have no environmental consequences, as the recommendation does not advocate bypassing the requirements of NEPA or the responsible agencies. Individual permit applications, even under a streamlined process, would be subject to environmental review.	The applicant has provided a detailed description of the proposed project. Attached are the required information and a preliminary narrative description of the project.
NO ACTION	No Action would result in continued delays and costs to industry in applying for clearing and shoreline development projects.	None at this time.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Efficient regulation and administration are national objectives. Elimination of permitting process is not consistent with state and federal laws.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: State and Federal Permitting Agencies -
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: See below

11. ADDITIONAL DISCUSSION/NOTES:

Responsible agencies should ensure that their permitting process remains an effective environmental safeguard, even when streamlined.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Commercial Transportation

2. TRACING NUMBERS:

A) FINAL 7

B) PREP 48

C) PFWG 6307

D) WORK GROUP 2034

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The purpose of this recommendation is to minimize the environmental impacts of establishing barge fleetings area on a site specific and systemwide basis. Studies are needed to identify impacts of barge fleetings on the UMR as to date, this knowledge is inadequate.

4. SHORT TITLE OF PROPOSED ACTION:

RIDCEE undertake studies to identify site specific and systemwide impacts of barge fleetings and identify acceptable sites for barge fleetings.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. Eliminate mooring from
3. Identify needed fleetings sites and measures to protect resources
4. Study impacts of fleetings
5. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The main channel and backwaters of the Upper Mississippi River from Faverton, Missouri north to Guttenberg, Iowa. For a detailed description see the Draft PFWG Technical Appendix, Volume II.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	The study item of all normal, minor effects. Consequently, to enter the project and use of specific shooting areas will require additional environmental documentation and this is called for as part of the study.	FMMW Appendix, and attached data as described in introductory narrative (parts III and IV).
NO ACTION	Present no planning shooting practices will continue, and impact will continue to be evaluated on a site by site basis.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

... evaluation of alternative 2, 3, 4 and ... in a comprehensive manner.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: FDIC/DOE - See below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Actions recommended as a result of the study may require additional E.A. or E.I.S. documentation.

B. CHANNEL MAINTENANCE

NOTE: There was no "Display of Accounts" developed for this component during the planning process.

RECOMMENDATION 8

RID/COE and agencies participating on the OSIT should take action immediately to implement the plans and programs contained in the GREAT II Channel Maintenance Handbook.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Channel Maintenance

2. TRACING NUMBERS:

- A) FINAL 8
- B) PREP 12 - combination of PREPS 9,10,11,12,13,14,3)
- C) PPWG 6001 - 6153 and 6245 - 6261
- D) WORK GROUP See Item 11

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

A primary goal of the GREAT II Team was the development of an environmentally and economically sound channel maintenance plan. The Channel Maintenance Handbook, a supplement to the Main Report, is adopted by reference in this recommendation.

4. SHORT TITLE OF PROPOSED ACTION:

Adopt the GREAT II Channel Maintenance Plan and Channel Maintenance Handbook.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended Action
- 2. No Action
- 3. Alternatives within the Plan (See item 11)

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The main channel, all potential dredged material disposal sites, the backwaters and associated resources will all be affected. See maps and tables in Channel Maintenance Handbook and the Project Area Description in the PPWG Draft Technical Appendix, Volume II for location of dredge cuts, disposal sites and related environment. Also see attached special Environmental Summary for dredge material disposal plan.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Continued operation and maintenance of the nine foot navigation project will have significant environmental impacts. These are discussed, in part, in the RMD/COE 1974 Environmental Impact Statement for operation and maintenance of the 9 foot navigation project. Preliminary site-specific environmental data for GREAT II recommended (Primary) and alternative sites are contained in the Channel Maintenance Handbook. There are insufficient data to make a complete impact analysis of the plan, and alternatives (see item 10).	DEW Appendix FWS Appendix MNMW Appendix NMW Appendix EWS Appendix 1974 EIS, EIS-11 GREAT II Channel Maintenance Handbook, and data as described in Introductory narrative (parts III and IV).
NO ACTION	Channel Maintenance activities would be conducted in accordance with permitting procedures and existing laws as interpreted solely by the RMD/COE.	

9. RATIONALE FOR SELECTED ALTERNATIVE:

The Channel Maintenance Handbook is a product of the GREAT II Team and represents an end product of research and recommendations by all agencies involved.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☒ E.I.S. NEEDED RESPONSIBLE AGENCY: RMD/COE - See below

11. ADDITIONAL DISCUSSION/NOTES:

Item 2.D. Work Groups numbers: 4009, 4002, 4003, 3507, 3007, 3008, 3005, 4012, 5510, 5511, 5502, 4007, 3501, 3001, 2, 10, 4505, 5002, 1002, 4001, 3010, 1031, 3030, 5526, 3036, 3012, 3502, 4001, 4005, 4501, 4502, 4503, 4504, 5503

Existing EIS for operation and maintenance of the 9 foot navigation project would be amended where necessary prior to implementation of those portions of the CMP which require such action under requirements of NEPA.

ENVIRONMENTAL SUMMARY

1. **COMPONENT:** Channel Maintenance

2. **TRACING NUMBERS:**

- A) FINAL _____
- B) PREP _____
- C) PFWG _____
- D) WORK GROUP _____

NOTE: This is a special Environmental Summary for the Dredge Material Disposal Plan portion of the Channel Maintenance Plan.

3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**

One of the paramount reasons for the organization of GREAT was opposition of various agencies and states to disposal sites and dredging methods used by the COE. Critics showed that dredged material disposal adversely affected fish and wildlife, water quality, and flood heights. Therefore, a primary objective of GREAT II was to develop a plan to ensure that channel maintenance activities are carried out in an environmentally acceptable manner. Six subobjectives were also developed.

4. **SHORT TITLE OF PROPOSED ACTION:**

Dredge Material Disposal Plan

5. **LIST OF ALTERNATIVES EVALUATED:** Over 750 disposal sites were considered by either the work groups, PFWG, DDSSTF, or the GREAT II Team. These sites were used to consider six general planning alternatives. These are:

- 1. Historical - site are or are similar to sites used for disposal in the past.
- 2. Floodplain - sites located in floodplain
- 3. RFFP - all sites other than beach sites are removed from the floodplain
- 4. PFWG Long Term - long term plan selected by PFWG
- 5. Primary Sites - disposal sites selected by GREAT II Team
- 6. Primary Sites with Stockpiling - sites selected by GREAT II Team with reduced acreage due to stockpiling

6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:** The affected environment includes sites in the UMP floodplain and a few sites above the historical floodplain. For assessment purposes, the affected environment has been grouped into the following habitat types:

- 1. Wetlands-all types except forested wetlands
- 2. Lowland hardwoods-all forested wetland
- 3. Agricultural field-all areas being actively farmed including plowed fields
- 4. Levee-levees and areas adjacent to levees usually consisting of grasses, forbs, vines, shrubs, and a few trees.
- 5. Old field - includes fields not in cultivation, pastures, and all other areas that are a mix of grasses, forbs, shrubs, and trees that do not fit into one of the other habitat types.
- 6. Aquatic-all open water habitats except wetlands
- 7. Mowed grass-grass mowed regularly (i.e. more than once a year)
- 8. Breached levee - levee in U.S. FWS Spring Lake Wildlife Management Area. Evaluates restoration of levee only and not secondary impacts of improved wildlife management.
- 9. Dredged material - includes all non-vegetated sandy areas
- 10. Developed - includes all areas which are highly disturbed by man's activities.

The habitat type of each disposal site alternative was determined by use of US FWS 1975 aerial photography and photos taken by the DMUWG for the DDSSTF.

8. REFERENCES:

FWMWG Appendix
PFWG Appendix
CMH

[illegible]

Material	Substructure		Base		RCV		RWA Long-Term		Primary Sites		Victim Sites	
	Acres	H. Acres/Unit	Acres	H. Acres/Unit	Acres	H. Acres/Unit	Acres	H. Acres/Unit	Acres	H. Acres/Unit	Acres	H. Acres/Unit
Asphalt	8	-294	0	0	0	0	5	-154	0	0	0	0
Concrete	241	-2072	297	-2643	195	-1734	298	-2567	415	-3617	168	-1488
Gravel/Flint	0	0	166	-2127	164	-2893	129	-1580	161	-1908	16	-197
Gravel	NL ¹	-	NL	-	NL	-	NL	-	82	-4043	48	-2400
Gravel	20	-264	15	-121	12	-95	11	-87	71	-605	33	-260
Gravel	(1431)	-	(160)	-	(186)	-	(266)	-	-	-	-	-
Gravel	NL	-	NL	-	NL	-	NL	-	10	-23	2	-5
Gravel	NL	-	NL	-	NL	-	NL	-	18	-78	18	-73
Gravel	267	-374	0	-51	0	0	118	-165	157	-246	101	-147
Gravel	18	-68	225	-596	173	-456	151	-393	200	-507	58	-142
Gravel	500	-291	700	-591	161	-6172	697	-5955	1620	-1000	609	-360

[illegible]

9. RATIONALE FOR SELECTED ALTERNATIVE:

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: COE-RID
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

The EA will need to evaluate the impacts of disposal on aquatic habitats, and cultural resources in addition to the terrestrial impact analysis performed by the FWMG. Also, site plans need to be developed for each of the primary sites including the appropriate mitigation measures to be employed at each site.

Existing EIS for operation and maintenance of the 9-foot navigation project would be amended where necessary prior to implementation of those portions of the CMP which require such action under requirements of NEPA.

C. COMMERCIAL/INDUSTRIAL/UTILITY DEVELOPMENT

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
COMMERCIAL/INDUSTRIAL/UTILITY COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS
A. Improved potential for coordinated, efficient, community development.	A. --	A. Identification of implementable measures to promote industrial development.	A. Studies of economic factors affecting development in the UMR corridor - PREP 16	A. *
				A. Not available
				* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

RECOMMENDATION 9

The GREAT II studies addressed the commercial/industrial/utility component only briefly through a contract to "identify the problems and needs of commercial river use". A report was prepared by the contractor and recommendations were made. A number of the recommendations in the report have already been made by other work groups (i.e., CTWG and RWG). However, the overall need, a lack of complete, accurate data (or consolidation of existing data) regarding economic use of the UMR corridor, has not been addressed.

There is a need to document economic development problems in compiling sources for the report, the contractor observed that little information was available on certain subjects. In order to do an accurate analysis of the commercial/industrial/utility needs of the UMR corridor, state and federal agencies should, in cooperation with each other, initiate a program which would include the following studies:

- * Development studies that show the interrelated economic impacts (benefits and costs) that all industries located in the study area have on the general economy, especially as they relate to all modes of transportation.
- * Detailed studies that assess prime waterway related industries to determine those that are attractive to selected communities.
- * Detailed analysis of the development needs and requirements of these industries.
- * A study to determine the relationship of all land uses in the UMR to industrial development, and the problems and the needs that result from this relationship.
- * A study to determine the potential for hydropower generation within the GREAT II area.

—

1. COMPONENT:

2. TRACING NUMBERS:
A) FINAL _____

A) FINAL _____

B) PREP _____

C) PFWG

D) WORK GROUP

3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**

There is a need to take the initiative for the first time and to start a consultation with other countries, even though the results are not of this level, except for the fact that the UNB.

Target 1 is made of thin aluminium foil (100 μ m) and needs a resistor with silver contacts. Target 2 is the detailed analysis of this target, meant to be used as a standard for the UHV.

4. **SHORT TITLE OF PROPOSED ACTION:**
Study existing development problems, needs, impacts and trends related to FWS land use.

Study economic development problems, needs, impacts and overall relationship to FWS land use.

5. LIST OF ALTERNATIVES EVALUATED

1. Recommended Action

2. No Action

1. Recommended Action
2. No Action

6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**

The Upper Mississippi River Corridor from Saverton, Missouri north to Lattensburg, Iowa. See the EFEG Technical Appendix, Volume II for detailed description.

The Upper Mississippi River Corridor from Saverton, Missouri north to Linton, Iowa. See the FFWG Technical Appendix, Volume II for detailed description.

8. REFERENCES:

9. RATIONALE FOR SELECTED ALTERNATIVE:

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

11. ADDITIONAL DISCUSSION/NOTES:

145

D. FLOODPLAIN MANAGEMENT

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
FLOODPLAIN DEVELOPMENT COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT		PROPOSED ACTION	NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL		DOLLAR BENEFITS	DOLLAR COSTS
A. -- B. -- C. Damage minimized to residential and commercial properties if new development restricted to areas which are higher than projected flood heights. D. Some people could be required to move out of the flood plain. E. --	A. -- B. Preservation of 306 thousand acres of cropland from loss due to encroachment. C. -- D. --	A. Interstate compact - PREP 63 B. Detailed flood way maps - PREP 18. C. Support math modeling study by UMRBC - PREP 19. D. Sediment accretion versus flood stages study - PREP 20.	A. -- B. \$308 million. C. -- D. --	A. \$11.5 million B. \$8 million C. \$42 thousand D. \$28 thousand
			* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.	

RECOMMENDATION 10

The states of Wisconsin, Iowa, Illinois and Missouri should coordinate to develop consistent management and use of the Mississippi River floodplain, compatible with the recommendations of GREAT.

RECOMMENDATION 11

The RID/COE should seek adequate funding to provide detailed flood boundary/floodway maps of the UMR corridor, based on detailed hydraulic studies, to be used for flood insurance and floodplain management purposes. The mapping effort should be closely coordinated with the math modeling of the flood flows and flood heights of the UMR floodplain for management purposes. (UMRBC Technical Floodplain Management Task Force Report dated August 1978.)

RECOMMENDATION 12

The RID/COE should seek funding to examine in coordination with the USDA, USFWS and state management agencies in further detail the products of GREAT I and GREAT II Fish and Wildlife, Side Channel, and Sediment and Erosion Work Groups along with other pertinent information, to determine if: sediment accretion in backwaters and subsequent plant succession and floodplain disposal of dredged material is affecting flooding.

This effort should identify all assumptions relative to data manipulation. Upon completion of this review, the COE should publish the results of this review including technical data which either support or refute the contention that backwater sediment accretion and/or floodplain disposal of dredged material is raising flood levels.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Level 1: Interstate

2. TRACING NUMBERS:

A) FINAL _____

B) PREP _____

C) PPWG _____

D) WORK GROUP _____

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Improve the existing Level 1, Level 2, State and Interstate
Transportation System. Improve the existing Level 1
State and Interstate System. Improve the existing
Level 2 System.

4. SHORT TITLE OF PROPOSED ACTION:

Level 1: Interstate

5. LIST OF ALTERNATIVES EVALUATED:

1. Level 1: Interstate
2. Level 2: State
3. Level 3: Interstate
4. Level 4: Interstate
5. Level 5: Interstate
6. Level 6: Interstate

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Improvement of the existing Level 1, Level 2, State and Interstate
Transportation System. Improve the existing Level 1
State and Interstate System. Improve the existing
Level 2 System.

8. REFERENCES:

RECOMMENDED	Improve the quality of management and the management impact of long-term habitat protection. This can be achieved by: • Improving water quality, maintaining riparian habitat, and riparian wildlife habitat preservation.	EMMA Appendix A, B, C, and D. Initial and final reports on the project. Initial and final reports on the project. Initial and final reports on the project.
NO ACTION	Improve the quality of management and the management impact of long-term habitat protection. This can be achieved by: • Improving water quality, maintaining riparian habitat, and riparian wildlife habitat preservation.	EMMA Appendix A, B, C, and D. Initial and final reports on the project. Initial and final reports on the project. Initial and final reports on the project.

the fact that the *in vitro* and *in vivo* results are in good agreement, it is likely that the *in vitro* results are representative of the *in vivo* situation. The *in vitro* results are also in good agreement with the *in vivo* results of other studies (e.g. 100–150 mg/kg/day for 14 days in rats, 100–200 mg/kg/day for 14 days in mice, 100–200 mg/kg/day for 14 days in dogs, 100–200 mg/kg/day for 14 days in monkeys, 100–200 mg/kg/day for 14 days in humans).

A) ☐ FONSI

B) ☐ THIS ASSESSMENT ADEQUATE

C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____

D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

The overall presentation is more direct than the recommendation approach of the WRC (RCP and ILIRW) level and subsequent impacts are less repetitive. It being quantified.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Floodplain Management

2. TRACING NUMBERS:

A) FINAL 11
B) PREP 18,19 combined
C) PFWG 6145, 6203
D) WORK GROUP 2502, 2507

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is a lack of detailed floodplain flowway information, thus hindering management capabilities. The recommended objective is to resolve that problem.

4. SHORT TITLE OF PROPOSED ACTION:

PFWD Peak Floodway Funding to provide detailed flowway information. Flowway maps - based upon detailed hydraulic studies and coordinated with math models.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended action
2. No Action
3. WRD request funds
4. Each CDF district request funds
5. UMNRD request funds
6. FEMA Peak Funds
7. States provide maps

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Management action resulting from more detailed information would affect the UMR system from Saverton, Missouri north to Guttenberg, Iowa. See PFWG Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no direct relationships with families or individuals. Any future change in management or structure will require additional environmental documentation. Long Term beneficial impacts would include reductions in annual flood damages due to improved management.	HMMA Appendix HMMA Technical E. Flood Management and Task Force Report, 1978 and data as described in Inter- agency Narrative (parts III and IV)
NO ACTION	Beneficial impacts (i.e. better management and reduced flood damages) would not be accrued.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

HEPAT II Team determined that RID/ COE would be most likely agency to obtain needed funds and apply them to problems in the study area.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: See below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

If result of mapping and model use results in programs requiring relocation; levee projects etc. additional E.A. and E.I.S. may be required.

ENVIRONMENTAL SUMMARY

1. **COMPONENT:**
Floodplain Management
2. **TRACING NUMBERS:**
A) FINAL 10
B) PREP 20
C) PFWG 6000
D) WORK GROUP 2505
3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**
Accretion of sediment in backwater and disposal of dredged material is believed to affect flooding in the UMS system. Resolution of this matter is needed to provide definitive direction to agencies in an overall approach to minimize flood damage.
4. **SHORT TITLE OF PROPOSED ACTION:**
WID/CMR work funding to document problem of sediment accretion and locate material disposal.
5. **LIST OF ALTERNATIVES EVALUATED:**
 1. Recommended Action
 2. No Action
 3. CCR perform localized study
6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**
The floodplain of the UMS from Saverton, Missouri north to Guttenberg, Iowa could in the long term, be affected. See PFWG Draft Technical Appendix, Volume II for detailed description.

ENVIRONMENTAL ALTERNATIVES CONSIDERED:

8. REFERENCES

REFERENCE	1. Environmental Impact Statement for the proposed project, prepared by the U.S. Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi, dated 1971. 2. Environmental Impact Statement for the proposed project, prepared by the U.S. Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi, dated 1971. 3. Environmental Impact Statement for the proposed project, prepared by the U.S. Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi, dated 1971.	4. Appendix A, Environmental Impact Statement for the proposed project, prepared by the U.S. Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi, dated 1971.
NO ACTION	1. Lack of data on the proposed project. 2. Lack of data on the proposed project. 3. Lack of data on the proposed project.	4. Appendix A, Environmental Impact Statement for the proposed project, prepared by the U.S. Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi, dated 1971.

9. RATIONALE FOR SELECTED ALTERNATIVE:

A limited study, or no action would not resolve the issues.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

I
I
E. RECREATION

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
RECREATION COMPONENT (PAGE 1 OF 2)

ENVIRONMENTAL QUALITY ACCOUNT			PROPOSED ACTION	NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC		DOLLAR BENEFITS	DOLLAR COSTS
A. Development of a plan to increase user satisfaction and reduce conflicts. B. Better understanding of the numbers and types of users. C. Increased pleasure to users through wise management. D. Conversion of 3200 acres of agricultural land to recreation use. E. Improved access and meeting places. F. Increased littering. G. Improved aesthetic appearance of recreation use areas.	A. -- B. -- C. Consideration of environment in recreation development. D. Protection of 2300 acres of wildlife habitat. E. Increased use may increase potential for trampling in vegetation. F. Access construction may damage vegetation and decimate some wildlife. G. Improved water quality - less debris.	A. Potential for increased recreational opportunities and beneficial use of dredged material. B. Increased potential for planners to meet the needs of UMR users. C. Increased recreational opportunities. D. Increased management efficiency. E. Cost for development of planning guidelines. F. Reduced levee maintenance costs. G. Increased use opportunities. H. Reduced costs of trash pick-up.	A. Multiple purpose islands study - PREP 21. B. Surveys and inventories of recreation areas and uses - PREP 22. C. Pool needs and establish objectives - PREP 23. D. Recreation access improvements PREP 24. E. Access land acquisition and development - PREP 24. F. Litter program PREP 25.	A. * B. * C. * D. \$644 thousand E. * F. *	A. \$400 thousand B. \$540 thousand C. \$500 thousand D. \$2.5 million E. \$15 million F. \$14 million
				* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.	

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
RECREATION COMPONENT (PAGE 2 OF 2)

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS
G. Reduction in injuries. H. -- I. Landscape preservation. J. Increased leisure opportunity. K. -- L. Reduced noise levels.	G. Reduction in erosion - preservation of aquatic and terrestrial habitat. H. Benefits to fish and wildlife through the restoration, enhancement or creation of habitat. I. Preservation of wildlife habitat. J. -- K. -- L. A decrease in disturbance to wildlife.	G. Increased facility life. H. Increased recreation use. I. Increased recreation. J. More efficient recreation management increased use and services. K. More efficient management of UMR. L. Reduced duplication of agency efforts. M. Increased enforcement.	G. Erosion protection measures PREP 26. H. Termination of leases - PREP 27. I. Improve UMR trail system - PREP 28. J. Funding to recreation management agencies PREP 29. K. Include UMR in SCORP plans - PREP 62. L. Noise level limits and enforcement - PREP 30.	DOLLAR COSTS G. \$300 thousand H. -- (on-going program) I. \$7 million J. \$35 million K. \$92 thousand L. \$110 thousand
			* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.	

RECOMMENDATION 13

Late in the GREAT II study process, the COE policy of cancelling recreation lease sites, as per Executive Order 11988, Floodplain Management, became a major item of public concern. GREAT II did not address this problem directly, but felt that the matter required further evaluation. It is therefore recommended that the RID/COE conduct a complete analysis of the policy determination to use such lands for recreation, fish and wildlife or floodplain management purposes. Plans designating the proposed uses of these areas should be developed. The needs analysis and planning process should include citizen representation from both lease holders and non-lease holders in the project area.

This study should be completed as soon as possible and recommendations made relative to the enforcement or modification of Executive Order 11988.

RECOMMENDATION 14

In order to properly manage the UMR for recreation, information on the amounts of various types of use, types of facilities available, the use of the various facilities and the distribution of the use is needed. State management agencies can use this information to predict not only the future use of recreation areas but they can better predict the specific types, number and locations of needed facilities.

GREAT II compiled information primarily on dredge material beach use. In order to compile a complete set of data for all recreational uses of the UMR, the management agencies should:

- * Develop a statistically reliable recreation survey for all recreation uses (includes hiking, photography, bird-watching, hunting, fishing and trapping) of the total river corridor and the total use incurred.
- * Implement a recreation use monitoring system which includes an update of the existing facility inventory.
- * Utilize the existing supply inventory of facilities in conjunction with an inventory of the undeveloped (for recreation) areas to determine the potential locations for facility development.

The collection of this information should be coordinated with other recreational planning efforts, including the UMRBC, UMRCC, USFWS, and COE to ensure compatibility of recreation activities.

RECOMMENDATION 15

The Mississippi River has not in the past, been considered in the development of State Comprehensive Outdoor Recreation Plans (SCORP). In order to facilitate satisfactory completion of Recommendation 14, state management agencies should:

- * Include the UMR as a SCORP subject.
- * Coordinate the activities of the SCORP planners.

RECOMMENDATION 16

Once the information outlined has been collected, the state management agencies (in coordination with the UMRBC, the COE, the USFWS and other appropriate agencies) can begin to address the UMR in more detail. They should begin by evaluating the needs and potentials for all types of recreational use and development for each pool in the GREAT II reach. When these needs have been fully identified, recreation management objectives should be developed for each pool.

RECOMMENDATION 17

A more specific problem along the river has been the lack of adequate access. However, recreational access should not be expanded on recreational demands alone but should consider the other multiple use values of the UMR. To this end, an evaluation of alternatives should occur early in the planning process. Consideration should be given to expanding auto/pedestrian access to recreational areas on the UMR.

Once access needs have been identified, the state agencies in coordination with the UMRBC, RID/COE, the USFWS, and other agencies as appropriate, can develop and implement plans for access developments, including purchase of access rights and design of access areas. Established access points should be maintained as needed to minimize new development. Adequate surveys for cultural resources and provisions for mitigation measures for damage to cultural resources should be included in these plans. Properly designed access areas will also decrease the potential for recreational damage to levees and should prevent increased erosion off the access sites.

In order to minimize new development and still provide adequate access, efforts should be made to identify and upgrade those already established access points which, for safe and reliable use, require some physical maintenance or modification (road upkeep, dredging, redesign, etc.).

One area that has been identified is the recreational boat access to Pool 11 located off the dike road at L/D 11. The RID/COE should extend the rock riprap spit to protect the access ramp from wave action.

Pool 19 should be considered a high priority for study of recreational access needs and alternatives.

RECOMMENDATION 18

In the development of management plans for each pool, state and federal management agencies should identify procedures and develop plans designed to promote a "take it home" campaign and thereby decrease litter problems. These plans could include:

- * Increased enforcement of litter laws on peak use occasions.
- * Organization of litter pickups through local community groups.
- * Development of container deposit laws.

RECOMMENDATION 19

The management plans in Recommendation 16 should also give the state management agencies an indication of the need for trail development along the UMR. Efforts to expand the existing trail system should be coordinated with the Great River Road Program. The trail system should include canoe trails in backwaters and multi-purpose trails on land. In addition, those abandoned railroad right-of-ways along the river which meet the agencies' criteria for trail development should be maintained for recreational trail use. However, before conversion, railroad rights-of-way should be fully evaluated for future transportation need. Recreation developments should be compatible with natural and cultural resource objectives.

RECOMMENDATION 20

Noise levels of boating equipment used on the UMR vary greatly depending on an individual's intended form of recreation and their personal preferences in types of equipment used. High noise levels often reduce the quality of the recreation experience for those individuals seeking a quiet, relaxing atmosphere. In order to reduce conflicts between various users of the UMR, state regulatory agencies should require manufacturers to reduce noise levels on new engines. In addition, the states agencies should encourage legislation on equipment operation and provide for the enforcement of this legislation.

RECOMMENDATION 21

In order to insure appropriate funding for the programs and plans outlined here, all state and federal management agencies should seek funding from any combination or all of the following sources:

- * The federal government should provide government assisted loans, Small Business Administration loans and technical assistance to help private businesses to provide recreation opportunities that are available to general public use.
- * The Bicentennial Land Heritage Programs should continue to upgrade and expand recreation facilities and continue the program funding.
- * Increased Land and Water Conservation Fund (LAWCON) funding and restructuring of cost share ratios are needed.
- * State agencies should seek increased State funding for their facilities through general funds, Marine Fuel Tax funds, registration fees and special use taxes.
- * The Federal Department of Transportation (DOT) should continue funding of the Great River Road program.
- * Increase in Corps of Engineers Recreation Resource Funding.
- * Local communities should increase locally generated monies for operation and maintenance of recreational facilities.

RECOMMENDATION 22

State and federal agencies responsible for issuing boathouse permits should carefully control and enforce issuance to prevent extended residency, sanitary discharge, aesthetic impacts and conflicts relative to other uses of the river resource.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Recreation

2. TRACING NUMBERS:

A) FINAL 100

B) PREP 100

C) PFWG 100

D) WORK GROUP 100

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

During the GREAT II study, a serious public concern was documented regarding the RID/COE Interpretation of F.R. 11950 regarding public lands for private development. This recommendation will address public concern and resolve potential conflicts.

4. SHORT TITLE OF PROPOSED ACTION:

RID/COE conduct complete analysis of policy interpretation, including development of plans for the affected areas.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Revert property to open space
4. Terminate based on need
5. Maintain leases
6. Purchase and develop additional land for public use.

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Affected environment would include all RID/COE lands currently under lease to private interests. These lands are identified and described in files of RID/COE Real Estate office, Rock Island Illinois. Lands are predominantly developed shoreline in the GREAT II Study area.

8. REFERENCES:

RECOMMENDED	1. The following information was obtained from the review of the file of the subject, and is being furnished to you for your information and guidance: 2. The subject was born on [redacted] at [redacted] and is currently residing at [redacted]. 3. The subject is a [redacted] and is currently employed as a [redacted] at [redacted]. 4. The subject is a [redacted] and is currently residing at [redacted]. 5. The subject is a [redacted] and is currently residing at [redacted].	6. The subject is a [redacted] and is currently residing at [redacted]. 7. The subject is a [redacted] and is currently residing at [redacted]. 8. The subject is a [redacted] and is currently residing at [redacted]. 9. The subject is a [redacted] and is currently residing at [redacted]. 10. The subject is a [redacted] and is currently residing at [redacted].
NO ACTION	1. The following information was obtained from the review of the file of the subject, and is being furnished to you for your information and guidance: 2. The subject was born on [redacted] at [redacted] and is currently residing at [redacted]. 3. The subject is a [redacted] and is currently employed as a [redacted] at [redacted]. 4. The subject is a [redacted] and is currently residing at [redacted]. 5. The subject is a [redacted] and is currently residing at [redacted].	6. The subject is a [redacted] and is currently residing at [redacted]. 7. The subject is a [redacted] and is currently residing at [redacted]. 8. The subject is a [redacted] and is currently residing at [redacted]. 9. The subject is a [redacted] and is currently residing at [redacted]. 10. The subject is a [redacted] and is currently residing at [redacted].

9. RATIONALE FOR SELECTED ALTERNATIVE:

The GREAT II Team developed the recommended action on the basis of EPC's recommendation combined with public comments. Other alternatives eliminated as not addressing the problem.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Recreation

2. TRACING NUMBERS:

A) FINAL 14

B) PREP 22

C) PFWG 6266, 6282

D) WORK GROUP 1021, 1032

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is a need for additional data by resource managers to enable them to better plan and manage the recreational resources of the UMR. This recommendation calls for development of needed data.

4. SHORT TITLE OF PROPOSED ACTION:

1) Utilize existing inventories, 2) inventory undeveloped areas, and 3) develop and use statistically reliable surveys and monitoring programs.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Utilize existing data
4. Inventory undeveloped areas
5. Carry out Pool by Pool survey
6. Develop statistically reliable survey
7. Survey sample pool
8. Survey each recreation use
9. Coordinate among agencies
10. Use performance monitoring system

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The entire UMR corridor from Saverton, Missouri north to Guttenberg, Iowa. See PFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no environmental consequences associated with a study and establishment of a monitoring program.	RWG Appendix and data as described in introductory narrative (parts III and IV).
NO ACTION	No Action would result in continued lack of data and inadequate recreation planning and management capabilities.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

Alternatives 3, 4, 6, 9 and 10 were combined into the recommended action to provide the most comprehensive approach to addressing long-range recreation management needs.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Recreation

2. TRACING NUMBERS:

A) FINAL 15
B) PREP 62
C) PFWG 6283
D) WORK GROUP 1033

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

State Comprehensive Outdoor Recreation Plan (SCORP) do not adequately address the UMR. This has resulted in inadequate consideration of the UMR in state recreation plans. This recommendation would resolve this problem.

4. SHORT TITLE OF PROPOSED ACTION:

States should include the UMR in SCORP activities and planners among states along the UMR should coordinate SCORP plans.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Coordinate SCORP Activities
4. Include UMR in SCORP's

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The UMR and adjacent land from Saverton, Missouri north to Guttenberg, Iowa. See PFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Indirect environmental impacts associated with the mine (e.g., long-term beneficial impacts may be due to beneficial impacts due to improved recreation planning and avoidance of duplication of recreation developments (see item 1)).	SWP Appendix C, B11c and data as described in Introduction, Narrative Part III and IV).
No ACTION	Continued lack of coordination may result in unnecessary development or under-development and thus coverage of areas.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended action is combination of alternatives 3 and 4 and addresses the problem directly.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Implementation of recommendations contained in SCORP's may require additional E.A. and/or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

2. TRACING NUMBERS:

A) FINAL _____

B) PREP _____

C) PFWG _____

D) WORK GROUP _____

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

4. SHORT TITLE OF PROPOSED ACTION:

5. LIST OF ALTERNATIVES EVALUATED:

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Establishment of new objective and study will have direct environmental consequences. Long Term beneficial impact may result from improved recreation management objective and better data. (See item 11).	BAI Appendix III Recreation Master Plan WMBD Master Plan Study and data as described in intro- ductory narrative (parts III and IV).
NO ACTION	Continued piecemeal management of recreation resources will continue.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The recommended Action is combination of alternatives 3, 5, and 6. the action fulfills the objectives in the most comprehensive manner.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Implementation of specific recreation objectives may require additional E.A. and/or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. **COMPONENT:**
Recreation
2. **TRACING NUMBERS:**
A) FINAL 17
B) PREP 24 (including 26)
C) PFNG 6321,6174,6217,6222,6231,6232,6285
D) WORK GROUP 1050,1035,1004,1030, 1019a,1036
3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**
There is a need for additional access for recreation that is compatible with the multi-use values of the UMR. This recommendation addresses this issue.
4. **SHORT TITLE OF PROPOSED ACTION:**
Identify, develop and implement plans for access development.
5. **LIST OF ALTERNATIVES EVALUATED:** (also see attached data)
 1. Recommended Action
 2. No Action
 3. Project by Project approach
 4. Pool 19 access development
 5. Levee improvements
 6. Improve road access over levees
 7. Install buffers to keep traffic away from levees
 8. Obtain new access
 9. Develop recreation without multi-use regard
6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**
Shoreline and water resources adjacent to existing or proposed new access areas. Site-specific environmental information not developed, but needs to be.

ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Levee in this district will have a significant environmental impact. Implementation of site-specific access developments will affect the levee and water at and adjacent to these areas, and may affect the environment if these points were accessed in increased frequency or recreation traffic potential.	EWI Appendix Levee District publications Work Group 11: Access and water as described in Introductory narrative (parts III and IV).
No Action	No increase in recreation opportunities, increased levee maintenance cost and potential negative impacts at access points that are over-used.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

This action is as specific as can be due to lack of back-up data. It incorporates pool 19 and pool 11 identified needs.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☒ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: RID/COE - See Below
 D) ☒ E.I.S. NEEDED RESPONSIBLE AGENCY: Same

11. ADDITIONAL DISCUSSION/NOTES:

Site specific access plans should include environmental assessment and, if needed, E.I.S. documentation prior to implementation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Recreation
2. TRACING NUMBERS:
A) FINAL 18
B) PREP 25
C) PFNG 6269
D) WORK GROUP 1028
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
Litter left by recreationists has a negative effect on the aesthetics of the river corridor. A means to resolve this problem needs to be developed. The recommendation addresses this need.
4. SHORT TITLE OF PROPOSED ACTION:
Reduce litter through enforcement of laws and organization of Clean-up campaigns.
5. LIST OF ALTERNATIVES EVALUATED:
 1. Recommended Action
 2. No Action
 3. Hire additional Maint. Staff
 4. Hire or contract Clean up Service
 5. Coordinate enforcement
 6. Organize citizen clean-up efforts.
 7. Promote take-home campaign
 8. Provide trash receptacles
 9. Public education program
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
All recreation areas in the UMR from Saverton, Missouri north to Guttenberg, Iowa. See Recreation Work Group Appendix for detailed list.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	all parties will have a adverse impacts and will have aesthetic appearance of the 100% water sheet.	Full Appendix and data as described in Interim Narrative (part III and IV).
No ACTION	Problems as cited would continue	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended Action most economical way to address the problem. It is a combination of alternatives 1 and 7 as well as new element "container deposit laws" added by GREAT II Team.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Recreation

2. TRACING NUMBERS:

A) FINAL 19
B) PREP 28
C) PFWG 6223
D) WORK GROUP 1011

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Analysis done to date indicated that there is a need for recreational trails along the UMR corridor.

4. SHORT TITLE OF PROPOSED ACTION:

Management plans should include trail development program coordinated with Great River Road Project and rail abandonment projects.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended
2. No Action
3. Allow rail land to revert to adjacent landowners
4. Acquire and develop new trails
5. Maintain any rail right-of-way that is abandoned for recreation etc. use.

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The affected environment could include all rail right-of-way and land suitable for trails adjacent to the UMR, plus adjoining areas which may be affected by increased human encroachment. Because the recommendation is not site specific, no detailed description can be given.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED:	1. The proposed project is located in a sensitive area and the proposed action is likely to result in significant adverse impacts on the environment. The proposed action is not recommended.	1. The proposed project is located in a sensitive area and the proposed action is likely to result in significant adverse impacts on the environment. The proposed action is not recommended.
NO ACTION	1. The proposed project is located in a sensitive area and the proposed action is likely to result in significant adverse impacts on the environment. The proposed action is not recommended.	1. The proposed project is located in a sensitive area and the proposed action is likely to result in significant adverse impacts on the environment. The proposed action is not recommended.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The proposed project is located in a sensitive area and the proposed action is likely to result in significant adverse impacts on the environment. The proposed action is not recommended.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: Implementing Agency - See back
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

The proposed project is located in a sensitive area and the proposed action is likely to result in significant adverse impacts on the environment. The proposed action is not recommended.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Recreation
2. TRACING NUMBERS:
A) FINAL 20
B) PREP 30
C) PFWG 6224
D) WORK GROUP 1012
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
Noise levels of boating equipment reduces the quality of recreational experiences on the UMR. The objective of the recommendation is to reduce noise through regulations and enforcement of same.
4. SHORT TITLE OF PROPOSED ACTION:
Adopt and enforce noise level regulations for boating equipment.
5. LIST OF ALTERNATIVES EVALUATED:
 1. Recommended action
 2. No Action
 3. Require manufacturers to reduce noise levels
 4. Establish & enforce decibel limits
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
The UMR corridor from Saverton, Missouri north to Guttenberg, Iowa. See PFWG draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	1. The proposed action is to develop a new product line for the company. This action is recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base. The proposed action is also recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base.	2. The proposed action is to develop a new product line for the company. This action is recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base. The proposed action is also recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base.
NO ACTION	3. The proposed action is to develop a new product line for the company. This action is recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base. The proposed action is also recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base.	4. The proposed action is to develop a new product line for the company. This action is recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base. The proposed action is also recommended because it will provide the company with a new source of revenue and will allow the company to expand its market base.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended action is combination of alternatives 1 and 4, and provides for broad approach to problem at both manufacturer and consumer level.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Recreation

2. TRACING NUMBERS:

A) FINAL 01

B) PREP 02

C) PFWG 0084

D) WORK GROUP 1054

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is inadequate funding for recreational planning, management and development programs. The objective of this recommendation is to secure adequate funding to meet the need outlined in the previous recreational recommendations.

4. SHORT TITLE OF PROPOSED ACTION:

State and Federal resource management agencies should seek funding for recreation needs.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Government assistance to private sector
4. DNR Funding
5. DAWGS Funding
6. State Funding through taxation
7. Great River Poul Program
8. DPE Funding
9. Local government funding
10. Establish special fund from use fees and taxes.

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The recreational resources of the UMR, in total, would be affected if funds obtained for all recreation project needs. The recommendation is not specific enough to describe the detailed affected environment.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	No significant adverse environmental consequences are identified for the proposed action. The proposed action is consistent with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA). The proposed action is consistent with the National Wetlands Act (NWA) and the National Antiquities Act (NAA). The proposed action is consistent with the National Marine Mammal Protection Act (NMMPA) and the National Oceanic and Atmospheric Administration (NOAA) Act (NOAA).	Environmental Impact Statement (EIS) and Environmental Assessment (EA) are required for the proposed action. The proposed action is consistent with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA). The proposed action is consistent with the National Wetlands Act (NWA) and the National Antiquities Act (NAA). The proposed action is consistent with the National Marine Mammal Protection Act (NMMPA) and the National Oceanic and Atmospheric Administration (NOAA) Act (NOAA).
NO ACTION	Continued lack of funding and thus program ineffectiveness.	None identified.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended Action is combination of alternatives 3-9. A special fund is duplicative and no action does not address the need.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Regulation.
2. TRACING NUMBERS:
A) FINAL _____
B) PREP _____
C) PFNG Area * District 100
D) WORK GROUP 100
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
Assisted with the regulatory and monitoring programs in the
in relation with intent of permits and the need for with other
programs. The purpose of this recommendation is to support
the program.
4. SHORT TITLE OF PROPOSED ACTION:
Control and enforce permits.
5. LIST OF ALTERNATIVES EVALUATED:
1. Recommended Action
2. No Action
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
Areas adjacent to existing and new bathhouses which may be
permitted in the future. Data not available at site-specific
level to further describe the environment.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Aesthetic environment, water quality near bathhouses, and nearby fish and wildlife habitat could be positively affected by implementation of controls on use and discharge. No specific data available.	Data as described in introductory narrative (parts III and IV).
No ACTION	Continuation of problems cited above.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The other alternative (no action) would not address the problem.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Note: This recommendation added at GREAT II Team level.

F. WATER QUALITY

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
WATER QUALITY COMPONENT (PAGE 1 OF 2)

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT		
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS	DOLLAR COSTS
A. More useful water quality criteria. B. Will protect public health. C. Protect human health. C. Cultural resources could be lost during dike or levee construction. D. -- E. -- F. Reduce the potential for the exposure of the public to hazardous substances. G. -- H. --	A. A realistic criterion for resuspended and deposited sediments would be established. B. Protection of UMR biota. C. Accidental toxic spills (chemical) would be prevented or contained. D. More accurate evaluation of the effects of thermal effluents. E. Documentation of water quality impacts of urban areas - improved knowledge of the pollution and rate of river recovery. F. Benefits to fish and wildlife. G. Improved water quality. H. Improved management of water quality. H. Would be incorporated into existing process at no extra cost. H. Interagency work group management activities simplified and less costly.	A. -- B. Will reduce costs associated with spill cleanup. C. Reduced property damage and costs. D. -- E. -- F. -- G. Government and private sectors costs to administer and participate in program. For certain industries, resource recovery will generally offset costs. H. Cost of waste load allocation study.	A. New water quality criteria - PREP 31. B. Enforce regulations to prevent toxic spills - PREP 32. C. Enforce floodproofing regulations - PREP 33. D. Revise quarterly thermal monitoring report format - PREP 34. E. Monitoring stations - PREP 35. F. Recreation and fish and wildlife weighting factor - PREP 36. G. Waste pretreatment programs - PREP 51. H. Compatible water quality management regulations - PREP 52.	A. -- B. * C. * D. -- E. -- F. -- G. * H. *	A. -- B. \$3.5 million C. \$2 million (enforcement costs only) D. \$170 thousand E. \$158 thousand F. -- G. * H. * *. Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

WATER QUALITY COMPONENT (PAGE 2 OF 2)

** Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

RECOMMENDATION 23

USEPA, in conjunction with interested states, should develop new water quality criteria for suspended and deposited sediments. Present water quality criteria for suspended sediments do not reflect the concern over loss or degradation of aquatic habitat caused by suspended and deposited sediments. Since sedimentation appears to be a greater threat to desirable aquatic habitat than diminished primary productivity in the GREAT II area, water quality management would be better served by criteria which protect habitat as well as the photosynthetic process. Water Quality Criteria relative to dredging should be incorporated into the GREAT II Channel Maintenance Handbook.

RECOMMENDATION 24

The USEPA, in conjunction with the USCG and the states, should investigate and complete where necessary additional regulations, which protect the waters of the UMR from potential spills from industrial, municipal, or transportation related transport, transfer, storage and handling of toxic and hazardous materials.

RECOMMENDATION 25

The USEPA, in conjunction with appropriate federal agencies, should require all industries located in the floodplain, which produce or store toxic materials, to be floodproofed, to the standard project flood. Prior to implementation a benefit/cost analysis of those regulations should be conducted. The program should be prioritized according to the type of materials produced, stored or handled.

RECOMMENDATION 26

The USEPA or delegated state agency should require all NPDES permit holders who must file quarterly thermal monitoring reports in the GREAT II study area, to submit these reports in identical format. These NPDES permit holders should use a mathematical model of the heat dispersion of their effluent in the Mississippi River. The model should be able to predict the following characteristics of the thermal plume:

- * Length, width and depth of the 5°F over ambient thermal plume.
- * The percent of the river cross-section passing through the 5°F over ambient plume.
- * The percent of the river flow passing through the 5°F over ambient plume.

The USEPA should evaluate those areas identified as being affected by overlapping plumes for the cumulative impacts of thermal pollution.

RECOMMENDATION 27

Studies conducted by the WQWG have shown that the existing network of water quality monitoring stations is not adequate to assess the impacts of a large urban area on the UMR. The USEPA in conjunction with the USGS should establish a cluster of water quality monitoring stations below a major urban area within the GREAT II study segment (Quad Cities is recommended). This group of stations will be used to measure the impact of the discharges (including stormwater) of a large urban area on water quality in the Mississippi River. Such a study would be useful for establishing techniques to determine need areas on the UMR for any wasteload allocation projects.

Study design should provide for at least four stations that will show the rate and spatial extent of the recovery and/or dispersion process. Water quality variables to be monitored should include, as a minimum: temperature, pH, conductivity, DO, BOD, COD, $\text{NH}_3\text{-N}$, $\text{NO}_2\text{-N}$, $\text{NO}_3\text{-N}$, Total P, total filterable P, FC, turbidity, suspended solids, the total and dissolved fractions of these metals, iron, manganese, cadmium, chromium, copper, lead, zinc and mercury.

RECOMMENDATION 28

The state selection process for priority funding of public wastewater treatment systems should include a weighting factor for recreation and fish and wildlife benefits of the proposed project.

RECOMMENDATION 29

The States of Wisconsin, Iowa, Illinois and Missouri, with the assistance of USEPA, should implement industrial waste pretreatment and resource recovery programs as soon as possible.

Pretreatment programs should consider the industrial discharges to the municipal sewage systems of these cities as their first priority:

- * Dubuque, Iowa
- * Clinton, Iowa
- * East Moline, Moline and Rock Island, Illinois
- * Bettendorf and Davenport, Iowa
- * Muscatine, Iowa
- * Burlington, Iowa
- * Fort Madison, Iowa
- * Keokuk, Iowa
- * Quincy, Illinois

There are 15 known industries whose discharges have been shown to contain significant pollutants (see list in WQWG Appendix).

Where possible, more effective waste treatment and/or resource recovery should be accomplished with priority on known industrial discharges to the Mississippi.

RECOMMENDATION 30

The state water quality management agencies should coordinate to monitor the water quality for fecal coliform bacteria at major recreation areas where body contact recreation activities occur.

RECOMMENDATION 31

There are few facilities along the UMR where recreationists can pump-out their holding tanks. Consequently, the contents of the holding tanks may be put directly into the river. As the number of recreationists increases, the potential for water quality problems also increases.

State and Federal agencies should assess the need for additional pump-out facilities and the feasibility of declaring sections of the UMR as "no discharge areas".

Agencies should promote cost sharing of state and federal monies with county and municipally operated marinas for sanitary pump-out facilities. Urban areas and privately operated marinas should be required to provide sanitary pump-outs with the help of low-interest loans. In addition, permittees and leasees along the UMR should be required to install sewage treatment or pump-out facilities.

RECOMMENDATION 32

Each bank of the UMR is lined with railroad tracks. Freight trains in the study area carry numerous cargos of toxic and hazardous materials. An accidental spill of any of these materials could have devastating impacts on water quality and consequently, fish and wildlife concerns.

The Federal Railroad Administration (FRA) should recognize the potentially serious environmental impact of a rail accident involving hazardous materials on railroad lines bordering the UMR, and should place a high priority on safety enforcement efforts on these lines.

The FRA should take any steps necessary to assure that information about required responses to spills and other accidents is readily available to the railroads.

AD-A096 442

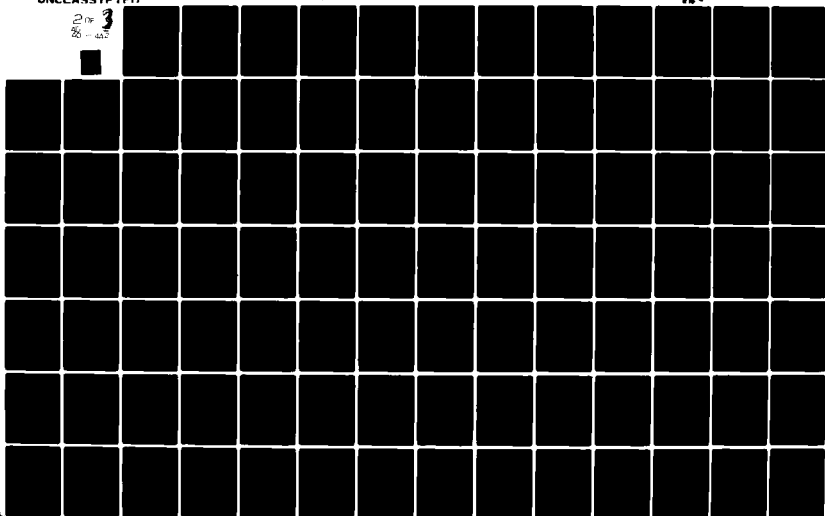
ARMY ENGINEER DISTRICT ROCK ISLAND IL
GREAT RIVER ENVIRONMENTAL ACTION TEAM (GREAT II). UPPER MISSISS--ETC(U)
DEC 80

F/G 13/2

UNCLASSIFIED

HL

2 3
28-442



RECOMMENDATION 33

The President's Council on Environmental Quality has established a National Oil and Hazardous Substance Pollution Contingency Plan. As a part of this plan a Regional Response Team (RRT) was formed for the North Central Region. This RRT is responsible for responding to all pollution emergencies in the GREAT II study area. The RRT is chaired by USEPA. Its members consist of federal agencies and state liasons. The RRT is to provide for efficient, coordinated and effective action to minimize damage from oil and hazardous substances discharges, including containment, dispersal and removal.

The USFWS represents fish and wildlife resources on the RRT. In many cases the chemical composition and source of a hazardous spill is unknown and mortality of organisms is the only indicator of a spill. A quick response of the RRT could avert a natural disaster on the UMR. The RRT's collection of biological and water quality samples could be facilitated by establishment of a contingency plan for each of the pools of the UMR. This plan would ensure necessary equipment (booms, staging areas, collection bottles, etc.) and trained personnel would be available in each pool for quick response to any spill. Cost of cleanup and/or mitigation should be paid for by the handler or carrier responsible as required by law.

Contingency plans providing a quick response to toxic spills as required by law for the protection of fish and wildlife resources should be developed for each pool. These plans should be coordinated by the USFWS in conjunction with state resource agencies and the Regional Response Team.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Water Quality
2. TRACING NUMBERS:
A) FINAL 23
B) PREP 31
C) PFWG 6158
D) WORK GROUP 1
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
There is a lack of coordinated water quality data and criteria on which to make management decisions that reflect current concerns. This recommendation would help to resolve this issue.
4. SHORT TITLE OF PROPOSED ACTION:
EIA/States develop new water quality criteria for suspended and deposited sediments.
5. LIST OF ALTERNATIVES EVALUATED:
1. Recommended Action
2. No Action
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
The waters of the UMR from Saverton, Missouri north to Guttenberg, Iowa. See Water Quality Work Group Appendix for more detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	The water quality of the water body is good. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body.	The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body.
NO ACTION	The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body.	The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body. The water body is not a designated water body.

9. RATIONALE FOR SELECTED ALTERNATIVE:

No Action would result in agencies having to rely on existing data/criteria

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: PIA, State - San Diego
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Comments on water quality are not a designated water body. The water body is not a designated water body. The water body is not a designated water body.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water Quality

2. TRACING NUMBERS:

A) FINAL 24
B) PREP 32
C) PFMG 6310, 6311
D) WORK GROUP 3037, 3038

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Toxic materials from municipal, agricultural, industrial, and transportation-related activities adversely affect fish and wildlife resources.

4. SHORT TITLE OF PROPOSED ACTION:

USEPA, USCG, and States investigate and complete regulations.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. USCG continue to enforce existing regulations
4. EPA, etc. enforce existing regulations and develop new ones

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The waters of the UMR from Saverton, Missouri north to Guttenberg, Iowa. See Water Quality Work Group Appendix for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	The proposed action will result in the construction of a new water supply system. This system will provide a reliable source of water for the community and will not result in any adverse environmental impacts.	1. Environmental Impact Statement (EIS) for the proposed water supply system, prepared by the U.S. Army Corps of Engineers, 1978. 2. Final EIS for the proposed water supply system, prepared by the U.S. Army Corps of Engineers, 1979. 3. Final EIS for the proposed water supply system, prepared by the U.S. Army Corps of Engineers, 1980. 4. Final EIS for the proposed water supply system, prepared by the U.S. Army Corps of Engineers, 1981.
NO ACTION	Enforcement of existing and new regulations will protect fish and wildlife habitat as opposed to no action.	None.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Enforcement of existing and new regulations will protect fish and wildlife habitat as opposed to no action.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: U.S. Army Corps of Engineers
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: U.S. Army Corps of Engineers

11. ADDITIONAL DISCUSSION/NOTES:

Enforcement of regulations will require a FONSI or EIS. However, actions taken to comply with regulations may require EIS or FONSI activities.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Water Quality

2. TRACING NUMBERS:

A) FINAL 25

B) PREP 33

C) PFMG 6095

D) WORK GROUP 3022

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The unregulated production and storage of toxic chemicals in the floodplain poses a threat to fish and wildlife as well as the human resources. This recommendation will resolve this issue.

4. SHORT TITLE OF PROPOSED ACTION:

EPA should require industries in the floodplain to eliminate structures.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Prohibit Storage and Production of toxic chemicals and wastes in the floodplain

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The waters of the UMR between Saverton, Missouri and Guttenberg, Iowa. See Water Quality Work Group Appendix for detailed description.

7. ENVIRONMENTAL CONSIDERATIONS OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Accidental release of toxic materials would be prevented or contained thus reducing the threat to the waters of the UMR and associated habitat. No adverse environmental impacts associated with recommendation.	FWWWS Appendix XQWWS Appendix 43 CFR Part 390 43 CFR 58946-59495 and data as described in introductory narrative (parts III and IV).
NO ACTION	No quantifiable data, however no action would result in continued potential for damage to the environment due to toxic spills.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

A flood event could result in an accidental release of toxic material into the waters of the UMR and loss of resources. Prohibition (alternatives) not necessary if this action taken.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: EPA - See below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

New regulations or floodproofing projects may require additional E.A. or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water Quality

2. TRACING NUMBERS:

A) FINAL 24

B) PREP 34

C) PWG 6100

D) WORK GROUP 7

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Thermal pollution caused by discharges from industries and utilities along the UMR may degrade water quality and affect fish and wildlife habitat. There is a need for improved Point-Source reporting procedures to improve monitoring of thermal discharge.

4. SHORT TITLE OF PROPOSED ACTION:

Format requirements for thermal monitoring reports.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The waters of the UMR between Saverton, Missouri and Guttenberg, Iowa. See Water Quality Work Group Appendix for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There will be no direct environmental consequences resulting from this action as the recommendation only calls for improved reporting requirements under an already mandated action. Improved decision-making regarding thermal pollution problems/solutions may be a long-term improvement.	with Appendix Thermal Pollution Report and data on temperature data base regarding thermal pollution.
NO ACTION	Present methods of data collection-considered inadequate, will continue and there will continue to be an inadequate data base regarding the effects of thermal pollution.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Action recommended will accomplish goal of improved data collection, and consistent reporting as opposed to no action.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water Quality

2. TRACING NUMBERS:

- A) FINAL 27
- B) PREP 35
- C) PWG 6163
- D) WORK GROUP 8

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The impacts of point-source and urban runoff pollution on UMR water quality are not adequately understood. The objective of this recommendation is to provide information to further understand this problem and manage for it.

4. SHORT TITLE OF PROPOSED ACTION:

Establish a cluster of water quality monitoring stations below a large urban area.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended Action
- 2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The waters of the UMR and associated habitat. See Water Quality Work Group Appendix for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	The direct impacts will be site-specific direct and indirect impacts at sites where data are available. Indirect impacts will be only as impacts can be specifically identified. Indirect impacts will be long-term indirect understanding of water quality impacts of water pollution thus improved decision-making capabilities.	WQAI Appendix WQAI discussion and data are provided in the factory narrative (parts III and IV)
NO ACTION	The present system of data gathering will continue, resulting in no improved understanding of how to deal with the problem.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

Long-term, state and local government investments, and those of the private sector, in water pollution control need to be tied, in some rational manner, to existing water quality.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water quality

2. TRACING NUMBERS:

A) FINAL 15

B) PREP 22

C) PFWG 10, 11, 12

D) WORK GROUP 10/14

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The water quality limits some recreational uses of the river and adversely affects fish and wildlife resources. The objective of this recommendation is to give priority to funding certain construction projects that will improve water quality in areas where these areas will benefit.

4. SHORT TITLE OF PROPOSED ACTION:

Wastewater treatment facilities. Funding shall include recreation and fish and wildlife weighting factors.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action.
2. No Action.
3. Fund in rank order worst dischargers.
4. Fund facilities that directly benefit recreation use areas and opportunities.

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Other than wastewater treatment facilities will be constructed and the resulting impact. This recommendation does not identify specific sites, a description of the affected environment is not available. Generally the affected environment is the water of the river. See Water Quality Work Group Appendix for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Direct environmental consequences will be construction impacts at sites where wastewater facilities are constructed. (i.e., habitat disturbance in use of construction materials etc.) Recommendation is not specific enough to further detail these impacts. Indirect long-term impacts will be improved water quality at areas selected for fishing.	RWG Appendix EWMWG Appendix RWG discussions and data as re- scribed in Intro- ductory narrative (Part III and IV).
NO ACTION	Water quality will continue to improve in general, but without immediate benefit to recreation and fish and wildlife resources.	Same as above

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended Action will most adequately meet stated objective and aid in meeting EPA Water Quality Standards.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: States of Illinois, Iowa,
Missouri, Wisconsin - See below
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Construction of wastewater facilities will require additional E.A. and E.I.S. documentation by funding and/or construction agency.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water Quality

2. TRACING NUMBERS:

- A) FINAL 12
B) PREP 61
C) PFWG 6100
D) WORK GROUP 1

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Point-source industrial discharges contribute many pollutants to the waters of the UMR. This recommendation calls for industrial waste pretreatment at specific locations known to be priority problem areas.

4. SHORT TITLE OF PROPOSED ACTION:

Implement industrial waste pretreatment and resource recovery programs in specific areas as soon as possible.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Fifteen industries (See WQWG Appendix) have been identified as needing programs outlined in this recommendation. The industries and the waters of the UMR adjacent to these industries will be primarily affected by this recommendation. The general water quality of the UMR and associated habitat can also be considered as the affected environment. See WQWG Appendix for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	1. The direct consequences will be of the type: A. The construction of the plant with a capacity of 100,000 gallons per day will improve the water quality in receiving water bodies where the plant is located. The plant will also provide a source of water for the community. B. The plant will also provide a source of water for the community.	1. The plant will provide a source of water for the community. The plant will also provide a source of water for the community.
No Action	Water quality of the UMR will improve but not as quickly as would be if the recommendation was implemented. There also will be no additional direct construction impacts where facilities built.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The plant will provide treatment for heavy metals (currently no other treatment) that municipal plants are not designed to handle.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: U.S. EPA
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: U.S. EPA

11. ADDITIONAL DISCUSSION/NOTES:

A final report will be submitted to the U.S. EPA for review. The report will include a copy of this assessment and a copy of the FONSI.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water Quality

2. TRACING NUMBERS:

A) FINAL

B) PREP

C) PRWG

D) WORK GROUP

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The water quality monitoring program is designed to provide information on the status of the water quality in the area of the project. The program is designed to provide information on the status of the water quality in the area of the project. The program is designed to provide information on the status of the water quality in the area of the project.

4. SHORT TITLE OF PROPOSED ACTION:

Water quality monitoring program. The program is designed to provide information on the status of the water quality in the area of the project. The program is designed to provide information on the status of the water quality in the area of the project.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Periodic Monitoring at Recreational Areas
4. Monitor all discharges
5. Monitor the entire river

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The waters at heavy recreation use areas (see Recreation Work Group Appendix) would be the environment impacted. The recommendation does not specify exact areas. Also see WONG Appendix for description of water quality in "MP".

8. REFERENCES;

9. RATIONALE FOR SELECTED ALTERNATIVE:

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. **COMPONENT:**
Water Quality
2. **TRACING NUMBERS:**
 - A) FINAL 31
 - B) PREP 40
 - C) PFNG 6008, 6100
 - D) WORK GROUP 1016, 5518
3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**

There are insufficient pump-out facilities for recreational boaters, resulting in direct discharge into the waters of the UMR. Thus water quality is adversely affected. The objective of this recommendation is to eliminate this problem.
4. **SHORT TITLE OF PROPOSED ACTION:**

Assess pump-out facility needs for recreational craft, determine need for "no discharge" areas, and promote additional facilities.
5. **LIST OF ALTERNATIVES EVALUATED:**
 1. Recommended Action
 2. No action
 3. Provide Pump-Out at locks
 4. " " " " marinas
 5. " " " " urban areas.
 6. Change laws to require pump-out facilities at marinas.
6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**

The waters of the UMR. See Water Quality Work Group Appendix for detailed description.

8. REFERENCES:

RECOMMENDED	The water of the UMR will be improved if discharge of non-potential toxic are reduced or stopped. Human health, fish and wild life and water quality will be positively affected. No quantifiable data is available.	FBI II Appendix CTAI II Appendix & FBI & CTAI Discussion on data as reported in data entry part III and IV.
NO ACTION	Polluted discharge of pollutants from residential area will affect water quality in proportion to the extent of residential loading on the UMR.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The appendix will contain a combination of alternatives 4,5,6 and provides an effective, feasible approach to solving the problem.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Water quality

2. TRACING NUMBERS:

A) FINAL 50

B) PREP 48

C) PPWG 50, 48

D) WORK GROUP 2000

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Project funding enables a study of water quality in the UMR. Based on the study results, a plan for water quality improvement is developed. The plan is then implemented and the results are reported. The plan is then revised and the results are reported. The plan is then revised and the results are reported.

4. SHORT TITLE OF PROPOSED ACTION:

The Federal Water Quality Act of 1972, as amended, requires that the UMR be maintained in a state of good health.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The waters, associated habitat and the UMR of the UMR. See PPWG Technical Appendix for description.

8. REFERENCES:

[illegible]

9. RATIONALE FOR SELECTED ALTERNATIVE:

The CHAI-1 Tear final writing is slightly different from W.3. Writing (line) is also in nature and addresses the problem from a general reader's standpoint.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONS I
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. **COMPONENT:**
Water quality
2. **TRACING NUMBERS:**
A) FINAL 43
B) PREP 39
C) PWG 6204
D) WORK GROUP 3021
3. **PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:**
Hazardous and toxic material spills into the river can cause extensive damage if not quickly dealt with. This recommendation calls for using an existing organization to quickly respond to spills on the river system, thereby minimizing negative impacts from toxic and hazardous material spills.
4. **SHORT TITLE OF PROPOSED ACTION:**
Develop contingency plans for each pool to provide quick response to spills.
5. **LIST OF ALTERNATIVES EVALUATED:**
1. Recommended plan
2. No action
6. **BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:**
All waters of the UMP could be affected. See WQWG Appendix for detailed description.

G. SEDIMENT AND EROSION

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
SEDIMENT AND EROSION COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT		
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS	DOLLAR COSTS
A. Preservation of acres of upland. B. Increased knowledge of sediment sources. C. Increased knowledge of sedimentation rates and increased ability to make management decisions based on sound data. D. -- E. Sound data base to improve management decisions.	A. Reduced sedimentation of backwaters. A. Preservation of aquatic habitat. A. Reduction in tons of sediment. A. Less turbid water. B. -- C. -- D. Reduced impacts due to dredged material disposal. E. --	A. Reduced loss of valuable agricultural land. A. Reduced costs of fertilization, etc. B. -- C. -- D. Increased facility life. D. Reduced dredging. E. --	A. Increased soil conservation - PREP 41. B. Install gages PREP 42. C. Monitor of channel areas - PREP 43. D. Redesign problem harbors and access areas - PREP 64. E. Streambank erosion study - PREP 44.	A. * B. -- C. -- D. \$3.7 million E. --	A. * B. \$7 million C. \$700 thousand D. \$13.3 million E. --
			* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.		

RECOMMENDATION 34

Accelerated land treatment, as discussed in the Channel Maintenance Component, is needed on 9.5 million acres of cropland to reduce erosion to tolerable levels at which soils will maintain themselves. This will protect and preserve the soil resource base and reduce a potential source of sediment to the UMR. It will also decrease the amount of suspended sediment delivered to the UMR corridor.

The USDA and other appropriate state and federal agencies should be funded to provide additional technical assistance and cost sharing to agricultural landowners. Adequate programs exist if the funding can be provided.

RECOMMENDATION 35

Another source of sediment in the UMR is from the tributaries themselves. Additional gaging stations are needed to gather data on suspended sediment, bed material and bed loads, for ungaged tributaries to the UMR.

The USGS should install gages on the following selected tributaries where data indicate a need for erosion protection:

RECOMMENDED GAGING STATIONS

<u>WATERWAY</u>	<u>LOCATION</u>
Turkey River	Garber, Iowa
Grant River	Potosi, Wisconsin
Maquoketa River	Monmouth, Iowa
Rock River	Joslin, Illinois
Green River	Silois, Illinois
Iowa River	Wapello, Iowa
Skunk River	Augusta, Iowa
Des Moines River	St. Francisville, Missouri
Fabias River	Monticello, Missouri
Main Stem at Locks & Dams 13, 16, 20	Locks & Dams 13, 16, 20
Galena River	Galena, Illinois
Apple River	Hanover, Illinois
Crow Creek	Bettendorf, Iowa

These gages should be maintained for a period long enough to provide a statistically accurate record at each site.

These data should be used to develop a sediment transport capacity model to correlate surface erosion rates with carrying capacity, rate those watersheds with the most serious problems and develop a treatment program if a solution is necessary.

RECOMMENDATION 36

Streambank erosion is another potential source of sediment in the UMR. The COE should, in conjunction with other federal (Soil Conservation Service) and state management agencies, conduct a study of streambank erosion on the Main Stem and tributaries of the UMR. This study should identify sources and volumes of sand-sized material generated in erosion and estimated to be delivered to the Main Stem of the UMR. These data would be used in future sediment budget studies. Where problem areas are identified, a treatment program should be developed and implemented.

The study conducted by the COE should also identify eroding areas affecting recreation and cultural resource sites and develop plans to reduce these damages.

RECOMMENDATION 37

A sediment budget study contracted to the University of Iowa, Institute of Hydraulic Research by the GREAT II Sediment and Erosion Control Work Group concluded that detailed cross-section surveys of the Mississippi River are required so that variations of sediment balance in each pool can be monitored. The data collected would allow hydrologic analysis of individual dredging problems and backwater accretion sites, and would provide the basis for more comprehensive sediment budget analysis. RID/COE should, therefore, conduct detailed pool-by-pool cross-section surveys, including off channel areas on an annual basis and provide analysis to the CARS, FWIC and OSIT. Based on analyses of these data, the FWIC should develop and implement a program for rehabilitation of critical backwater areas. Data should also be published in order to make this material available to researchers doing work on basic hydrologic and morphologic problems.

RECOMMENDATION 38

Boat harbors and recreational access areas suffer from severe sedimentation in some cases. These areas would be partially helped by the implementation of the above recommendations. The RID/COE should identify those harbors and access areas which are poorly designed or improperly located and develop a plan for the rehabilitation or relocation of these areas. Funding should be provided by the responsible agency or agencies.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Definitive reclamation

2. TRACING NUMBERS:

A) FINAL

B) PREP

C) PFAG

D) WORK GROUP

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Excessive upland erosion is affecting the UMB. The objective of this recommendation is to reduce upland erosion to tolerance levels at which soils will maintain themselves.

4. SHORT TITLE OF PROPOSED ACTION:

Provide funds to carry out accelerated land treatment to 1.0 million acres of cropland.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended action
2. Continue present program
3. Accelerated treat 50% area
4. " " 75% area
5. " " 100% area
6. No action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

2.4 million acres of cropland in the upper MI River/Alcona River basin (See PFAG Appendix) as well as the "W" riparian forest. See PFAG Technical Appendix, Volume 1 for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	The recommended alternative specifically describes treatment actions that would be effective. Direct impacts would be adverse effects on lands selected for treatment, and would be positive in that treatment would call for reduction in soil erosion and a possible increase in vegetative cover. Secondary impacts would accrue to the treatment of the UMR. (See FWWG, OWA identified)	FECWG Appendix FWWG Appendix SCWG Appendix and data as described in introductory narrative (parts III and IV).
NO ACTION	No Action may contribute to the continuation of erosion, siltation and sedimentation in the UMR.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Land treatment of 9.5 million acres is a reasonably attainable goal and would protect the resources.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: SCS - See below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Some site-specific land treatment measures may require additional E.A. or E.I.C. documentation prior to implementation and this documentation should be provided by the implementing agency.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

2. TRACING NUMBERS:

A) FINAL _____

B) PREP

C) PFWG

D) WORK GROUP _____

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is inadequate data about the quantity of supercoiled particles generated during transcription initiation. The purpose of this research was to develop a program to calculate the data for use in solving problems related to transcription in the lab.

4. SHORT TITLE OF PROPOSED ACTION:

Intensive support and selection of inmates and use data to develop
a rehabilitation plan, followed by treatment programs.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Record of action
- 2. No action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The UNP corridor between Reventon, Missouri north to Gutterberg, Iowa. See FEWS Technical Appendix, Volume II for detailed information.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Installation of gates in 1. tributaries and 2. floodgates have a minimal impact at the sites where they are installed. Long term beneficial impacts through use of new information should be all beneficial. "Developing a treatment program" will result in the need for additional EA or EIS documentation prior to implementation.	Same as described in introductory narrative (parts III and IV).
NO ACTION	New information on sediment bedload and suspended bed material will not be obtained and long term improved management activities will be hampered.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

"No Action" would not address the problem.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: USGS/SCS - See below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Specific treatment programs resulting from the transport capacity model will require an E.A. and/or E.I.S. to assess alternatives and impacts of those programs.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Component number 1000

2. TRACING NUMBERS:

- A) FINAL 1000
- B) PREP 1000
- C) PFWG 1000, 1001, 1002
- D) WORK GROUP 1000, 1001, 1002

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Identify and evaluate the streambank erosion problem in the UMR. Determine the streambank erosion problem and the need for treatment. Determine the streambank erosion problem and the need for treatment. Determine the streambank erosion problem and the need for treatment.

4. SHORT TITLE OF PROPOSED ACTION:

Conduct studies to identify streambank erosion problem, and eventual treatment of identified problem.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended Action
- 2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The streambanks of tributaries and the main stem of the UMR from Saverton, Missouri to Guttenberg, Iowa. See PFWG Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	conducting studies will have no environmental impacts. The long-term use of study findings may result in proposals for specific streambank erosion control programs which would have site specific direct environmental impacts and indirect impacts on the UMR and tributaries affected, and its cultural resources.	DECM Appendix CRMG Appendix RWD Appendix and data as described in introductory narrative (part III and IV).
NO ACTION	Desired information would not be obtained and long term development of sediment control programs would be hampered.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The recommended action is the only alternative identified, other than no action and would meet stated objective.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Sediment and Erosion

2. TRACING NUMBERS:

- A) FINAL 37
- B) PREP 72 (including 43)
- C) PFWG 6204, 6205
- D) WORK GROUP 3002, 3003

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Sedimentation is occurring in the channel and backwater areas and reducing fish and wildlife values. The extent of this problem, how it can be corrected, and specific programs to implement are unknown. This recommendation will aid in developing long-term solutions to the problem.

4. SHORT TITLE OF PROPOSED ACTION:

Carry out detailed cross-section surveys of the UMR and use data to develop and implement programs of backwater rehabilitation.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended Action
- 2. No Action
- 3. Monitor off-channel areas

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Main channel and backwaters of UMR from Saverton, Missouri north to Guttenberg, Iowa. See PFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Implementing backwater rehabilitation programs will result in improved water quality and increased habitat for fish and wildlife. The program will also result in improved aesthetics and increased property values.	FWIC will have to designate responsible party to conduct further E.A. and/or F.I.N. information when site-specific backwater rehabilitation programs proposed.
No ACTION	Lack of data and reduced likelihood of implementing backwater rehabilitation programs would result from no action.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

This recommendation was developed at the team level and incorporated the intent of alternative 3 as well as needs identified at team level in team discussions.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: FWIC - See below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

FWIC will have to designate responsible party to conduct further E.A. and/or F.I.N. information when site-specific backwater rehabilitation programs proposed.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Sediment and Erosion

2. TRACING NUMBERS:

- A) FINAL 38
- B) PREP 64
- C) PFWG 6225
- D) WORK GROUP 1013

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Some boat harbors and recreational access areas suffer from severe sedimentation, thus limiting their use. The objective of this recommendation is to rehabilitate access or relocate access areas so that they can continue to carry out their function.

4. SHORT TITLE OF PROPOSED ACTION:

Identify boat harbors and access areas needing rehabilitation or relocation and develop plans to solve problems noted.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended action
- 2. No Action
- 3. Public agency own dredge
- 4. Establish private fund to dredge
- 5. Relocate or redesign problem accesses
- 6. Require local gov't to maintain
- 7. User tax pay for maintenance
- 8. Restructure existing fund sources

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The recommendation does not specify locations of access areas, but calls for identification of those that need work, so directly affected environment is unknown. General description potentially is all existing access areas. See RWG Appendix for location of areas.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	No environmental impacts associated with identification and development of rehabilitation or relocation plans. Implementation of site specific projects will likely require additional E.A. and/or E.I.S. documentation, and take will be taken as part of project development and implementation.	EWA Appendix and take will be taken as part of project development and implementation (part. III and IV).
NO ACTION	Adverse impacts and hazards will continue to exist in, limiting recreation use and habitat habitat over time from aquatic to marsh and partly terrestrial habitat.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

All three alternatives (except no action) provide alternative means to meet the project goals. This recommendation calls for broad approach to project.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSJ
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

H. FISH AND WILDLIFE RESOURCES

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
FISH AND WILDLIFE COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS DOLLAR COSTS
A. -- B. Improved management decisions. C. -- D. -- E. Preservation of the viewshed. F. --	A. Protection or rehabilitation of 31 thousand acres of habitat (terrestrial). A. Protection of 2 thousand acres backwater habitat. A. Wise management of 1 million acres of habitat. B. Improved habitat quality. B. Protection of 48 species. B. Protection of nesting sites. C. Improved habitat and hunter quality. C. Reduced backwater areas lost to sedimentation. D. -- E. Increased diversity on 20 acres. E. Preserve aquatic habitat. E. Increased knowledge of the impacts of dredging a backwater. F. --	A. -- B. -- C. Increased management efficiency in planning and decision making. D. -- E. Increased dredging costs. F. Support is not in the form of funding - studies are already on-going - support is for continued collection of biological data at present study budgeted costs.	A. Establish fish and wildlife interagency committee - PREP 45. B. Collect baseline data - PREP 46. C. Document impacts of management practices - PREP 47. D. Impacts of barge fleet study - PREP 48. E. Pilot project of dredging a backwater - PREP 49. F. Support of ongoing studies - PREP 50.	A. \$12.4 million B. \$5 million C. \$3.7 million D. \$200 thousand E. \$75 thousand F. *
			** Non-quantifiable economic benefits and costs are displayed in Environmental Quality Account.	

RECOMMENDATION 39

As the GREAT recommendations regarding dredging and main channel modifications are implemented, frequent consultation will be needed on fish and wildlife resources. A specific coordinating team will be needed to respond quickly in providing direction as to which course of action will protect fish and wildlife resources. This will minimize delays when responsive direction and consultations are needed. In addition, there will be a continuing need for coordination of broad scope river management studies and investigations. Such an inter-agency group will be critical in developing and facilitating research too comprehensive for any one agency to handle.

A Fish and Wildlife Interagency Committee (FWIC) should be designated and funded to provide coordination regarding fish and wildlife matters associated with main channel dredging, dredged material disposal, physical river modifications, backwater modifications, and river management studies and investigations. The FWIC should be composed of fish and wildlife biologists from Wisconsin, Iowa, Illinois, Missouri, USFWS and COE. Initially this committee will be chaired by USFWS. Member agencies should provide funds necessary for their participation.

Specific areas where the FWIC should provide such coordination are to:

- * Define fish and wildlife management objectives.
- * Develop and recommend a comprehensive fish and wildlife management plan for the entire GREAT II reach (based on above objectives).
- * Consider the development of a fish and wildlife management plan for Pool 19 as highest priority (see Fish and Wildlife Discussion, Chapter 2).
- * Ensure compatibility of all FWIC activities with those of the JMRBC in the development of UMR resource management plans and to avoid duplication of efforts in the collection or dissemination of data (see Recommendations 52 and 53).
- * Analyze any proposed introductions of organisms not native to the UMR corridor to determine compatibility with the integrity of the native communities before they are introduced. An agreement between agencies should be established through the UMRCC for providing direction for new species introductions. Suitability for continued use of already established exotic species should be determined, and a restrictive list should be created for those found not desirable.

The FWIC will also coordinate and develop recommendations regarding the operation and maintenance of the navigation channel. This function is specifically addressed in the Channel Maintenance Plan.

RECOMMENDATION 40

A considerable wealth of information is available on the distribution, abundance, population characteristics, and harvest of many fish and wildlife resources of the Upper Mississippi River. The value of much of that information for use in modern management decision-making processes is greatly limited, however, for various reasons. With an ever-changing river environment, information previously collected on the distribution, abundance, population characteristics, and harvest of fish and wildlife resources may not be applicable to present conditions. Much of the information available concentrates on a relatively few species of significant sport or commercial value. Nearly all of the information is collected for specific sites or areas. The ability to integrate information and apply it to the biological system as a whole is severely limited by incongruities in sampling methods or data analysis, and the intermittent nature and seasonal differences in data collection.

To acquire the needed biological information base for current management planning and decisions, the following studies are recommended to be completed by the USFWS in cooperation with the other state and federal natural resource management agencies:

- * Collection of information on the distribution, abundance, population characteristics, and harvest of all fish and wildlife species in the UMR, on a systematic basis.
- * A program to monitor federal and state endangered or threatened species to obtain information on abundance and population characteristics. Particular emphasis should be placed on present habitat utilization within the UMR floodplain so that habitat management techniques may be developed for the species.
- * Monitor the nesting sites of colonial nesting birds. New sites should be located and mapped.
- * Develop and implement a plan to inventory the submergent characteristics of the UMR. The plan should consist in part of the pilot plan developed for the FWMWG. However, new technologies must also be investigated to make the inventory economically feasible and easy to up-date.

Much of the above studies when completed, in addition to existing information, is site specific data. Considering the size of the UMR corridor, a bookkeeping system for storage and immediate retrieval of collected data becomes necessary for management purposes. One available system is the Geographic Information System (GIS) which is being used for long-range planning on the Upper Mississippi River Wild Life and Fish Refuge. Therefore, the USFWS should expand and complete the GIS for the entire UMR corridor and should keep it current as new data is collected. The GIS should be available to all natural resource management agencies.

RECOMMENDATION 41

Several studies on the UMR need to be completed to adequately address various aspects of habitat enhancement through backwater modifications. The RID/COE should complete the following investigations in coordination with the FWIC:

- * Initiate a pilot project to determine the feasibility and environmental considerations for dredging a backwater area.
- * Use in-house capability, if available, to apply the physical, chemical and biological data from Burnt Pocket, Fountain City Bay, and any other side channel alteration studies to other computer models or methodologies to further test and refine the capability to predict the biological consequences of physical alterations to side channels and backwaters.
- * The feasibility of using fine sediments for agricultural purposes in the GREAT II area should be investigated. Potential dredging of the backwaters will require the disposal of significant amounts of silty materials.
- * Unless agricultural disposal is shown to be feasible, it is likely most disposal would occur in areas of basically monotypic lowland hardwood habitat.

Unlike dredged sand, it is thought that dredged silt may provide opportunities for enhancing lowland hardwood habitat. The RID/COE and the USFWS in cooperation with the Illinois Department of Conservation and the U.S. Soil Conservation Service have developed a plan to evaluate habitat development on silt in conjunction with the Fulton Local Flood Protection Project. This plan will evaluate silt tolerance and growing success of tree, shrub, vine and grass species that are beneficial to wildlife. Additional information will be sought to determine the relative effect of varying disposal depths on vegetative survival. Effects on cultural resources must also be considered.

Desorption of pollutants from dredged silts and muds is a definite possibility. A water quality monitoring program should be initiated with any demonstrations, or addressed in any feasibility studies. It is possible that complete containment of the dredged material and water may be required, which may affect habitat development.

The RID/COE should complete the dredging and habitat development project and monitoring program described in the Technical Report for the Fulton Local Flood Protection Project Stage IIIC.

- * Based on the information obtained above as well as that gathered in conjunction with various side channel opening or closure projects (FWMWG-GREAT I, SCWG-GREAT II), the RID/COE should complete the priority 1B backwater alterations as prioritized by the SCWG (see Criteria for the Determination of Appropriate Action in Priority 1 Backwaters - Section II.D. - SCWG Appendix). The RID/COE should coordinate these alterations with the FWIC to ensure maximum benefit to fish and wildlife resources.

SCWG PRIORITY 1B SITES

Sites which have lost considerable value to "natural" causes. These sites will continue to lose habitat value at a rapid rate. Remedial action is required immediately if the area is to be preserved.

<u>POOL</u>	<u>SITE</u>	<u>RIVER MILE</u>
11	Ackerman's Cut	613.9L
	Goetz Island Side Channel	614.5R
	Jack Oak Slough	605.9L
	Bertom Lake	602.5L
	Unnamed	599.5L
12	Stump Island	582.0L
	Industrial Chemical Light	578.0-579.0L
	Harris Slough	564.0-566.0L
13	Lainsville Slough	545.8R
	Brown's Lake Complex	544.0-546.0R
	Pin Oak Lake	541.9R
	Spring Lake Levee	531.0-534.0L
14	Sunfish/Cattail Slough	516.0-518.0L
15	No Sites in Priority 1B	
16	Andalusia Island	463.5-466.5L
	Dead Slough	461.5-464.0L
	Wyoming Slough	458.0-461.0R
	Drury Slough	459.0-461.0L
17	Blanchard Island	449.0L
18	Sturgeon or Boston Bay	433.0-434.0L
	Unnamed	429.2-430.8R
	Blackhawk Island	427.0R
	Kingston Bar	424.0R
	Campbell Island	419.5-423.3L
19	Otter Slough	407.0-409.0R
	Unnamed	394.5R
	Grape Island	391.0R
20	Taylor Chute	353.0L
	Huff/Hunt Islands	439.0-350.0L
21	Bear Creek Recreation Area	341.0L
	Long Island	333.5L
	Teal Island	332.5L
	Triangle Lake	330.0L
	Broad Lake/Quincy Bay	328.0-329.2L
	Monkey Chute	325.0R

<u>POOL</u>	<u>SITE</u>	<u>RIVER MILE</u>
22	Texas Chute	324.0L
	Beebe Island	316.7-318.5L
	Unnamed	316.0L

(NOTE: The SCWG also identified backwaters in need of alteration that have been impacted by construction, operation and maintenance of the navigation channel. This recommendation is in the Channel Maintenance Plan.)

- * Initiate a research and development program in conjunction with the COE, to determine the equipment (pieces of equipment or equipment system) necessary for performing large scale backwater alterations.

RECOMMENDATION 42

The RID/COE in conjunction with the FWIC should develop and scope a study to determine the cumulative effects of increased industrial, municipal, residential and recreational encroachment on fish and wildlife habitat and the effect of environmental regulations on industrial, municipal, residential and recreational development in the UMR corridor. The results of such a study will aid permitting agencies in making permitting decisions.

RECOMMENDATION 43

Although there are many studies which could be identified for support, based on the significance of the completion of these studies to protecting fish and wildlife resources, the following studies should be completed and the collection of information coordinated with the ORRMT:

- * The UMRBC Master Plan Study has outlined and initiated studies to address future environmental management needs/concerns on the UMR. It is questionable, due to time and funding constraints, that these studies will be completed. The results of the Master Plan should be coordinated with FWIC and these studies completed as necessary.
- * Address the impacts of commercial and recreational navigation on the fish and wildlife resources of the UMR.
- * Identify measures that can be used for mitigation, restoration, protection, management and enhancement of environmental resources.
- * Determine the adverse and beneficial impacts of each measure identified with respect to:
 - the environment
 - national and regional economies, and
 - the social character of the region.
- * Determine which of those measures identified can be immediately implemented.
- * Determine costs and studies for those measures identified which will require demonstration projects to evaluate adverse and beneficial impacts.
- * RID/COE should complete the winter biological studies recommended in their feasibility report on year-round navigation.
- * Coordinated refuge master planning effort on the Upper Mississippi Wild Life and Fish Refuge.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Fish and Wildlife
2. TRACING NUMBERS:
A) FINAL 14
B) PREP 14
C) PFWG 1414, 1415, 1416, 1417
D) WORK GROUP 1414, 1415, 1416, 1417
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
The purpose of this project is to provide information on the status of fish and wildlife resources in the UMR from Saverton, Missouri north to Guttenberg, Iowa. The purpose of this project is to provide information on the status of fish and wildlife resources in the UMR from Saverton, Missouri north to Guttenberg, Iowa.
4. SHORT TITLE OF PROPOSED ACTION:
Fish and Wildlife Resources in the UMR from Saverton, Missouri north to Guttenberg, Iowa.
5. LIST OF ALTERNATIVES EVALUATED:
1. No action
2. No action
3. No action
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
All fish and wildlife resources of the UMR from Saverton, Missouri north to Guttenberg, Iowa. See PFWG draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	These are no direct environmental impacts associated with establishment of FWIC. Indirect environmental consequences should be beneficial as the purpose of FWIC is to assure fish and wildlife resources are thoroughly considered in all management actions.	FWMWG Appendix (I&II) SCWG Appendix (I&II) Evaluation of pool 19 Results of OSIT - See Channel Maintenance Plan handbook and data as described in introductory narrative (parts III and IV).
NO ACTION	Direct result will be little or No comprehensive coordination and indirect long-term impacts could be continued degradation of F/W resources.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

No action or continued separation of efforts will not result in needed coordination.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: USFWS and states affected
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: (See below)

11. ADDITIONAL DISCUSSION/NOTES:

Development and implementation of comprehensive fish and wildlife plans may require additional E.A. and/or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Fish and Wildlife

2. TRACING NUMBERS:

A) FINAL 40

B) PREP 46

C) PFWG 6304, 6297, 6299, 6290, 6319

D) WORK GROUP 3031, 3024, 3026, 3014, 3013

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Information on the distribution and abundance of fish and wildlife is inadequate for many management objectives. The purpose of this recommendation is to undertake studies to obtain information identified by GREAT II as necessary for improved management.

4. SHORT TITLE OF PROPOSED ACTION:

Collect identified data and place in an information system for storage and immediate retrieval.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Monitor endangered species
4. Complete submergent characteristics study
5. Terminate Sub. Char. Study at stage 2
6. Obtain data on species distribution and abundance
7. Continue current investigations
8. Complete GIS
9. Monitor Colonial bird nesting.

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The affected environment to be studied are the fish and wildlife resources of the UMR. See Fish and Wildlife Work Group Appendix and the PFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no direct environmental impacts associated with data collection and development of the FWS Information System. Long term impacts resulting from completion of this study may be improved fish and wildlife habitat and improved management.	FWMWG Appendix Endangered Species Act, FWMWG submergent characteristics study, Scope of Work GREAT I FWMWG Pilot Studies UMRHC and UMRCC information and data as described in introductory narrative (parts III and IV).
NO ACTION	If no action is taken a minimum of valuable and necessary data will be collected at the present rate. Proper management of fish and wildlife resources will continue to be hampered.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended Action is a combination of alternatives 3,4,6,8,9, and a Team approved study of proposed introduction of non-native organisms. All combined are needed to improve management data base.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: USFWS and federal and state management agencies - See Below
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Actions taken as a result of these studies may require an E.A. and/or E.I.S.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Field and Wildlife

2. TRACING NUMBERS:

A) FINAL 01

B) PREP 5-11-1968 (1968-1969)

C) PPWG 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008

D) WORK GROUP 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

1. To determine the impact of the proposed action on the environment.
2. To determine the impact of the proposed action on the environment.
3. To determine the impact of the proposed action on the environment.
4. To determine the impact of the proposed action on the environment.

4. SHORT TITLE OF PROPOSED ACTION:

Complete studies to determine the potential of the proposed action to cause backwater modification.

5. LIST OF ALTERNATIVES EVALUATED:

1. No action alternative
2. No action alternative
3. No action alternative
4. No action alternative
5. No action alternative
6. No action alternative
7. No action alternative
8. No action alternative
9. No action alternative
10. No action alternative

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The backwaters of the RMB will be the subject of studies and plans. See RMB Draft Technical Appendix, Volume II, RMBW Appendix, and RMBW Appendix for detailed description.

8. REFERENCES:

9. RATIONALE FOR SELECTED ALTERNATIVE:

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

11. ADDITIONAL DISCUSSION/NOTES:

141

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Fish and Wildlife
2. TRACING NUMBERS:
A) FINAL
B) PREP None
C) PFWG None
D) WORK GROUP None
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
Agency permits for municipal, industrial, residential, and recreational activities which encroach on fish and wildlife habitat, to date have largely been based on assessment of only localized impact. There is a need to look at cumulative impacts, as this recommendation calls for.
4. SHORT TITLE OF PROPOSED ACTION:
Develop and conduct a study to determine the cumulative effects of development on fish and wildlife resources and use this data to aid the permitting process.
5. LIST OF ALTERNATIVES EVALUATED:
1. Recommended Action
2. No Action
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
All fish and wildlife habitat in the UMR could eventually be affected. See PFWG Draft Technical Appendix, Volume II for details.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Study will have no direct environmental consequences. Study results will aid future project-specific environmental analysis.	GREAT II Team discussions, 1980 Note: This action developed by team without back-up study by work groups.
No ACTION	Continued piecemeal approach to permit granting decisions.	Same as Above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Action determined by GREAT II Team to be needed to aid in overall river resource management.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Fish and Wildlife
2. TRACING NUMBERS:
A) FINAL 43
B) PREP 50
C) PFWG 6305, 6306, 6296
D) WORK GROUP 3030, 3083, 3023
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
There is a need to assure completion of studies that address future environmental needs on the UMR. The GREAI II Team has identified a series of actions which will improve overall future management decision-making.
4. SHORT TITLE OF PROPOSED ACTION:
Complete studies addressing navigation effects, mitigation measures, winter biological studies, refuge master planning, etc. and coordinate with FWIC.
5. LIST OF ALTERNATIVES EVALUATED:
 1. Recommended Action
 2. No Action
 3. Study impacts commercial/recreational navigation
 4. Do mitigation studies
 5. Do winter navigation studies
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
The fish and wildlife resource of the UMR. See PFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no direct environmental impacts associated with doing these studies. Long term beneficial impacts to the fish and wildlife resources will accrue if study findings aid in improved management decision-making.	FWMWG Appendix, and data as described in introductory narrative (parts III and IV).
NO ACTION	Continued data-gaps and lack of information for improved fish and wildlife resource management decisions.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The recommended action is a combination of alternatives 3, 4, and 5 and address a broad range of issues determined necessary components of improved management.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: RID/COF FWIC (See below)
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Studies themselves do not need E.A. or E.I.S. documentation. Future actions resulting from study finding may need E.A. and/or E.I.S. documentation.

I. CULTURAL AND AESTHETIC

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
CULTURAL AND AESTHETIC COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS DOLLAR COSTS
A. Protection of the natural landscape. B. Protection of the watershed. C. Identification and protection of cultural resources. C. People would become more aware of their UMR heritage. D. Increase the awareness and the application of the importance of and regulations pertaining to cultural resources. E. Increased public awareness of cultural resources and resultant greater protection and better management decisions.	A. Protection of wildlife habitat. B. Less land lost to commercial uses. C. -- D. -- E. --	A. -- B. Less cost to develop roads, utilities and terminals. C. More efficient surveying procedures results in decreased long-term survey costs. D. -- E. --	A. Complete natural history survey and prepare base plans - PREP 53. B. Encouragement of terminal complex development - PREP 54. C. Complete reconnaissance surveys - PREP 55. D. Conduct workshops about cultural regulations - PREP 56. E. Encourage local governments to conduct reconnaissance surveys - PREP 57.	A. \$1.5 million B. -- C. * D. \$92 thousand E. -- * Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

RECOMMENDATION 44

There is evidence that our natural heritage is being lost as a result of changing land uses without proper controls or protections. The components of our natural heritage, that is fragile natural, scenic and cultural areas, must first be identified in order that they may be protected for future generations.

Approximately 25 states have initiated a program to identify, locate and make protection plans for remaining natural areas (i.e., areas which still demonstrate an undisturbed nature reminiscent of their condition at the time of settlement). Many of the 25 states are cooperating with the Nature Conservancy in establishment of a "Heritage Program" in their state.

The state management agencies, the RID/COE and the USFWS, should develop and complete a natural history survey to identify those natural, scenic and cultural areas needing protection. When this survey has been completed the state agencies should use the information collected to prepare natural and cultural area base plans. The plans should include a system to protect from loss those areas identified in the natural history survey. The plans should also include guidelines to establish control entities in areas where none exist. State management agencies should observe the criteria for funding of natural history surveys, as set forth in the Heritage Conservation and Recreation Service Manual - "Guidelines for Planning Assistance".

RECOMMENDATION 45

Industrial/commercial development in the form of unlimited strip development, can adversely impact the aesthetics and natural habitat value of the river corridor. Industrial development (as carried out per Executive Orders 11988 and 11990) in the form of commercial terminal complexes should be encouraged through tax incentives or through municipal comprehensive planning as a means to limit strip development. In order to protect the aesthetic quality of the river and at the same time establish greater efficiency in industrial development, all levels of government should encourage consolidation into terminal complexes during local plan formulation prior to request for permits.

RECOMMENDATION 46

Adequate management of cultural resources on federal lands is severely constrained by the lack of locational data. The identification of such resources, nomination of significant cultural properties to the National Register of Historic Places, and management of the cultural resources is required by EO-11593, Public Law 89-665, and implementing regulations of the involved federal agencies.

The RID/COE and the USFWS own and/or manage the majority of the federal lands in the GREAT II study area. In order to assure proper protection of cultural resources in the GREAT II area and to preserve important examples of these non-renewable resources for future generations, the RID/COE in coordination with the USFWS, should develop and implement a systematic survey to locate and identify cultural resources in the GREAT II reach of the UMR. This task should be accomplished in coordination with the HCRS and SHPO's.

The survey should incorporate, at a minimum, the following activities:

- * Conducting geomorphic studies of present land surface and literature and document search of preinundation landscape to determine likely areas of location of buried archaeological sites.
- * Conducting UMR bank surveys to locate and identify unknown archaeological sites which are being affected by wave action.
- * Conducting a thorough historical records search and evaluation to identify location of known steamboat wrecks.
- * Expansion of their administrative policy on removal of sunken wrecks and obstructions. Where such wrecks are an obstacle to navigation, their removal should be alternative where the wreck is located in either the main channel and/or other commercially navigable waters.
- * Conducting a historic architectural/engineering survey of as-built navigation system structures as a significant historic network.

RECOMMENDATION 47

The perception of 33 CFR 305 (the implementing regulations of the COE for identification and administration of cultural resources) by SHPO's and state preservation program staff is that sections of the regulations are vague and their application varies between COE districts.

In order to increase the accuracy and consistency of the application of this regulation among the staff which work with the regulations on a daily basis, the NCD/COE should conduct regular workshops at the Division level for district staffs and state preservation program staff. The programs should include definitions and interpretations of 33 CFR 305 as well as the problems that have resulted to date in compliance with the regulation. The CRWG Appendix documents 15 sites in the GREAT II area where application of the law could be improved.

RECOMMENDATION 48

Other than private land owners, local governments maintain control over the majority of public lands within urban areas and corporate limits of municipalities. Contained on and within these public lands are potentially many non-renewable resources including archaeological sites, as well as standing structures of architectural and historical interest.

So that the HCRS and the preservation programs of the involved states will work more closely and intensively with local governments, the HCRS should work with them, to develop local ordinances which, will, at a minimum, consider the preservation and conservation aspects of the built environment prior to development.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Cultural and Aesthetic

2. TRACING NUMBERS:

A) FINAL 44

B) PREP 53

C) PFNG 6265, 6267

D) WORK GROUP 1023, 1022

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Our natural heritage is being lost to recreational and other types of development. There is a need to further survey our natural, scenic and cultural areas and to develop plans, where necessary, to protect these areas. This recommendation calls for such action.

4. SHORT TITLE OF PROPOSED ACTION:

Develop and complete a natural history survey to identify areas needing protection and develop plans for same.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Prepare natural history survey
4. Prepare land use plans/river corridor
5. Improve agency awareness of visual resources and impacts

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The cultural, natural and scenic resources of the UMR. See PFNG Draft Technical Appendix, Volume II, CRWG and RWG Appendix for detailed descriptions.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Cultural and Aesthetic

2. TRACING NUMBERS:

A) FINAL 45

B) PREP 54

C) PFWG 6230

D) WORK GROUP 1018

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

The aesthetic character of the UMR corridor is threatened by uncontrolled, unlimited strip industrial and commercial development. There is a need to promote cluster development to minimize impacts, as this recommendation suggests.

4. SHORT TITLE OF PROPOSED ACTION:

Industrial development in the form of commercial terminal complexes should be encouraged through incentives and permitting process.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Allow Strip Commercial development

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The aesthetic environment of the UMR. See RWG Appendix and PFWG Draft Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	The proposed project is a commercial development consisting of a 100,000 sq. ft. building and a parking lot. The project is located in an area that is currently undeveloped. The project will result in the loss of some natural resources, but the benefits of the project outweigh the costs. The project is recommended for approval.	The project is recommended for approval. The project is located in an area that is currently undeveloped. The project will result in the loss of some natural resources, but the benefits of the project outweigh the costs. The project is recommended for approval.
NO ACTION	The project is not recommended for approval. The project is located in an area that is currently undeveloped. The project will result in the loss of some natural resources, but the benefits of the project do not outweigh the costs. The project is not recommended for approval.	The project is not recommended for approval. The project is located in an area that is currently undeveloped. The project will result in the loss of some natural resources, but the benefits of the project do not outweigh the costs. The project is not recommended for approval.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The project is recommended for approval because the benefits of the project outweigh the costs.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Note: The permitting of actual or potential industrial complexes may require additional E.A. and/or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Cultural and Aesthetic

2. TRACING NUMBERS:

A) FINAL 46

B) PREP 55

C) PFWG 6210,6263,6264,6217,6214,6262

D) WORK GROUP 5001,5007,5008,5519,5005,5006

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is inadequate identification and management of cultural resources on federal lands, resulting in continued degradation of these resources. The purpose of this recommendation is to assure proper protection of these resources on federal lands.

4. SHORT TITLE OF PROPOSED ACTION:

Complete reconnaissance surveys to identify cultural resources in the UMR.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Pool by Pool research-incremental
4. Total survey
5. Research pre-enundation landscape
6. Research only present land surface
7. Survey as-built navigation system for sunken barges

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The cultural resource of the UMR. See CRWG Appendix and PFWG Draft Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	During the planning process, the project will require the construction of a new road through the project area. This road will be constructed through the project area, and will be constructed in a manner that will minimize the impact on the environment. The road will be constructed in a manner that will minimize the impact on the environment.	The project will require the construction of a new road through the project area. This road will be constructed through the project area, and will be constructed in a manner that will minimize the impact on the environment. The road will be constructed in a manner that will minimize the impact on the environment.
NO ACTION	An unknown number of cultural resources would continue to be lost.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended Action is a combination of alternatives 1, 5, 6 and 7. It provides for a comprehensive approach to locating cultural resources.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Cultural and Aesthetic

2. TRACING NUMBERS:

A) FINAL 47

B) PREP 56

C) PRWG 6212

D) WORK GROUP 5003

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is a need to increase the accuracy and consistency of application of 33 CFR 305 (identification and administration of cultural resources). This recommendation calls for specific action to meet this need.

4. SHORT TITLE OF PROPOSED ACTION:

NCD/COE should conduct workshops regarding application of 33 CFR 305.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The cultural resources on federal lands on the UMR. See CRWG Appendix for description. No detailed locational data readily available.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Cultural and Aesthetic
2. TRACING NUMBERS:
A) FINAL 48
B) PREP 57
C) PRWG 6213
D) WORK GROUP 5004
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
Development in the UMR floodplain may be resulting in destruction of cultural resources.
4. SHORT TITLE OF PROPOSED ACTION:
BPA should assist states, and local government, to develop local ordinances which consider cultural resources prior to development.
5. LIST OF ALTERNATIVES EVALUATED:
1. Recommended Action
2. No Action
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
The cultural resources in the floodplain of the UMR. See CNWG Appendix for information. No detailed data readily available.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	1. Environmental impacts of the proposed action are not significant and are within the range of normal variation. No further action is required. 2. Where impacts are significant, the proposed action is not recommended.	1. The proposed action is not recommended. 2. The proposed action is recommended.
NO ACTION	1. The proposed action is not recommended. 2. The proposed action is recommended.	1. The proposed action is not recommended. 2. The proposed action is recommended.

9. RATIONALE FOR SELECTED ALTERNATIVE:

1. The proposed action is recommended because it is the most feasible and least costly alternative.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

J. PUBLIC INFORMATION AND EDUCATION

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
PUBLIC INFORMATION AND EDUCATION COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS DOLLAR COSTS
A. Improved safety. A. Improved knowledge of the opportunities of the UMR. A. Improved public input into the management of the UMR, therefore, management more tailored to public's needs. A. Promotion of multiple land uses as a viable management tool. B. Enable greater public participation and consequently better management decisions.	A. Increased awareness and understanding of the UMR environment - greater protection. B. --	A. Reduced floodplain damages. A. Reduced litter damages. A. Increased facility life. B. --	A. Establish a broad-based public education program - PREP 58 B. Reimburse active public participants - PREP 59.	A. * B. -- A. \$9 million B. \$500 thousand * Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.

RECOMMENDATION 49

There is a need to provide public information that will increase public knowledge and understanding of the UMR resource; and its problems, opportunities, benefits and hazards. Improving public understanding and education will aid state agencies in managing the river through increased cooperation, and will help to reduce the dangers to the public associated with use of the UMR. Many GREAT II work groups recommended initiation of a public education and information program for their areas of study.

State management agencies presently have public education and information programs. However, development of information for the public about the UMR has been limited.

The state and federal management agencies of the GREAT II area should fund the development and implementation of a comprehensive public education and information program. The goals of this program would be:

1. To explain concepts of land use management as a viable tool for conservation and preservation of UMR resources.
2. To provide a centralized, independent public information and education program about the UMR and UMR on-going activities.
3. To increase awareness and understanding of the UMR:
 - * Development and distribution of signage, programs and literature on the opportunities and facilities of the UMR especially as it relates to recreation and navigation.
 - * Development and distribution of signage, programs and literature promoting the value of the resources of the UMR, and the need for wise management of these resources, especially as it relates to fish and wildlife resources, cultural resources, water quality, dredged material and soil conservation measures.
 - * Development and distribution of signage, programs and literature describing the management programs of the URM, especially as it relates to floodplain management and development.
 - * Development of public education programs on safety and litter (including mandatory safety/operation education procedures for boat rental companies).
 - * Development of programs to identify hazards, mark channel control structures where suitable to allow safe passage of recreational craft and establish no-wake areas in high density use areas.

RECOMMENDATION 50

The GREAT II PPIWG, upon completion of the GREAT II public participation and information program, evaluated the program to determine how future public participation and information programs by federal and state agencies could be improved. Based on that evaluation, the following guidelines are suggested (source GREAT II PPIWG Final Appendix, Chapter III, Pages 103-110):

1. In future studies, the public problem identification process should be included as part of the Plan of Study development phase. Extensive efforts should be made to identify and invite the affected public in this effort.
2. In future studies of large scope and covering a large geographic area, the establishment of a well balanced small citizen group should be considered. Critical to the success of the effectiveness of the group are the following:
 - * A consistent well documented on-going process for informing and obtaining responses of such a group should be built into the overall study process beginning with the earliest stage of the study.
 - * Sufficient funds from the study budget should be allocated to provide staff support, material reproduction costs, etc., for the group.
 - * The overall study process should be designed to provide adequate time for the group to thoroughly review and comment on materials - especially those materials directly affecting study decisions - before the decisions are actually made.
3. For studies of large scope, long duration and covering large geographic areas, general informational public meetings should not be used except at critical points, alternate less expensive and more effective means, such as newsletters, media releases, and personal letters are more effective.
4. In nearly all technical studies where the amount and complexity of information is extensive, the study sponsors should explore the use of one or more intensive workshop-type sessions for interested public interests. Based on an analysis of the GREAT I and GREAT II experiences, the following guidelines should be used in workshop development:
 - * The workshop should be scheduled into the overall study process in some cases as a substitute for critical point public meetings. The optimum times for workshops are (1) upon completion of the Plan of Study, (2) just prior to the formal public review process for major draft products.
 - * Essential to the success of a workshop experience is the development of a good audio-visual materials for use at the workshop. Clear, concise summaries of information to be discussed (narrated slide shows are particularly effective) should be developed by study staff.
 - * Study members should be fully briefed in advance of the intent of the workshop, their roles, the information to be covered, and the format to be used.

- * Psychological aspects of the workshop should not be overlooked. Maximum retention of data and promotion of dialogue can be achieved by holding the workshop in comfortable surroundings that are, at the same time, formal.
 - * Finally, a person or persons should be assigned to record workshop proceedings to be provided at a later date in visual form to participants or other interested parties. To assure accuracy either a tape recorder or stenographer/court reporter should record the proceedings.
5. To the extent possible every study should have a person or persons available to "go on the road" with information for interest groups, governmental bodies, etc., in the study area. Personal visits with public clientele seems to be the best way to get information out and to gather public attitudes about study items.
 6. In those cases where a study has a direct impact on local government (i.e., local flood control project) special efforts must be made to work with local government units.
 7. An integral part of any study budget should be the funding of a solid public participation and information program with adequate staffing. In the GREAT II Study, 6% of the study budget was allocated to the PPIWG program under contract to a private consultant. Contacts with other PPI staffs in similar studies indicates that an allocation of up to 10% of the budget is usually adequate to carry out an adequate program (not counting the quality and efficiency of the program staff).
 8. In future multi-agency studies, consideration should be given to use of independent staff and office facilities, where it appears most effective.

RECOMMENDATION 51

Persons or groups attempting to locate available information spend excessive time and money wading through voluminous and unorganized data.

The RID/COE should institute a program to arrange and manage the archives of the district.

ENVIRONMENTAL SUMMARY

1. Comparison:

$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

2. TRACING NUMBERS:

A) FINAL _____

B) PREP _____

C) PRWG

D) WORK GROUP _____

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

and the information provided in the information is the part of a larger body of information given orally. Hence, all the information is placed and put in the information only for a comprehensive manner.

4. SHORT TITLE OF PROPOSED ACTION:

There is no representation put in front of a unit information in a process.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended action
 - 2. Action
 - 3. Individual Agency programs
 - 4. Inter-agency program
 - 5. Use of already existing program.
 - 6. Individual in test program
 - 7. Several alternatives for specific projects discussed in attached data
- new extensions in recommended action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The UMR in general. This recommendation promotes improved public understanding of the overall UMR environment.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no direct environmental impacts associated with this recommendation. Improved public understanding and support of management studies may have a long term beneficial impact on the resource in that it will aid public stewardship of the resource.	11001 Appendix 11002 Appendix 11003 Appendix and data as located in site history narrative (parts III and IV).
NO ACTION	Continued piecemeal approach to public information and education and possible duplication of effort and costs.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended action only alternative which addresses the need for a broad-based program.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Public Information and Education

2. TRACING NUMBERS:

A) FINAL 500

B) PREP 50

C) PPWG 6,750

D) WORK GROUP 1505

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Public Information/Education programs in OREAS I and OREAS II have evaluated means to improve future programs of this type. Specific actions are contained in this recommendation.

4. SHORT TITLE OF PROPOSED ACTION:

Initiatives for improvement of future PPWG programs (see full recommendation).

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. Parts of Recommended Action
3. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Future studies on the UMR could be affected by these guidelines. The environment of the UMR in general would be affected by improved public information/education efforts.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no direct environmental consequences if this recommendation is implemented. Long term benefits to the environment may be an indirect result of improved public involvement efforts by the resource agencies.	PPIWG Appendix and data as described in introductory narrative (parts III and IV).
NO ACTION	Inadequacies in public involvement programs could continue unless improved efforts are made.	

9. RATIONALE FOR SELECTED ALTERNATIVE:

The GREAT II Team developed this recommendation on the basis of an evaluation contained in the PPIWG Appendix.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

ENVIRONMENTAL SUMMARY

1. PURPOSE:

2. LOCATION:

A. INITIAL _____

B. PREP _____

C. DESIG _____

D. REVIEW _____

3. A BRIEF DESCRIPTION OF THE PROPOSED ACTION:

4. SHORT TITLE OF PROPOSED ACTION:

5. LIST OF ALTERNATIVES EVALUATED:

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	Meets the objective and satisfies the stated need.	FIMSI Appendix and other information in this report satisfies the objective of parts III and IV.
NO ACTION	Additional difficulty in obtaining information same as above.	

9. RATIONALE FOR SELECTED ALTERNATIVE:

Meets the objective and satisfies the stated need.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
- B) ☒ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

K. COORDINATION

DISPLAY OF ACCOUNTS
RECOMMENDED PLAN
COORDINATION COMPONENT

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT	
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	DOLLAR BENEFITS	DOLLAR COSTS
A. Improved multiple use management would benefit all resources.			A. *	A. *
			A. Development of comprehensive land use management plans and maintain coordination functions for all management agencies with responsibilities on the UMR PREP 60. * Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.	

RECOMMENDATION 52

On-Going Planning and Research Coordination.

Congress and the states have recognized the need for regional planning and the coordination of state and federal activities. GREAT studies that indicate a requirement for further study or policy changes must be subject to this regional planning and coordination effort.

The Upper Mississippi River Basin Commission (UMRBC) is presently the mechanism to coordinate planning activities of the UMR.

Therefore, the UMRBC, through the Great River Study Committee (GRSC) should continue to develop a total river resource management plan. Items recommended by GREAT II for further study and policy changes should be incorporated into the UMRBC planning activities. The GRSC should continue to operate as it presently operates. However, the responsibilities of the GRSC committee should be expanded to provide more intensive coordinating activities. The state or federal agency representative to the GRSC committee, should also serve as the contact/coordination person for inter-departmental communication.

The GRSC should:

- * Incorporate results of completed, on-going and future studies (including those recommended as a result of GREAT I, II, III and the Master Plan) into the river management plan.
- * Assure adequate public participation in development of the plan.
- * Identify and recommend to the UMRBC the need for any new cooperative agreements between the state and federal agencies for consistency in river resource management.
- * Assist state and federal agencies in securing new authorities and/or appropriations as necessary, to implement plans as developed.
- * Monitor state and federal agency implementation of plans.

RECOMMENDATION 53

On-Going Implementation Coordination.

Certain components of the GREAT II recommended plan (i.e., channel maintenance component) contain recommended actions that may be implemented without further study. These actions should be implemented by the lead agency in consultation with other appropriate agencies who would be affected by the actions. To assure that this consultation/coordination occurs there is a need to establish a committee, similar to that of GREAT II, for on-going coordination.

Operating under the Great River Study Committee the committee could be called the "On-going River Resource Management Team" (ORRMT). The ORRMT should be composed of one representative from each of the participating states and federal agencies. The State of Iowa and the COE should be responsible for initially co-chairing the ORRMT. The co-chairs would be responsible for calling meetings, and maintaining minutes. The ORRMT would meet no less than quarterly. Voting procedures would be the same as those used by the GREAT II Team (see PFWG Appendix).

The initial and primary responsibility of the ORRMT would be to review the implementation requirements contained in Chapter IV of this report and determine, in more detail, what each agency member must do to begin implementation. On the basis of this review, an annual team plan of action (POA) should be prepared for submittal to each member agency. The POA would identify those actions which should be jointly funded, jointly implemented and/or coordinated.

Each agency should then develop an annual plan of action (beginning with a POA for FY 1982) that outlines specific actions, personnel requirements and funding needs to implement items under their jurisdiction. The POA should also outline how and where the implementable actions fit into existing budgets and programs, or determine if additional resources are required, i.e., funding through the UMRBC/GRSC.

Upon completion of annual POA's, the ORRMT should meet to compare the proposed ORRMT POA to the POA actually adopted by the agencies or states. Items that an agency is unable to complete should be reviewed to determine an appropriate alternative action (for example, inclusion in a subsequent POA, etc.).

As newly identified "action items" are identified by any state or agency as a result of some administrative action or study findings, they should become part of the ORRMT review/coordination procedures. These would include implementable actions recommended as a result of completion of GREAT II, GREAT II Master Plan and COE and USFWS recreation and refuge master planning activities.

An additional ORRMT duty will be to coordinate with and advise the OSIT as to recommended changes to the RID/COE channel maintenance plan (i.e., primary sites and site selection priorities). The ORRMT recom-

mended changes should be made upon completion of studies recommended in the GREAT II CMP Handbook, or as new information and technology becomes available. The recommended changes will be incorporated into the annual POA's and simultaneously to the OSIT.

RECOMMENDATION 54

The overall goal of the GREAT studies was development of a total river resource management plan. Improved inter-agency and inter-resource coordination through GREAT has helped approach that goal. However, more information/data are needed to attain such a comprehensive plan.

To help facilitate completion of the plan, the ORRMT, through the member agencies should develop a complete computerized resource information system for all resources and resource uses in the UMR corridor. All data gathered in any resource studies, etc., would be entered (i.e., GIS - see Recommendation 39), into this system. The system would also be continuously updated as new data was made available. The collection of data on land ownership and management is an essential part of this system.

The system would be a valuable tool by having this information readily available to resource managers as they prepare the total river resource management plan.

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Coordination
2. TRACING NUMBERS:
A) FINAL 52
B) PREP 60
C) PFNG 19 numbers, (see item 11)
D) WORK GROUP 19 numbers, (See item 11)
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
GREAT II identified numerous problems and need related to inter-agency administration, study and management.
4. SHORT TITLE OF PROPOSED ACTION:
Defines coordination needs and proposes expanded activity of the UMRBC GREAT River Study Committee.
5. LIST OF ALTERNATIVES EVALUATED: (See attached data)
 1. Recommended Action
 2. No Action
 3. Various institutional arrangements were outlined by Work Groups to address specific needs
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
Agencies of the UMR directly would be affected. Indirectly the UMR resources would all be affected by coordination of planning efforts.

8. REL. VCS:

[illegible]

9. RATIONALE FOR SELECTED ALTERNATIVE:

[illegible]

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
- B) ☐ THIS ASSESSMENT ADEQUATE
- C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
- D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

1994 #1s: 6270, 6274, 6235, 6297, 6201, 6161, 6191, 6174,
6175, 6262, 6165, 6191, 6272, 6201, 6154, 6305, 6213, 6276,
6115
1991 #1s: 1007, 1001, 3004, 3024, 1045, 6, 3016, 1035, 1007,
1046, 1002, 5526, 1017, 4011, 2501, 3041, 1006, 1002, 1005

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Coordination

2. TRACING NUMBERS:

- A) FINAL 53
- B) PREP 66
- C) PFNG 19 numbers (see item 11)
- D) WORK GROUP 19 numbers (see item 11)

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

There is a need to establish an on-going mechanism to continue the inter-agency coordination started by GREAT. The objective of this organization is to establish this mechanism in the name of an "On-going River Resource Management Team" (ORRMT).

4. SHORT TITLE OF PROPOSED ACTION:

Establish ORRMT and provide initial operating guidelines.

5. LIST OF ALTERNATIVES EVALUATED:

- 1. Recommended Action
- 2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

The agencies managing the UMR and the overall UMR environment will be affected by this recommendation.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There will be no direct environmental impacts associated with establishment and operation of the EMT. Long term, indirect impacts should accrue to the overall EME environment through improved coordination during the implementation of the EMT recommendation.	WQWG, CQWG, FIMWG, DEWG, FWD Appendixes and data are identified in the following narrative (p. 111 and 112).
No ACTION	Many of the recommendations of GREAT II need to be coordinated among various agencies during the implementation process. Without this organization efficient and effective coordination will be less likely.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

The PFWG and GREAT II Team discussions, in coordination with the GREAT I Team, resulted in the design of this action to address a wide array of implementation/coordination needs.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

PFWG #s: 6220, 6214, 6235, 6297, 6221, 6161, 6291, 6174, 6173, 6268, 6265, 6191, 6229, 6201, 6154, 6305, 6233, 6270, 6218,
 WG #s: 1007, 1001, 3004, 3024, 1008, 6, 3016, 1035, 1027, 1026, 1023, 5520, 1017, 4011, 2501, 2031, 1020, 1029, 1005

ENVIRONMENTAL SUMMARY

1. COMPONENT:
Coordination
2. TRACING NUMBERS:
 - A) FINAL 54
 - B) PREP 73 and 50 (partial)
 - C) PFWG 6297
 - D) WORK GROUP 3024
3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:
There is a need for a computerized resource information system for entry and storage of the ever-expanding data base on UMR resources. This recommendation calls for such action.
4. SHORT TITLE OF PROPOSED ACTION:
ORRMT, through member agencies, establish and maintain an information system accessible to users on the UMR.
5. LIST OF ALTERNATIVES EVALUATED:
 1. Recommended Action
 2. No Action
6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:
All UMR resources and agencies managing the resources will be affected by this action. See PFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There will be no direct environmental consequences of this action. Long-term beneficial impacts could accrue to the UMR resources as a result of improved data collection and availability.	FWMWG Appendix and data for W.G. recommendation #3024 under previous recommendation GREAT I Pilot Study
No ACTION	As data base expands and resource management continues to become more complex it would be increasingly difficult to access and use information scattered among resource management agencies.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Best judgement of GREAT II Study Team based on analysis of data from the FWMWG, and the GREAT I Pilot Study.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

I

L. LEGISLATION

ENVIRONMENTAL QUALITY ACCOUNT			NATIONAL ECONOMIC DEVELOPMENT ACCOUNT		
CULTURAL AND SOCIAL	BIOLOGICAL	ECONOMIC	PROPOSED ACTION	DOLLAR BENEFITS	DOLLAR COSTS
A. Improved recreation opportunities.	A. Fish and wildlife considered in more management decisions.	A. Protection of the present system of maintaining the channel (depths and widths) for commercial interests. A. Cost of preparing legislation.	A. Revision of legislation by Congress - PREP 61	A. *	A. *
* Non-quantifiable economic benefits and costs are displayed in the Environmental Quality Account.					

RECOMMENDATION 55

The recommendations which comprise the channel maintenance component of the recommended plan place considerably more responsibility on the RID/COE. In many cases they are not presently authorized to carry out these activities/recommendations. In order to insure that the recommendations developed by GREAT II can be implemented by the RID/COE, it is hereby recommended that Congress provide the RID/COE with increased funding and authority associated with the UMR 9' navigation project to give equal consideration and to complete measures to benefit Fish and Wildlife and recreation resources. All measures carried out under this authority must be coordinated fully with and agreed to by all agencies having state and federal fish and wildlife resource management responsibilities in the affected area.

In addition, the RID/COE should be granted the authority to perform alterations to backwater areas for the benefit of fish and wildlife as recommended by the FWIC.

RECOMMENDATION 56

The RID/COE is restricted from developing and maintaining additional recreational areas on Corps lands without a cost sharing partner. Public Law 89-72 should be amended to allow the RID/COE with the approval of affected agencies to develop and maintain recreation areas on Corp managed lands without local cost sharing. Such action would include the management and maintenance of dredged material beaches and should expand the existing ranger staff.

AD-A096 442

ARMY ENGINEER DISTRICT ROCK ISLAND IL
GREAT RIVER ENVIRONMENTAL ACTION TEAM (GREAT II). UPPER MISSISS--ETC(U)
DEC 80

F/G 13/2

NL

UNCLASSIFIED

3 OF 3
BIC - 211



END
DATE
FILMED
4-11
DTIC

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Recreation

2. TRACING NUMBERS:

A) FINAL _____

B) PREP _____

C) PFWG _____

D) WORK GROUP _____

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

1. To provide facilities, water interpretation, and other activities which will enhance the recreational value of the project area. 2. To provide facilities and other services which will enhance the recreational value of the project area. 3. To provide facilities and other services which will enhance the recreational value of the project area.

4. SHORT TITLE OF PROPOSED ACTION:

Provide the project purpose of the water recreation project. Provide recreation and other facilities and services, and authorize the BLM to perform backwater restoration.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action
3. Give BLM specific funding for individual backwater modification projects.
4. Give BLM authority but no funding
5. Provide another agency with funding and authority
6. Amend BLM 50-10 to provide authority without local cost-sharing

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

Potentially all fish, wildlife, and recreation resources on the WNS could be affected by this action. See IFWG Draft Technical Appendix, Volume II for detailed description.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There are no direct environmental consequences associated with this change in project authority. Long term environmental impacts will depend upon specific projects which may result under this new authority. (See item 11)	FWMWG Appendix GREAT I FWWG Appendix and data as described in introductory narrative (parts III and IV).
NO ACTION	Existing authorities will continue, resulting in continued difficulty in achieving projects deemed necessary to improve and preserve fish, wildlife, and recreational resources.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Recommended action determined to be the most acceptable institutional arrangement by members of GREAT II Team.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☒ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Note: specific projects which may result from this change in authority may need additional E.A. and/or E.I.S. documentation.

ENVIRONMENTAL SUMMARY

1. COMPONENT:

Legislation

2. TRACING NUMBERS:

A) FINAL 56

B) PREP 68

C) PFWG 6286

D) WORK GROUP 1037

3. PURPOSE, NEED AND OBJECTIVE OF PROPOSED ACTION:

Current law prohibits the BLM/BLM from developing additional recreational areas without a cost-sharing partner. In order to promote the implementation of new recreational areas, the recommended action calls for a change in PL 89-70.

4. SHORT TITLE OF PROPOSED ACTION:

Amend PL 89-70 to allow COE to develop and maintain new recreational areas.

5. LIST OF ALTERNATIVES EVALUATED:

1. Recommended Action
2. No Action

6. BRIEF DESCRIPTION OF AFFECTED ENVIRONMENT:

All resources of the UMP could be affected by this action. See PFWG Draft Technical Appendix Volume II and RWG Appendix for detailed information.

7. ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED:

8. REFERENCES:

RECOMMENDED	There would be no direct environmental consequences that would result from this action. Long term and direct impacts resulting from new recreational development may be incurred over time. (See item 11)	PWG Appendix II 89-7, and data as described in Introductory narrative (parts III and IV).
No ACTION	Continued difficulty in establishing new recreation areas due to lack of local partners. Long term impact would be continued lack of recreational facilities to meet the expected increase in demand.	Same as above.

9. RATIONALE FOR SELECTED ALTERNATIVE:

Change in law is determined to be only way of enabling the RID/COE to respond to demands for increased recreational facilities.

10. ENVIRONMENTAL DOCUMENTS REQUIRED:

- A) ☐ FONSI
 B) ☒ THIS ASSESSMENT ADEQUATE
 C) ☐ ADDITIONAL E.A. NEEDED RESPONSIBLE AGENCY: _____
 D) ☐ E.I.S. NEEDED RESPONSIBLE AGENCY: _____

11. ADDITIONAL DISCUSSION/NOTES:

Specific recreational developments which may result from this recommendation may require additional E.A. and/or E.I.S. documentation as part of the planning process by the RID/COE.

EXHIBIT A

SOURCES OF ADDITIONAL DATA

The back-up data (one copy each) for the Environmental Summary, as described in Parts III and IV have been provided to the following people and agencies:

Dick Fleischman
U.S. Army Corps of Engineers
Rock Island District
Clock Tower Building
Rock Island, IL 61201

Dennis Miller
Soil Conservation Service
693 Federal Building
Des Moines, Iowa 50309

Tom Groutage
USF&WS, Spencer Office Building
1830 Second Avenue
Rock Island, IL 61201

Arnie Sohn
Iowa Conservation Commission
Wallace State Office Building
E. 9th and Grand Avenue
Des Moines, Iowa 50319

Dick Walton
Second Coast Guard District
Department of Transportation
1430 Olive Street
St. Louis, MO 63103

Bill Bertrand
Illinois Dept. of Conservation
Box 164
Aledo, IL 61231

Bob Koke
Section 404/Wetlands Program
US EPA, Region VII
324 E. 11th Street
Kansas City, MO 64106

Dave Kennedy
Wisconsin Dept. of Natural
Resources
State Office Building, Rm. 108
3550 Mormon Coulee Road
LaCrosse, WI 54601

Gordon Farabee
Missouri Dept. of Conservation
Route 1, Box 55
Palmyra, Missouri 63461

EXHIBIT B

LIST OF PREPARERS

The following people were primarily responsible for input into this document

<u>NAME</u>	<u>EXPERTISE</u>	<u>EXPERIENCE</u>	<u>PROFESSIONAL DISCIPLINE</u>
Daniel W. McGuinness	Environmental Analysis	5 years, environmental plan- ning in Winona, South St. Paul, and Wabasha, Minnesota. 5 years, Principal, Dan McGuinness & Associates, Hastings, Minnesota, Environ- mental Consultants	Environmental Planner
Nancy J. Beckwith	Water Resources	2 years, forest hydrologist, Minnesota Department of Natural Resources 2 years, water resources planner, Dan McGuinness & Associates, Hastings, Minn- esota, Environmental Con- sultants	Forest Hydrologist and Water Resources Planner

Note: In addition the Work Group Chairmen of the GREAT River Environmental Action Team (GREAT II), assisted through preparation of back-up data cited in Parts III and IV. This document was reviewed and approved by the GREAT II Team, December 1980.

